

APPENDIX G

Traffic Impact Analysis

Prepared by:

LSA, Inc

TRAFFIC IMPACT ANALYSIS

AVALON MONROVIA
MONROVIA, LOS ANGELES COUNTY, CALIFORNIA

This Traffic Impact Analysis has been prepared under the supervision of
Donson H. Liu, T.E.

Signed



LSA

March 2018

TRAFFIC IMPACT ANALYSIS

AVALON MONROVIA MONROVIA, LOS ANGELES COUNTY, CALIFORNIA

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March 2018

EXECUTIVE SUMMARY

LSA has prepared the following Traffic Impact Analysis (TIA) to identify any traffic impacts that could result from the development of 154 apartment dwelling units (DUs) and 3,900 square feet (sf) of retail use on the northwest corner of Myrtle Avenue/Chestnut Avenue in Monrovia. The existing site for the Avalon Monrovia Project (project) consists of the Tanner Research and Development office building (20,865 sf office use) and two Karl Short office buildings (3,204 sf and 2,990 sf office uses). All existing uses were in operation at the time of the TIA's preparation. These uses will be replaced by the project. Vehicular access to the project site will be provided via an existing full-access driveway along Chestnut Avenue, and an additional full-access driveway approximately 50 feet (ft) east of the existing driveway.

This study focuses on the a.m. peak-hour and p.m. peak-hour (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.) levels of service (LOS) at 10 intersections. Project impacts were determined based on the analyses of the following scenarios:

1. Existing (2017) condition
2. Existing (2017) plus project condition
3. Cumulative year (2020) condition
4. Cumulative year (2020) plus project condition

The study also analyzed the California Department of Transportation (Caltrans) ramp intersections using *Highway Capacity Manual* (HCM, Transportation Resources Board 6th Edition) methodology. The ramp intersection analysis is not part of the City of Monrovia's (City) TIA guidelines, but is included for Caltrans disclosure purposes.

The project incorporates design features to accommodate pedestrian circulation on site. Pedestrian access to the site would be provided via existing sidewalks along Chestnut Avenue and Myrtle Avenue. The proposed project will construct landscape and parking improvements along Myrtle Avenue adjacent to the project site. The proposed project would relocate the sidewalk along Myrtle Avenue by approximately 4 feet westerly to allow for seven parallel public parking spaces along Myrtle Avenue. The northwestern corner of the intersection of Myrtle Avenue/Chestnut Avenue would be extended by 8 feet, creating a choker at the intersection. This reconstruction would act to protect pedestrians and shadow the parallel parking spaces. The sidewalk adjacent to the project site along Myrtle Avenue would be widened and would be relocated to accommodate the curb relocation. Both project driveways are anticipated to operate under satisfactory conditions.

In the immediate vicinity, Foothill Transit bus stops are provided at the South Primrose Avenue/Walnut Avenue (Line 270) and Huntington Drive/Myrtle Avenue West (Lines 187 and 270) intersections. Approximately 10 additional bus stops are within a 0.5-mile (mi) radius from the project site. Additionally, the project site is approximately 0.75 mi northeast of the Metro Gold Line Station. The project site and the train station are linked by sidewalk and crosswalk connections.

The proposed project is estimated to generate 985 trips per day, including 58 trips in the a.m. peak hour (16 inbound and 42 outbound) and 83 trips in the p.m. peak hour (49 inbound and

34 outbound). The total net trip generation (total proposed project minus trips generated by existing land uses) will generate 721 trips per day, 27 trips in the a.m. peak hour (a reduction of 11 inbound trips and an addition of 38 outbound trips), and 52 trips in the p.m. peak hour (44 inbound and 8 outbound).

Based on the results of this TIA, the project can be implemented without creating significant impacts to the performance of the studied intersections or the Caltrans ramp intersections. No mitigation measures are required for project implementation.

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LIST OF ABBREVIATIONS AND ACRONYMS

Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Monrovia
DU	dwelling unit
ft	foot/feet
HCM	<i>Highway Capacity Manual</i>
I-210	Interstate 210
ICU	Intersection Capacity Utilization
ITE	Institute of Transportation Engineers
LOS	level of service
mi	mile/miles
NDS	National Data and Surveying Services
project	Avalon Monrovia Project
sf	square foot/square feet
TIA	Traffic Impact Analysis
v/c	volume-to-capacity
VMT	Vehicle Miles Traveled

INTRODUCTION

LSA has prepared this Traffic Impact Analysis (TIA) to identify any traffic impacts that could result from the planned development of 154 apartment dwelling units (DUs) and 3,900 square feet (sf) of retail use on the northwest corner of Myrtle Avenue/Chestnut Avenue in Monrovia. This TIA for the Avalon Monrovia Project (project) was prepared in accordance with the applicable sections of the City of Monrovia's (City) *General Plan Circulation Element* (adopted by the City on January 15, 2008, and amended on November 6, 2012) and guidance through discussions with the City Traffic Engineer.

PROJECT SITE

Figure 1 shows the project site location. The project includes the demolition of three existing structures, consisting of the Tanner Research and Development office building (20,865 sf office use) and two Karl Short office buildings (3,204 sf and 2,990 sf office uses), for a total of 27,059 sf of office use, and construction of 154 apartment DUs and 3,900 sf of retail use. The proposed project will construct landscape and parking improvements along Myrtle Avenue adjacent to the project site. The proposed project would relocate the sidewalk along Myrtle Avenue by approximately 4 feet westerly to allow for seven parallel public parking spaces along Myrtle Avenue. The northwestern corner of the intersection of Myrtle Avenue/Chestnut Avenue would be extended by 8 feet, creating a choker at the intersection. This reconstruction would act to protect pedestrians and shadow the parallel parking spaces. The sidewalk adjacent to the project site along Myrtle Avenue would be widened and relocated to accommodate the curb relocation. No changes to Chestnut Avenue are proposed.

An existing alley is between Chestnut Avenue and Walnut Avenue, and connects Primrose Avenue to Myrtle Avenue. The project would close the alley's connection to Myrtle Avenue, and redirect it to Walnut Avenue. Truck access and loading would be provided via the redirected alleyway.

The project site is bound by Walnut Avenue to the north, Myrtle Avenue to the east, Chestnut Avenue to the south, and office uses to the west. Vehicular access to the project site will be provided via an existing full-access driveway along Chestnut Avenue and an additional full-access driveway approximately 50 feet (ft) east of the existing driveway. Both driveways will have one inbound lane and one outbound lane and will be approximately 25 ft wide. Figure 2 shows the project site plan.

Truck Access and Loading

Delivery and move-in truck access would be encouraged at the rear of the building along the redirected alley connecting Primrose Avenue and Walnut Avenue. Delivery and smaller moving vehicles smaller than or equal to a 30-foot length (SU-30) could maneuver into the loading area by backing into the space from the northerly alley. Leaving, they could then turn and maneuver north onto Walnut Avenue. Figure 3 illustrates the turning template for a SU-30 truck.

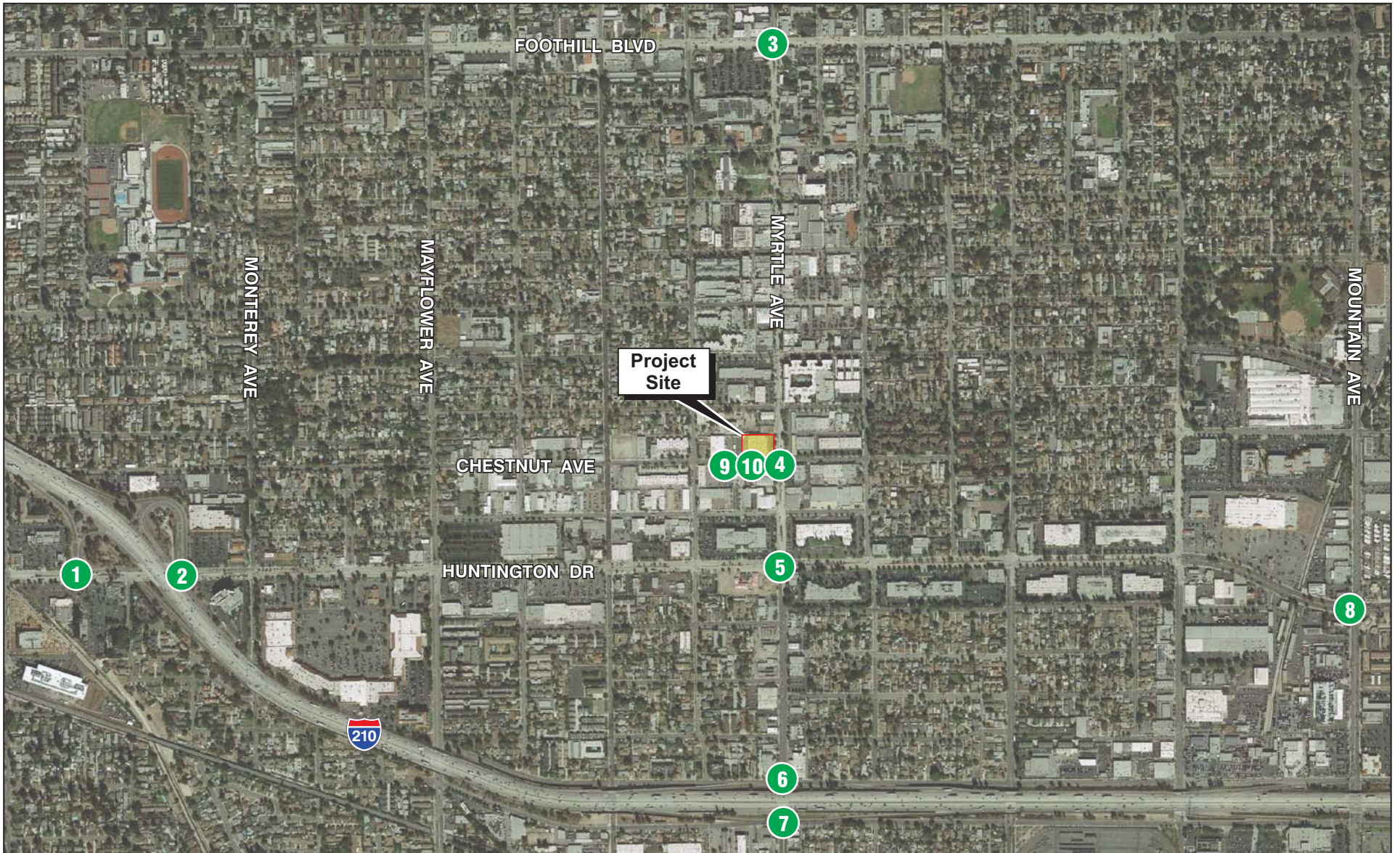
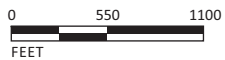


FIGURE 1



LSA



SOURCE: Google Earth

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LEGEND

-  - Project Site
-  - Study Area Intersection

Avalon Monrovia
Project Location and
Study Area Intersections

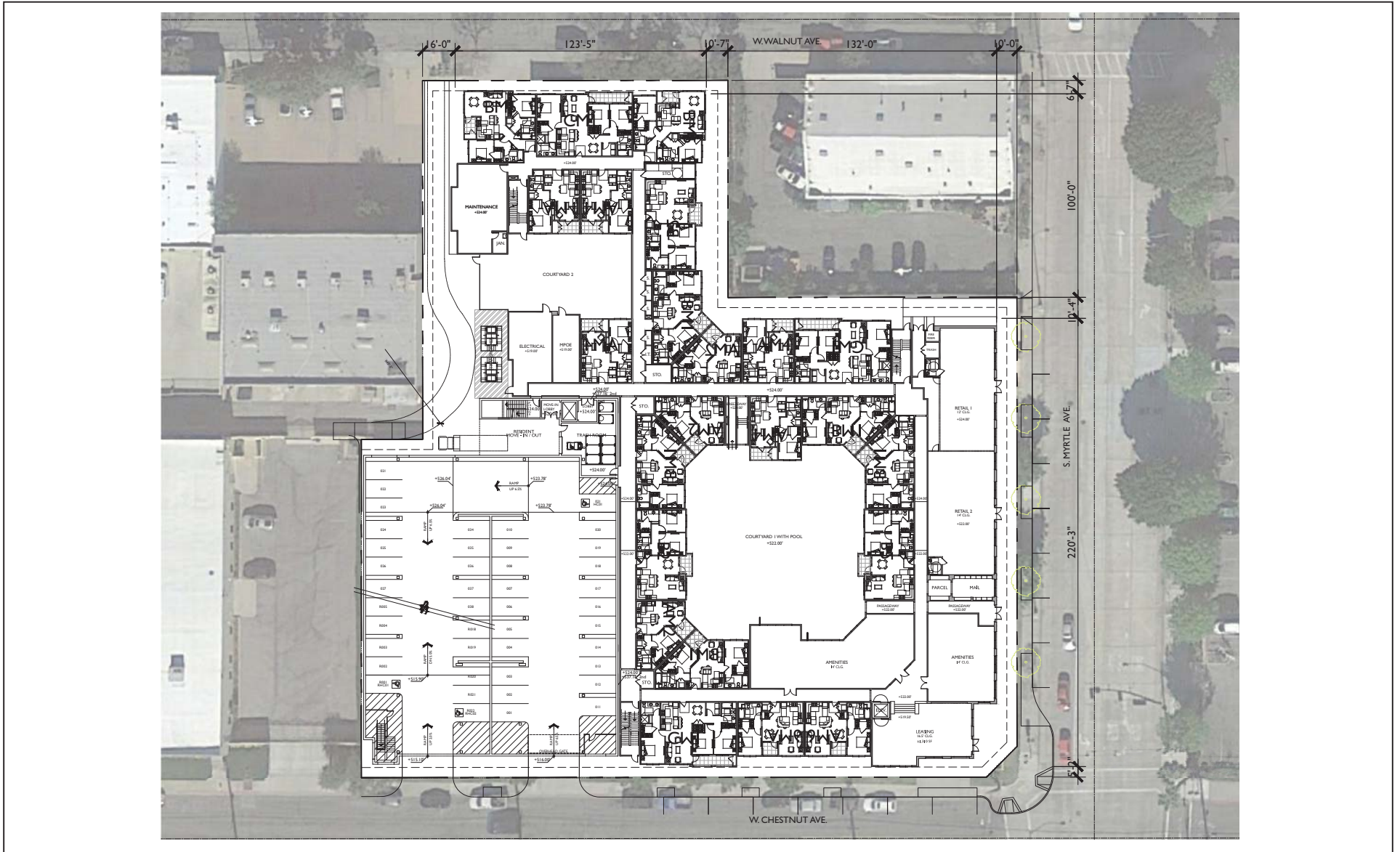
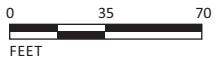


FIGURE 2

LSA



SOURCE: Bassenian/Lagoni

I:\AVL1701\G\Site Plan.cdr (3/8/2018)

Avalon Monrovia
Site Plan

Larger delivery and moving vehicles smaller than or equal to a 40-foot length (B-40) could head in from the western alley, make their deliveries, back straight out onto the western alley, and then maneuver northerly to Walnut Avenue. Figure 4 illustrates the turning template for a B-40 truck. Larger vehicles would be prohibited from using the alley to make deliveries.

Study Area Boundary

As illustrated on Figure 1, the study area includes the following intersections:

1. Interstate-210 (I-210) eastbound ramps/Huntington Drive (signalized)
2. I-210 westbound ramps/Huntington Drive (signalized)
3. Myrtle Avenue/Foothill Boulevard (signalized)
4. Myrtle Avenue/Chestnut Avenue (signalized)
5. Myrtle Avenue/Huntington Drive (signalized)
6. Myrtle Avenue/Central Avenue and I-210 westbound ramps (signalized)
7. Myrtle Avenue/Evergreen Avenue and I-210 eastbound ramps (signalized)
8. Mountain Avenue/Huntington Drive (signalized)
9. Western Project Driveway/Chestnut Avenue (unsignalized)
10. Eastern Project Driveway/Chestnut Avenue (unsignalized)

PERFORMANCE CRITERIA

Intersection Criteria

The Intersection Capacity Utilization (ICU) methodology was used to determine the peak-hour operations at signalized intersections within the study area. The ICU methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. The resulting ICU is expressed in terms of level of service (LOS), where LOS A represents free-flow activity and LOS F represents overcapacity operation. Parameters set by the City for ICU calculations, including lane capacity, right-turn treatment, and clearance interval, are incorporated into the analysis.

According to the City's *General Plan Circulation Element* (2012), LOS at an intersection is considered to be unsatisfactory when the ICU exceeds 0.90 (LOS D) within the City, except at locations where LOS E or F conditions currently exist. The relationship of ICU to LOS is demonstrated in the following table.

Level of Service	ICU
A	0.00–0.60
B	0.61–0.70
C	0.71–0.80
D	0.81–0.90
E	0.91–1.00
F	> 1.00

Source: *Highway Capacity Manual* (Transportation Research Board 6th Edition).
ICU = Intersection Capacity Utilization

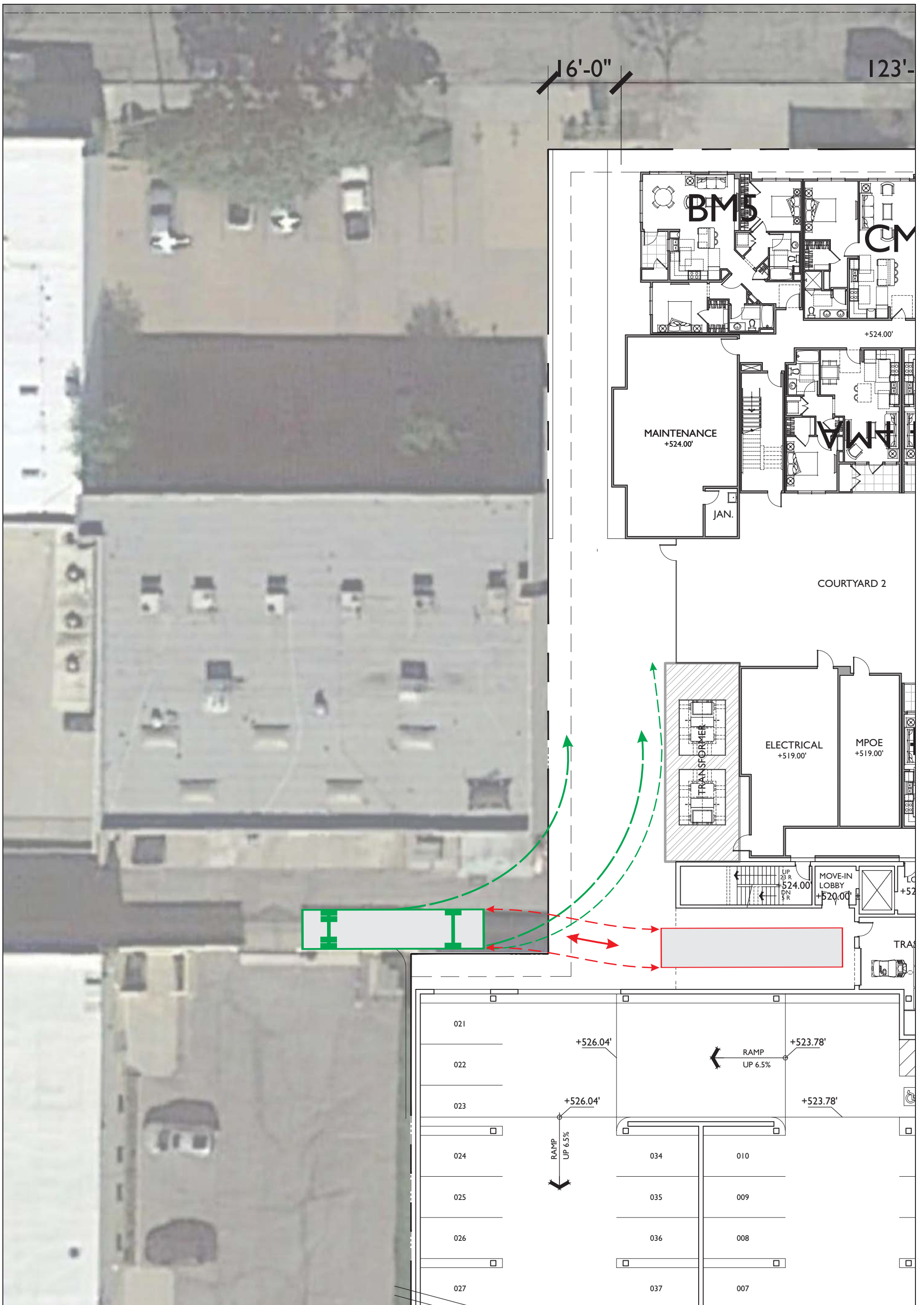
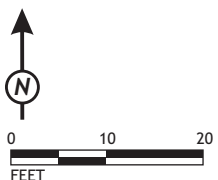


FIGURE 4

LSA



SITE PLAN SOURCE: Bassenian/Lagoni

Avalon Monrovia
Truck Turning Template (B-40)

Based on discussion with the City Traffic Engineer, a project impact occurs when project traffic causes an intersection to exceed the acceptable LOS, or the impact of the development results in an increase of 0.04 or greater for LOS C, 0.03 or greater for LOS D, 0.02 or greater for LOS E, or 0.01 or greater for LOS F. Project mitigation would be required to return such intersections to acceptable LOS, or to the baseline ICU if the baseline ICU is greater than 0.90.

In addition to the ICU methodology of calculating signalized intersection LOS, the *Highway Capacity Manual* (HCM, Transportation Resources Board 6th Edition) methodology was used to determine the LOS at unsignalized study area intersections and signalized intersections at freeway interchanges. The HCM unsignalized and signalized intersection methodology looks at delay (in seconds per vehicle), as opposed to capacity, as the measure of effectiveness. The resulting delay is expressed in terms of LOS, much like the ICU methodology. The relationship of delay to LOS is illustrated in the following table.

Level of Service	Signalized Intersection Delay (seconds)	Unsignalized Intersection Delay (seconds)
A	≤10.0	≤10.0
B	>10.0 and ≤20.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

Source: *Highway Capacity Manual* (Transportation Research Board 6th Edition).

This study, consistent with City guidelines, evaluates traffic impacts based on ICU methodology. The HCM methodology is another method to evaluate operational conditions at signalized intersections, and takes into consideration signal timing and can calculate queue lengths at turn lanes. HCM methodology is also required by the California Department of Transportation (Caltrans) to analyze Caltrans ramp intersections. Acceptable LOS for Caltrans intersections is considered to be LOS D or better. However, Caltrans does not have significant impact criteria for the City. Based on a discussion with the City Traffic Engineer, the Caltrans significant impact criteria specified in the *SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region* (San Diego Regional Traffic Engineers Council/ITE 2000) are used. These criteria identify a significant impact at a Caltrans ramp intersection when the intersection operates at LOS D, E, or F, and the impact of the development results in an increase of at least 2 seconds of delay. The ramp intersection analysis is not part of the City’s TIA guidelines, but is included for Caltrans disclosure purposes. All HCM analysis for this study has been developed using Synchro (Version 9.2) software.

Freeway mainline impacts are generally a function of density, a criteria relative to traffic volumes. A significant impact on the freeway that would change density would possibly occur at an added 50 to 100 vehicles. Caltrans has no specific threshold for mainline analysis. As will be explained in the project trip generation, the project generates 27 a.m. and 52 p.m. net peak-hour trips, of which fewer than 15 trips are assigned to any one segment of the freeway in the peak direction. Based on these volumes, the project is not expected to have any significant impacts on the freeway ramps, as shown later in the report.

California has been preparing to move away from vehicle delay and LOS analysis as the primary measure of effectiveness for California Environmental Quality Act (CEQA) transportation analysis, and is switching to vehicle miles traveled (VMT) as the primary criteria for significant impacts. VMT is a measure of the number of miles and distance traveled by vehicles within a specified region for a specific time period. However, formal CEQA guidelines including VMT as a metric of transportation impacts have not been formally adopted in Sacramento. Therefore, agencies such as the City have not yet adopted specific criteria for VMT analysis. Formal rule making is estimated to conclude by the end of 2018, with statewide application by 2020.

EXISTING (2017) CONDITIONS

Existing Site Uses

The existing site currently consists of the Tanner Research and Development office building (20,865 sf of office use) and two Karl Short office buildings (3,204 sf and 2,990 sf office uses), for a total of 27,059 sf of office use. These uses will be replaced by the proposed 154 apartment DUs and 3,900 sf of retail use. Figure 5 illustrates existing lane configurations within the study area.

Existing (2017) Baseline Traffic Volumes and Levels of Service

Peak-hour intersection turn volumes for the study area intersections were obtained from the City and National Data and Surveying Services (NDS). Figure 6 presents the existing (2017) a.m. and p.m. peak-hour (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.) turn-movement volumes at the study area intersections. Appendix A provides the existing (2017) count data.

Table A summarizes the results of the existing (2017) a.m. and p.m. peak-hour LOS analysis. As previously discussed, the ICU methodology was used to determine the LOS at signalized study area intersections.

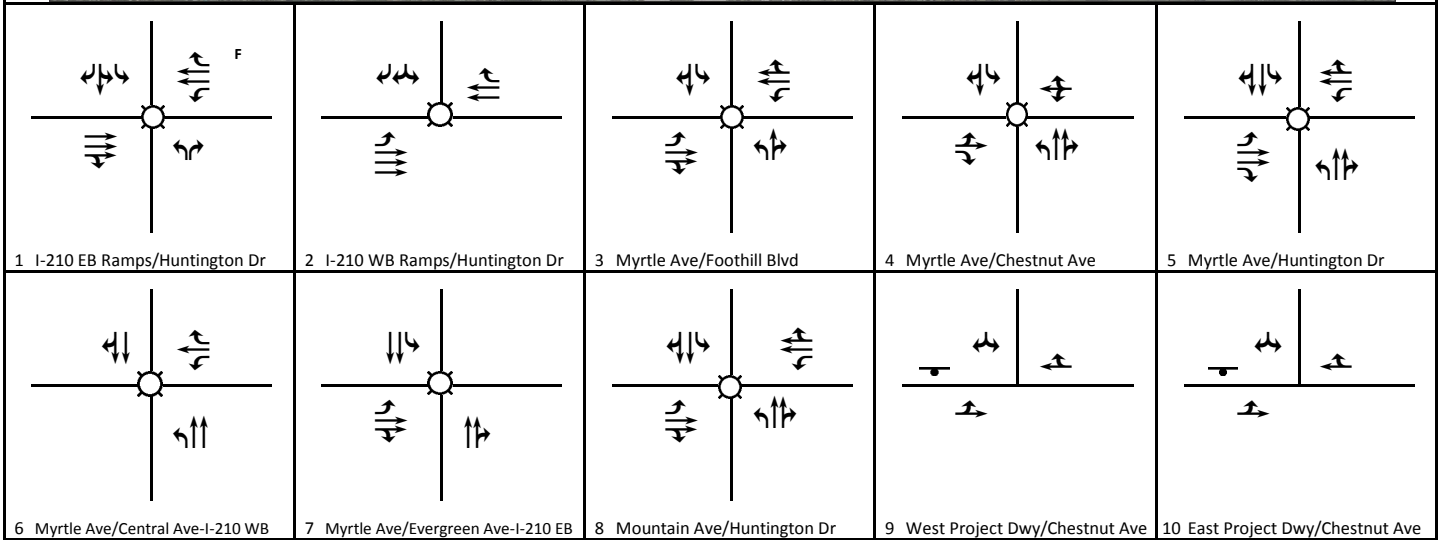
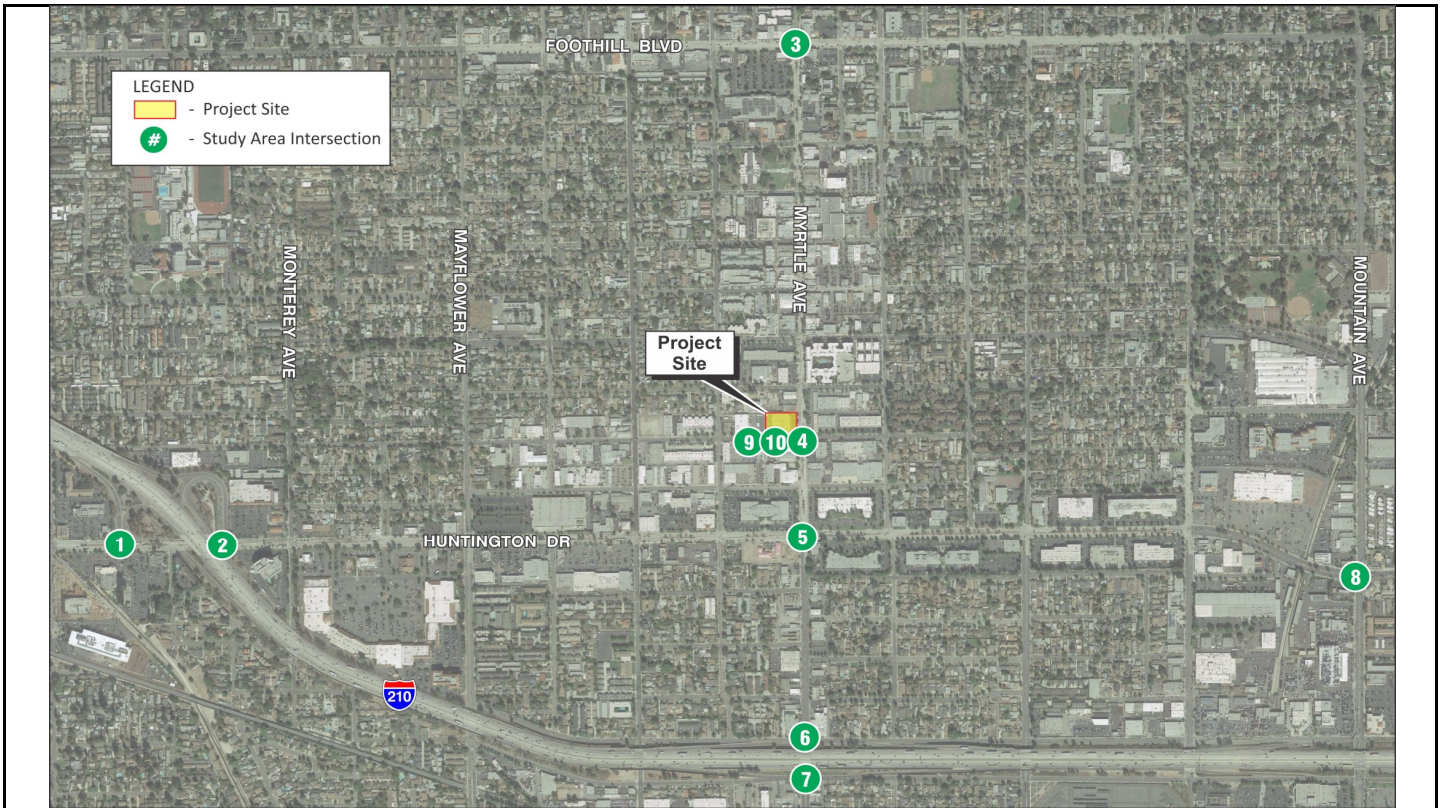
As shown in Table A, all study area intersections currently operate at satisfactory LOS during the a.m. and p.m. peak hours with the exception of Mountain Avenue/Huntington Drive (LOS E during the p.m. peak hour).

PROPOSED PROJECT TRAFFIC

Trip Generation

Trip generation calculations for the project were based on the daily and peak-hour trip rates taken from the Institute of Transportation Engineers (ITE) *Trip Generation*, 10th Edition (2017), shown in Table B.

As Table B indicates, the existing land uses are estimated to generate 264 trips per day, including 31 trips during the a.m. peak hour (27 inbound and 4 outbound) and 31 trips in the p.m. peak hour (5 inbound and 26 outbound). The proposed project is estimated to generate 985 trips per day, including 58 trips in the a.m. peak hour (16 inbound and 42 outbound) and 83 trips in the p.m. peak hour (49 inbound and 34 outbound). The net trip generation is calculated by subtracting the trips generated from the existing land uses from the trips generated from the project's land uses. The



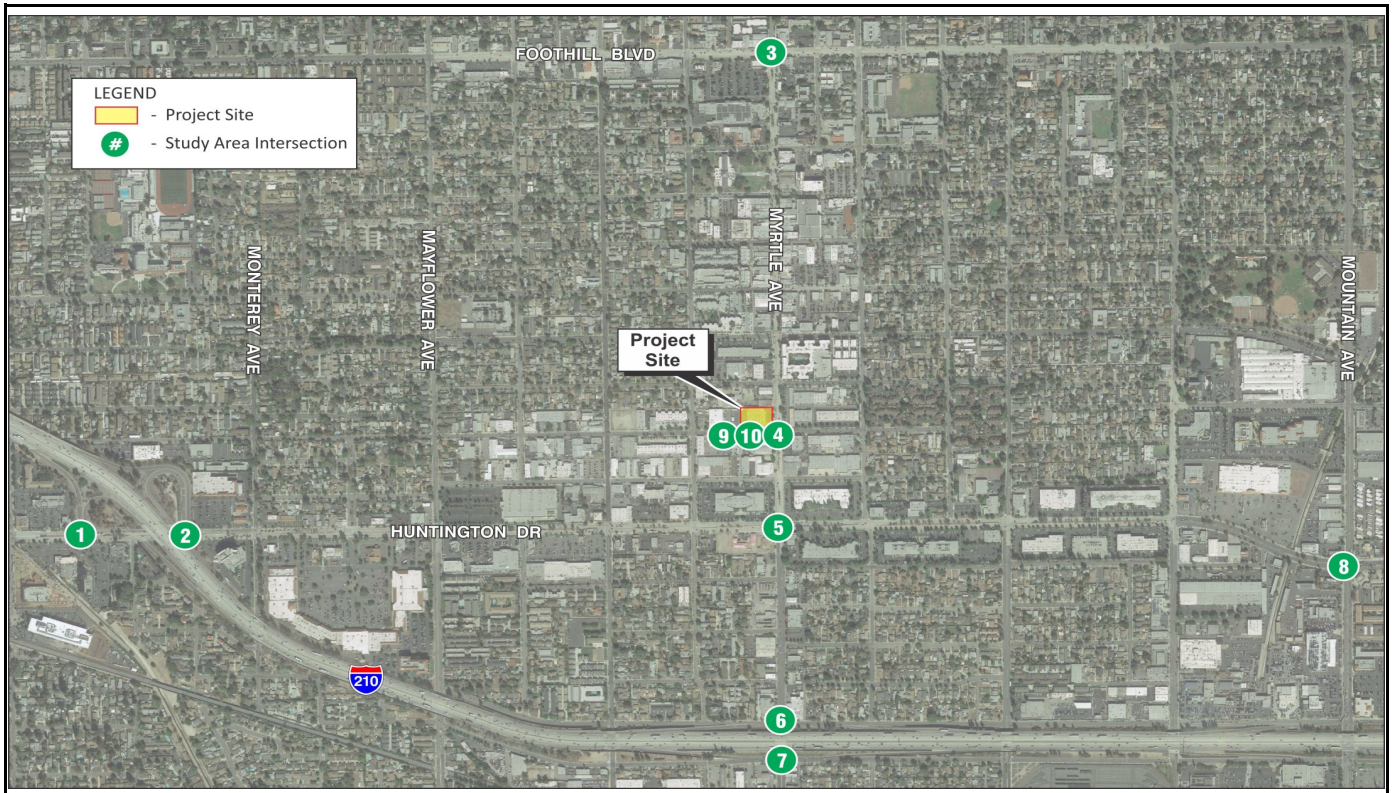
LSA

Legend

- Signal
- Stop Sign
- F** Free Right Turn

FIGURE 5

Avalon Monrovia
Existing Intersection Geometrics



<p>1 I-210 EB Ramps/Huntington Dr</p> <table border="1"> <tr><td>195 / 75</td><td>↑</td><td>109 / 32</td></tr> <tr><td>← 9 / 4</td><td>↓</td><td>1432 / 1047</td></tr> <tr><td>751 / 1498</td><td>↓</td><td>8 / 20</td></tr> <tr><td>11 / 27</td><td>↓</td><td>37 / 22</td></tr> <tr><td></td><td>↓</td><td>29 / 16</td></tr> <tr><td></td><td>↓</td><td>251 / 346</td></tr> </table>	195 / 75	↑	109 / 32	← 9 / 4	↓	1432 / 1047	751 / 1498	↓	8 / 20	11 / 27	↓	37 / 22		↓	29 / 16		↓	251 / 346	<p>2 I-210 WB Ramps/Huntington Dr</p> <table border="1"> <tr><td>169 / 361</td><td>↑</td><td>499 / 478</td></tr> <tr><td>← 23 / 99</td><td>↓</td><td>1396 / 759</td></tr> <tr><td>31 / 91</td><td>↓</td><td></td></tr> <tr><td>566 / 1231</td><td>↓</td><td></td></tr> </table>	169 / 361	↑	499 / 478	← 23 / 99	↓	1396 / 759	31 / 91	↓		566 / 1231	↓		<p>3 Myrtle Ave/Foothill Blvd</p> <table border="1"> <tr><td>75 / 55</td><td>↑</td><td>13 / 30</td></tr> <tr><td>← 48 / 56</td><td>↓</td><td>1443 / 622</td></tr> <tr><td>25 / 64</td><td>↓</td><td>50 / 71</td></tr> <tr><td>542 / 1377</td><td>↓</td><td>131 / 129</td></tr> <tr><td>53 / 116</td><td>↓</td><td>23 / 48</td></tr> <tr><td></td><td>↓</td><td>37 / 90</td></tr> </table>	75 / 55	↑	13 / 30	← 48 / 56	↓	1443 / 622	25 / 64	↓	50 / 71	542 / 1377	↓	131 / 129	53 / 116	↓	23 / 48		↓	37 / 90	<p>4 Myrtle Ave/Chestnut Ave</p> <table border="1"> <tr><td>15 / 18</td><td>↑</td><td>4 / 4</td></tr> <tr><td>← 273 / 380</td><td>↓</td><td>122 / 30</td></tr> <tr><td>6 / 28</td><td>↓</td><td>21 / 27</td></tr> <tr><td>43 / 153</td><td>↓</td><td>89 / 46</td></tr> <tr><td>36 / 132</td><td>↓</td><td>365 / 429</td></tr> <tr><td></td><td>↓</td><td>8 / 22</td></tr> </table>	15 / 18	↑	4 / 4	← 273 / 380	↓	122 / 30	6 / 28	↓	21 / 27	43 / 153	↓	89 / 46	36 / 132	↓	365 / 429		↓	8 / 22	<p>5 Myrtle Ave/Huntington Dr</p> <table border="1"> <tr><td>27 / 58</td><td>↑</td><td>73 / 51</td></tr> <tr><td>← 286 / 533</td><td>↓</td><td>1182 / 685</td></tr> <tr><td>41 / 77</td><td>↓</td><td>111 / 137</td></tr> <tr><td>385 / 925</td><td>↓</td><td>194 / 139</td></tr> <tr><td>110 / 150</td><td>↓</td><td>551 / 360</td></tr> <tr><td></td><td>↓</td><td>106 / 137</td></tr> </table>	27 / 58	↑	73 / 51	← 286 / 533	↓	1182 / 685	41 / 77	↓	111 / 137	385 / 925	↓	194 / 139	110 / 150	↓	551 / 360		↓	106 / 137
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FIGURE 6

Legend

123 / 456 AM / PM Volume

Avalon Monrovia
Existing Peak-Hour Volumes

the change in land use from existing office uses to residential uses may cause the net trip generation to generate fewer trips.

Trip Distribution and Assignment

Trip distribution for the project was based on the project's location in relation to local and regional transportation facilities and origins/destinations, along with input and concurrence from the City Traffic Engineer. Figure 7 shows the trip distribution for the project. Figure 8 displays the resulting project trip assignment for study area intersections.

Existing (2017) and Existing (2017) Plus Project Traffic Volumes and Levels of Service

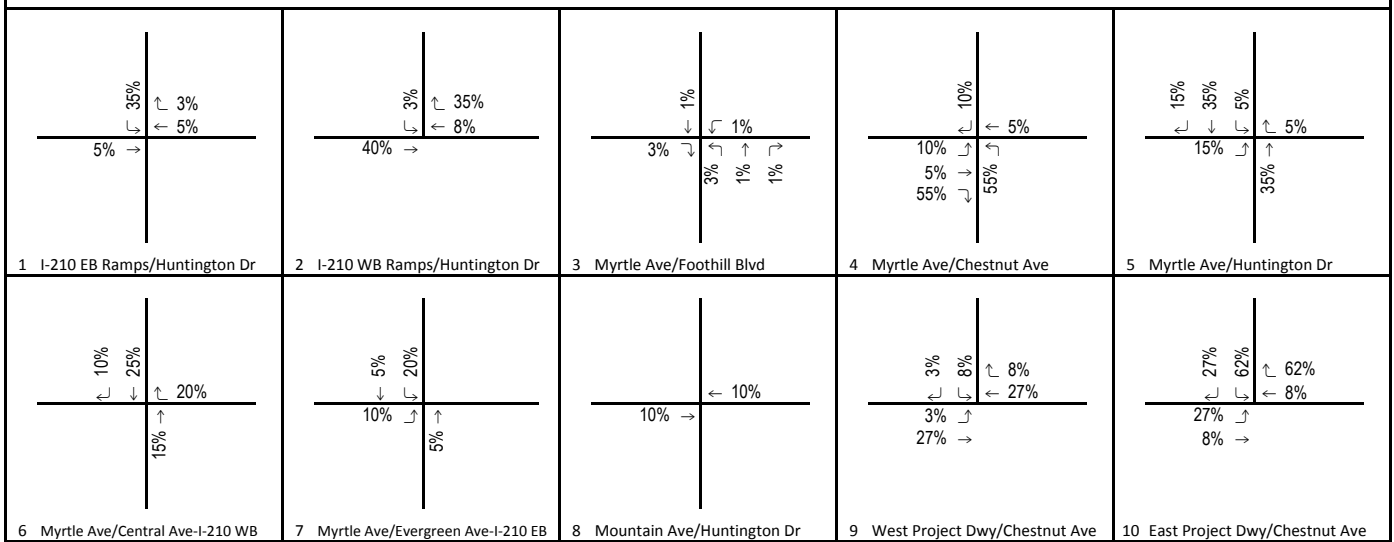
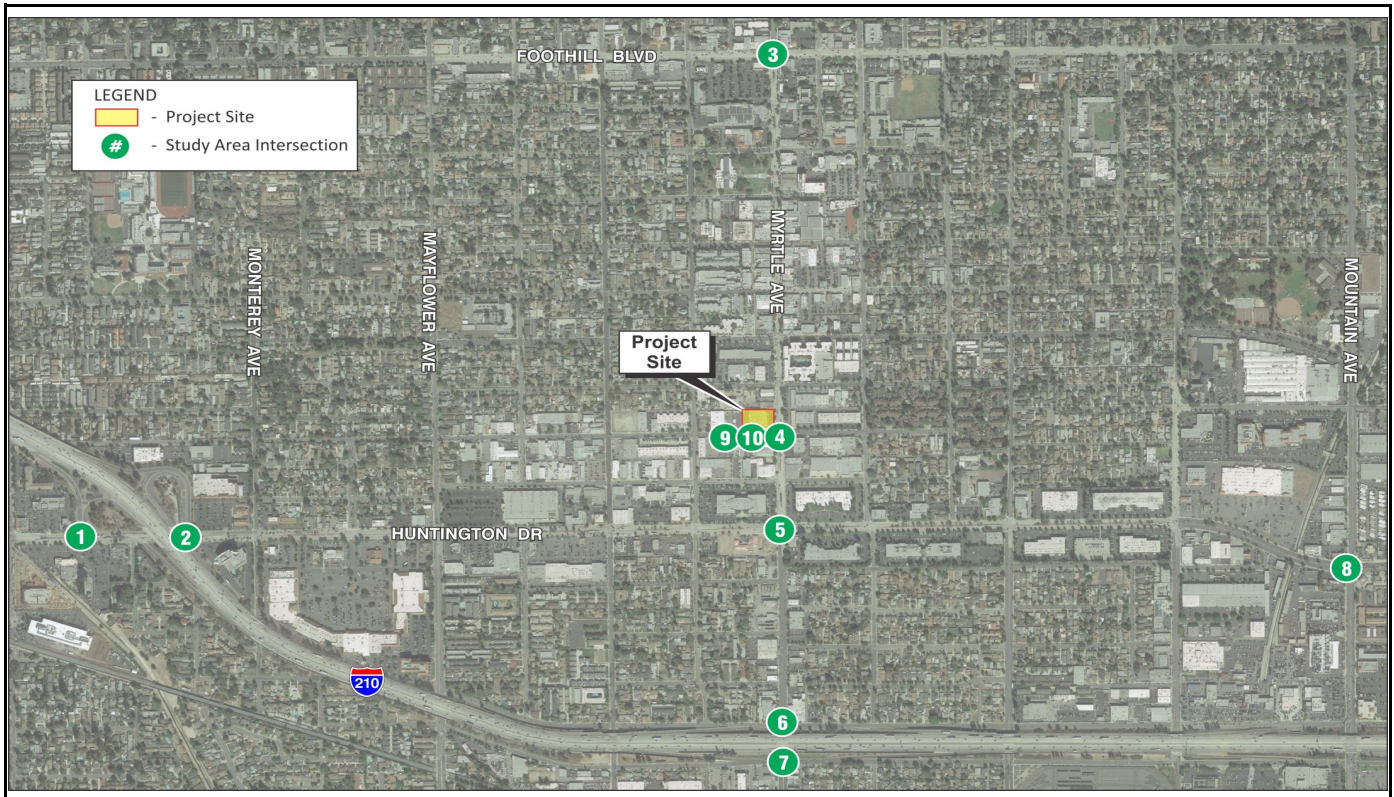
To demonstrate the effect that the project would have on the study area intersections in the existing (2017) condition, an existing (2017) plus project LOS analysis was prepared. Figure 9 displays the existing (2017) plus project peak-hour volumes for the study area intersections. Intersection geometrics reflect current conditions as of 2017.

The existing (2017) and existing (2017) plus project LOS worksheets are provided in Appendix B. A summary of existing (2017) and existing (2017) plus project intersection LOS is presented in Table C, which indicates that all study area intersections currently operate at satisfactory LOS during the a.m. and p.m. peak hours with the exception of Mountain Avenue/Huntington Drive (LOS E during the p.m. peak hour). With the addition of the project to the existing (2017) setting, all study area intersections would continue to operate at satisfactory LOS, with the exception of the previously stated intersection. The increase in ICU does not exceed the thresholds of significance at any of the intersections; therefore, the project can be implemented in the existing (2017) setting with no significant peak-hour intersection impacts. No mitigation measures are required.

CUMULATIVE (2020) TRAFFIC CONDITION

To present a cumulative (2020) traffic condition, a regional ambient growth rate was determined and traffic volumes for other planned or under construction projects in the vicinity were developed, which were added to the existing traffic counts.

To reflect regional growth in the study area, a growth rate of 0.45 percent per year (total of 1.35 percent) was added to the existing (2017) traffic volumes. This growth rate was obtained from the Los Angeles County *Congestion Management Plan* (Los Angeles County Metropolitan Transportation Authority 2010). A list of cumulative projects was provided by the City Planning Division (Appendix C). Significant projects located near the proposed project were analyzed as cumulative projects and are illustrated on Figure 10. Table D shows the cumulative projects and their respective trip generations. It should be noted that there are a total of sixteen cumulative projects listed in Appendix C. Of these sixteen projects, only ten have the ability to measurably affect traffic within the study area. The remaining six projects were included as part of the regional annual growth rate, due to their small project sizes.



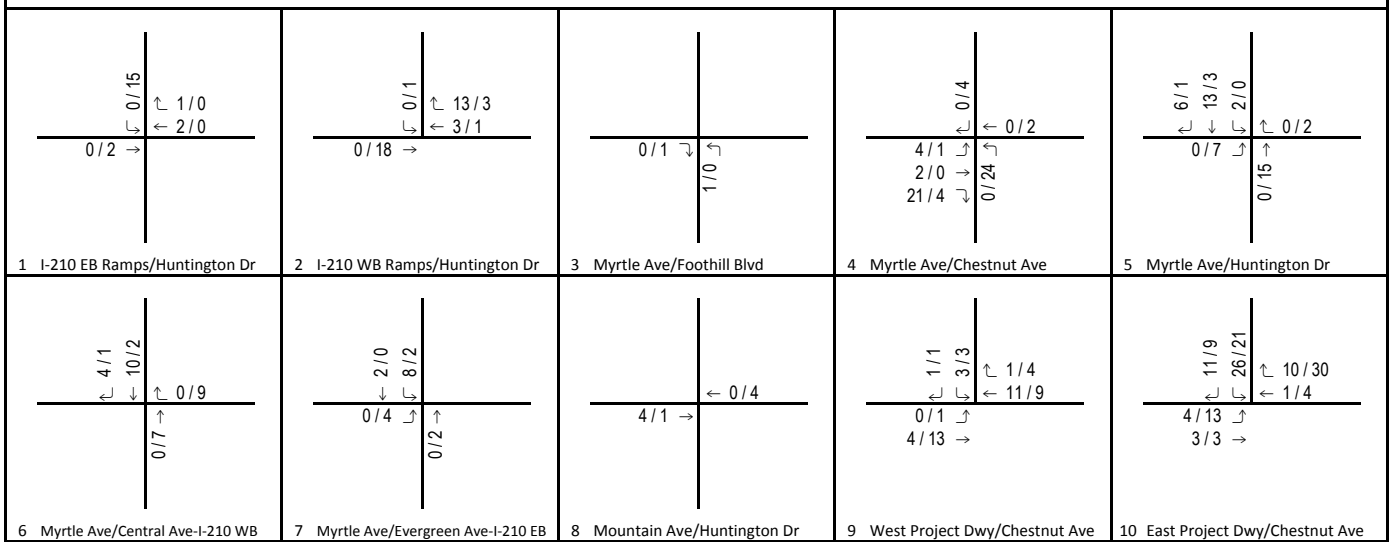
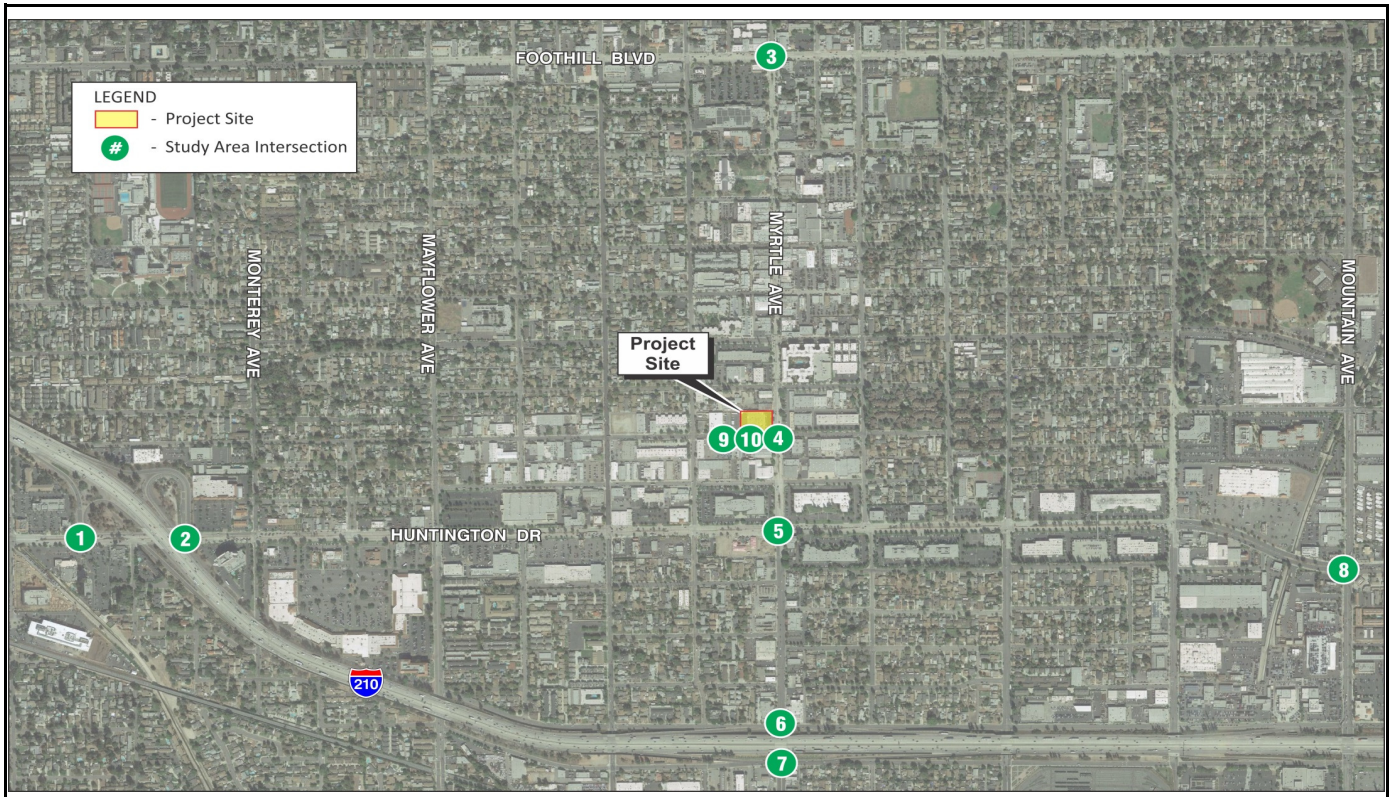
LSA

FIGURE 7

Legend

% Project Trip Distribution Percentages

Avalon Monrovia
Project Trip Distribution



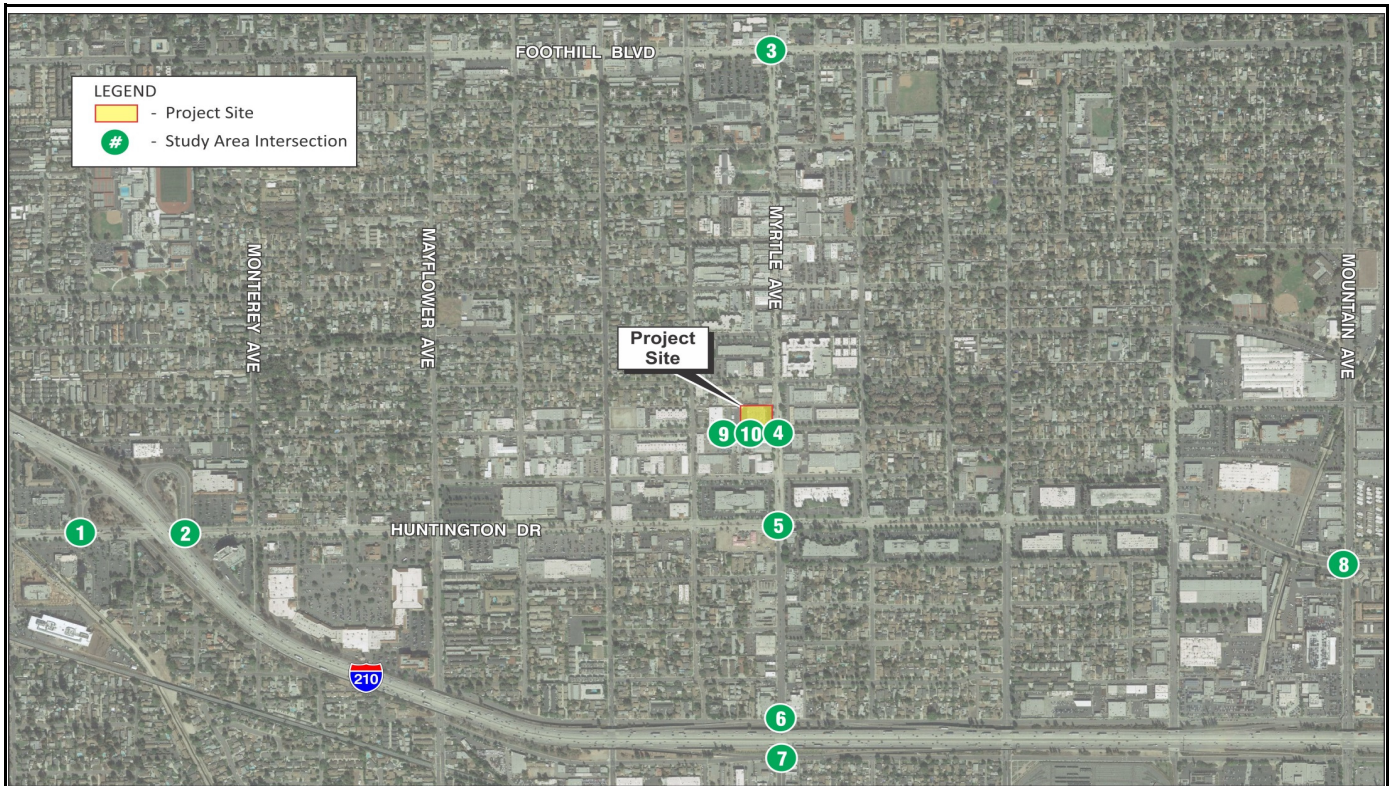
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FIGURE 8

Legend

123 / 456 AM / PM Volume

Avalon Monrovia
 Project Trip Assignment



<table border="1"> <tr> <td>195 / 75</td> <td>110 / 32</td> </tr> <tr> <td>← 9 / 4</td> <td>↑ 1434 / 1047</td> </tr> <tr> <td>751 / 1500</td> <td>8 / 20</td> </tr> <tr> <td>11 / 27</td> <td>37 / 22</td> </tr> <tr> <td></td> <td>29 / 16</td> </tr> <tr> <td></td> <td>251 / 361</td> </tr> </table> <p>1 I-210 EB Ramps/Huntington Dr</p>	195 / 75	110 / 32	← 9 / 4	↑ 1434 / 1047	751 / 1500	8 / 20	11 / 27	37 / 22		29 / 16		251 / 361	<table border="1"> <tr> <td>169 / 361</td> <td>512 / 481</td> </tr> <tr> <td>← 23 / 100</td> <td>↑ 1399 / 760</td> </tr> <tr> <td>31 / 91</td> <td></td> </tr> <tr> <td>566 / 1249</td> <td></td> </tr> </table> <p>2 I-210 WB Ramps/Huntington Dr</p>	169 / 361	512 / 481	← 23 / 100	↑ 1399 / 760	31 / 91		566 / 1249		<table border="1"> <tr> <td>75 / 55</td> <td>13 / 30</td> </tr> <tr> <td>← 48 / 56</td> <td>↑ 1443 / 622</td> </tr> <tr> <td>25 / 64</td> <td>50 / 71</td> </tr> <tr> <td>542 / 1377</td> <td>132 / 129</td> </tr> <tr> <td>53 / 117</td> <td>23 / 48</td> </tr> <tr> <td></td> <td>37 / 90</td> </tr> </table> <p>3 Myrtle Ave/Foothill Blvd</p>	75 / 55	13 / 30	← 48 / 56	↑ 1443 / 622	25 / 64	50 / 71	542 / 1377	132 / 129	53 / 117	23 / 48		37 / 90	<table border="1"> <tr> <td>15 / 22</td> <td>4 / 4</td> </tr> <tr> <td>← 273 / 380</td> <td>↑ 122 / 32</td> </tr> <tr> <td>10 / 29</td> <td>21 / 27</td> </tr> <tr> <td>45 / 153</td> <td>89 / 70</td> </tr> <tr> <td>57 / 136</td> <td>365 / 429</td> </tr> <tr> <td></td> <td>8 / 22</td> </tr> </table> <p>4 Myrtle Ave/Chestnut Ave</p>	15 / 22	4 / 4	← 273 / 380	↑ 122 / 32	10 / 29	21 / 27	45 / 153	89 / 70	57 / 136	365 / 429		8 / 22	<table border="1"> <tr> <td>33 / 59</td> <td>73 / 53</td> </tr> <tr> <td>← 299 / 536</td> <td>↑ 1182 / 685</td> </tr> <tr> <td>41 / 84</td> <td>111 / 137</td> </tr> <tr> <td>385 / 925</td> <td>194 / 139</td> </tr> <tr> <td>110 / 150</td> <td>551 / 375</td> </tr> <tr> <td></td> <td>106 / 137</td> </tr> </table> <p>5 Myrtle Ave/Huntington Dr</p>	33 / 59	73 / 53	← 299 / 536	↑ 1182 / 685	41 / 84	111 / 137	385 / 925	194 / 139	110 / 150	551 / 375		106 / 137
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LSA

FIGURE 9

Legend

123 / 456 AM / PM Volume

Avalon Monrovia
Existing Plus Project Peak-Hour Volumes

Table C: Existing and Existing Plus Project LOS Summary

Intersection		Existing				Plus Project				Peak-Hour Δ ICU/HCM		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM	
		ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS			
1	I-210 EB Ramps/Huntington Drive	0.693	B	0.553	A	0.693	B	0.558	A	0.000	0.005	No
2	I-210 WB Ramps/Huntington Drive	0.616	B	0.599	A	0.617	B	0.602	B	0.001	0.003	No
3	Myrtle Avenue/Foothill Boulevard	0.729	C	0.761	C	0.730	C	0.761	C	0.001	0.000	No
4	Myrtle Avenue/Chestnut Avenue	0.431	A	0.507	A	0.434	A	0.526	A	0.003	0.019	No
5	Myrtle Avenue/Huntington Drive	0.746	C	0.746	C	0.747	C	0.747	C	0.001	0.001	No
6	Myrtle Avenue/Central Avenue and I-210 WB Ramps	0.763	C	0.864	D	0.768	C	0.865	D	0.005	0.001	No
7	Myrtle Avenue/Evergreen Avenue and I-210 EB Ramps	0.662	B	0.823	D	0.667	B	0.825	D	0.005	0.002	No
8	Mountain Avenue/Huntington Drive	0.853	D	0.957	E	0.853	D	0.957	E	0.000	0.000	No

Note: Gray shading indicates values that exceed City of Monrovia's LOS criteria.

Δ = change

EB = eastbound

HCM = Highway Capacity Manual delay (seconds per vehicle)

I-210 = Interstate 210

ICU = Intersection Capacity Utilization ratio

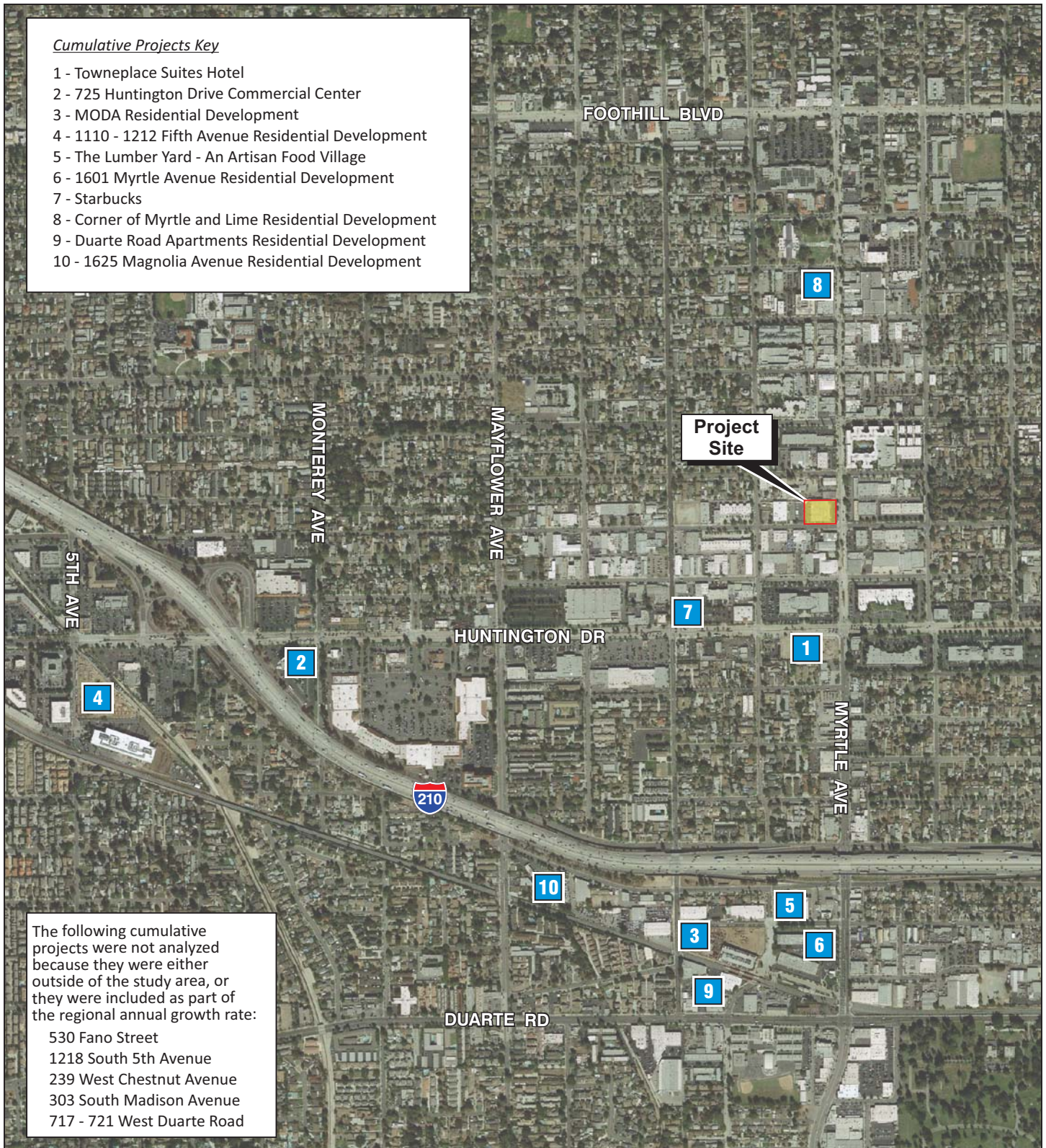
LOS = level of service

N/A = not applicable; driveway not in use

WB = westbound

Cumulative Projects Key

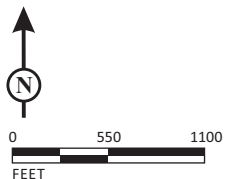
- 1 - Towneplace Suites Hotel
- 2 - 725 Huntington Drive Commercial Center
- 3 - MODA Residential Development
- 4 - 1110 - 1212 Fifth Avenue Residential Development
- 5 - The Lumber Yard - An Artisan Food Village
- 6 - 1601 Myrtle Avenue Residential Development
- 7 - Starbucks
- 8 - Corner of Myrtle and Lime Residential Development
- 9 - Duarte Road Apartments Residential Development
- 10 - 1625 Magnolia Avenue Residential Development



The following cumulative projects were not analyzed because they were either outside of the study area, or they were included as part of the regional annual growth rate:

- 530 Fano Street
- 1218 South 5th Avenue
- 239 West Chestnut Avenue
- 303 South Madison Avenue
- 717 - 721 West Duarte Road

LSA



SOURCE: Google Earth

LEGEND

- Project Site
- # - Cumulative Projects

FIGURE 10

Avalon Monrovia
Cumulative Project Locations

Table D: Cumulative Project Trip Generation Summary

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour				
				In	Out	Total	In	Out	Total		
Trip Rates¹											
General Light Industrial		TSF	4.96	0.62	0.08	0.70	0.08	0.55	0.63		
Apartment		DU	7.32	0.11	0.35	0.46	0.35	0.21	0.56		
High-Turnover Restaurant		TSF	112.18	5.47	4.47	9.94	0.61	0.37	0.98		
Coffee/Donut Shop Without Drive-Through Window ²		TSF	820.38	51.58	49.56	101.14	18.16	18.15	36.31		
Coffee/Donut Shop with Drive-Through Window		TSF	820.38	45.38	43.61	88.99	21.69	21.69	43.38		
Shopping Center		TSF	37.75	0.58	0.36	0.94	1.83	1.98	3.81		
Cumulative Trip Generation											
1	Hotel ³	109	Rooms	891	34	24	58	34	31	65	
2	Shopping Center	98.000	TSF	3,700	57	35	92	179	194	373	
3	Apartment ⁴	261	DU	1,433	22	69	91	69	41	110	
4	Apartment ⁴	154	DU	845	13	40	53	40	24	64	
5 ⁴	High-Turnover Restaurant	12.617	TSF	1,062	52	42	94	6	3	9	
	Coffee/Donut Shop without Drive-Through Window	2.165	TSF	1,332	84	80	164	29	29	59	
	Brewery Manufacturing ⁵	3.477	TSF	13	2	0	2	0	1	1	
	Shopping Center	2.675	TSF	76	1	1	2	4	4	8	
6	Apartment	103	DU	754	11	36	47	36	22	58	
7	Coffee/Donut Shop with Drive-Through Window	2.200	TSF	1,805	100	96	196	48	47	95	
8	Apartment	140	DU	1,025	15	49	64	49	29	78	
9	Apartment ⁵	296	DU	925	-10	80	70	66	7	73	
10	Apartment ⁷	472	DU	2,129	15	143	158	143	69	212	
				Trip Generation	15,990	396	695	1,091	703	501	1,204

Note: Totals may not appear to sum correctly due to rounding.

¹ The following trip rates were referenced from the Institute of Transportation Engineers *Trip Generation Manual*, 10th Edition (2017):

- Land Use Code (110) – General Light Industrial
- Land Use Code (220) – Apartment
- Land Use Code (932) – High-Turnover (Sit-Down) Restaurant
- Land Use Code (936) – Coffee/Donut Shop without Drive-Through Window
- Land Use Code (937) – Coffee/Donut Shop with Drive-Through Window
- Land Use Code (820) – Shopping Center

² ADT for Coffee/Donut Shop Without Drive-Through Window is not available. The ADT was taken from the related land use 937 – Coffee/Donut Shop with Drive-Through Window.

³ The net trip generation was taken from the *Monrovia Hotel Traffic Impact Analysis* (LSA 2017c).

⁴ 25% trip credits have been taken from projects 3, 4, and 5, due to their proximity to the Metro Gold Line Station.

⁵ Brewery Manufacturing land use was analyzed with the General Light Industrial trip rates.

⁶ The net trip generation was taken from the *Duarte Road Apartments Traffic Impact Analysis* (LSA 2017a).

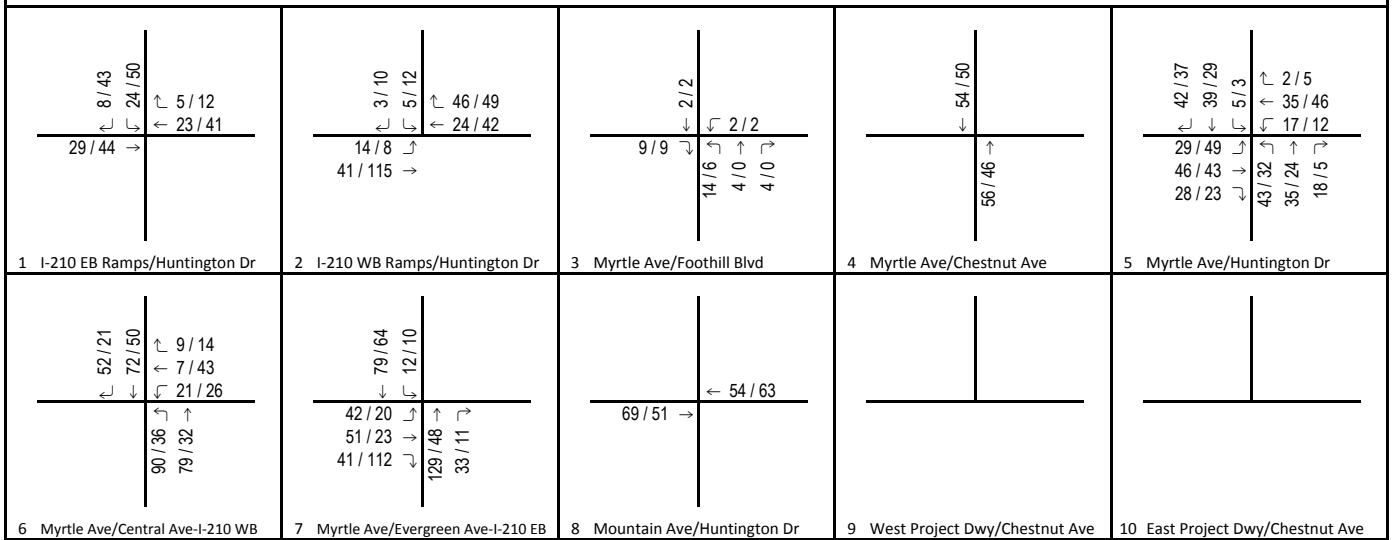
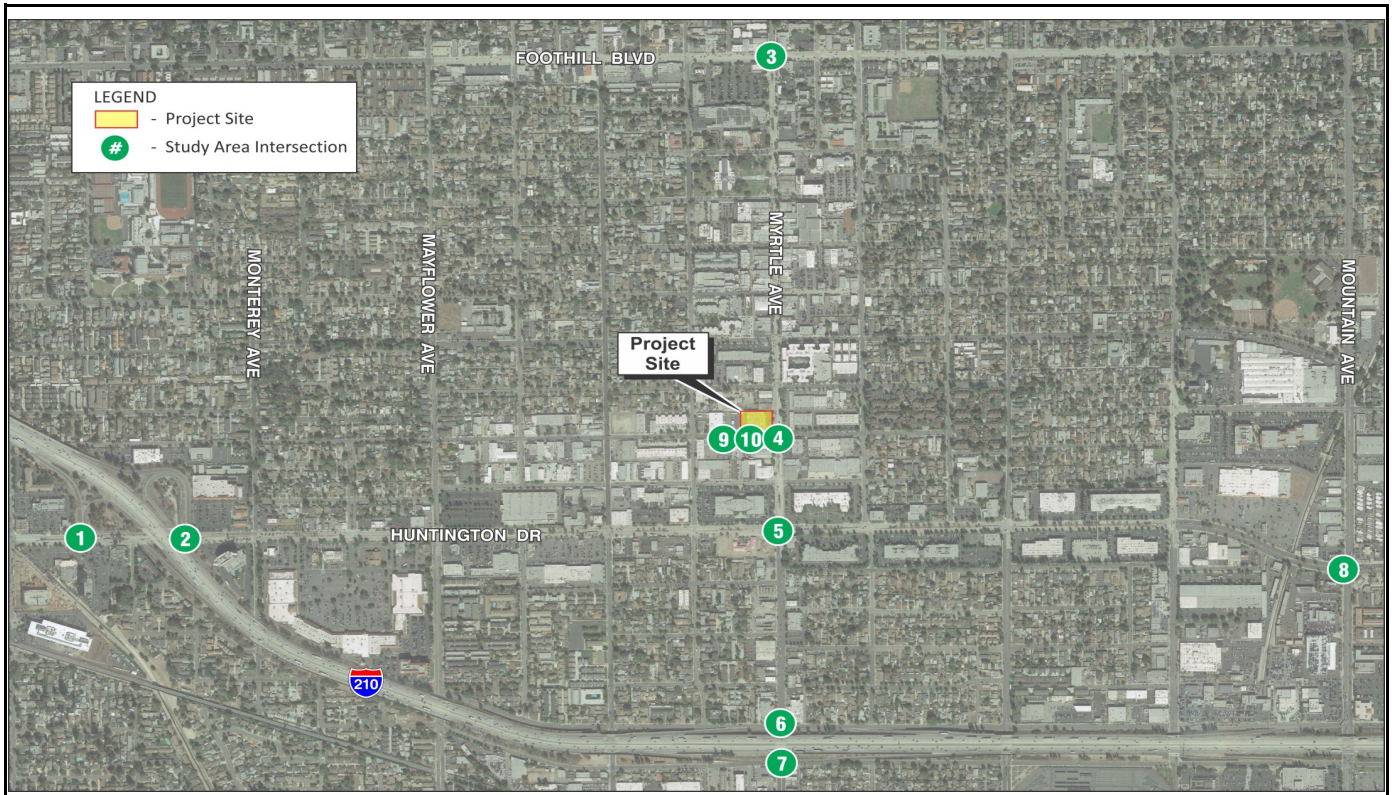
⁷ The net trip generation was taken from the *1625 Magnolia Traffic Impact Analysis* (LSA 2017b).

ADT = average daily traffic

DU = dwelling unit

TSF = thousand square feet

The cumulative project trip distribution was determined based on each project’s land use and location. The resulting combined trip assignment at the study intersections for the cumulative projects is provided on Figure 11. The cumulative condition was developed by adding ambient growth and cumulative project traffic to existing traffic volumes. The resulting cumulative (2020) peak-hour traffic volumes are shown on Figure 12. The cumulative plus project peak-hour traffic



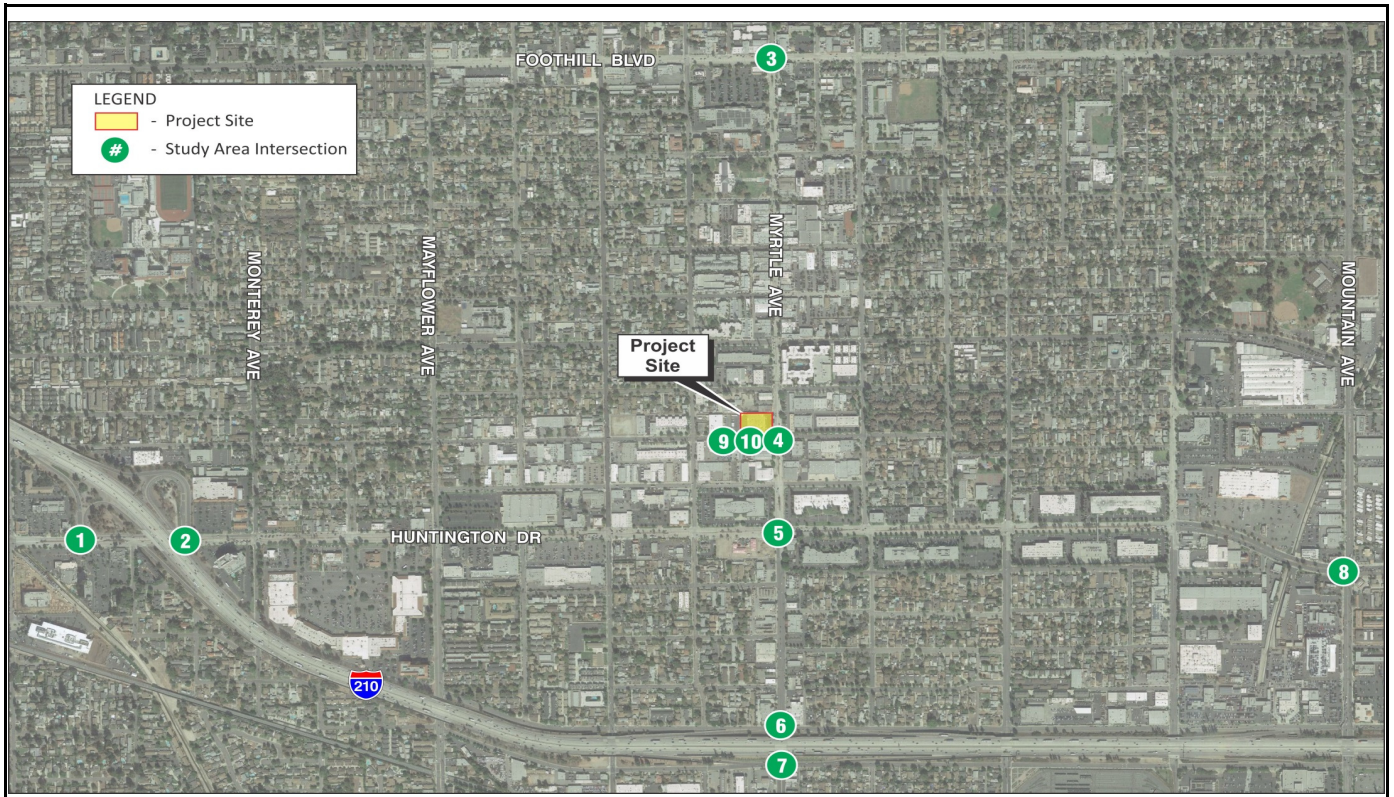
LSA

FIGURE 11

Legend

123 / 456 AM / PM Volume

Avalon Monrovia
Cumulative Project Trip Assignment



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LSA

FIGURE 12

Legend

123 / 456 AM / PM Volume

Avalon Monrovia
Cumulative Peak-Hour Volumes

volumes are shown on Figure 13. In order to assess the project’s potential impact in cumulative conditions, an analysis of cumulative LOS was prepared. This analysis assumes existing intersection geometrics.

As Table E indicates, all study area intersections are anticipated to operate at satisfactory LOS during the cumulative setting with the exception of Myrtle Avenue/Central Avenue – I-210 WB Ramps (LOS E during the p.m. peak hour), Myrtle Avenue/Evergreen Avenue – I-210 EB Ramps (LOS E during the p.m. peak hour), and Mountain Avenue/Huntington Drive (LOS E during the p.m. peak hour). With the addition of the project in the cumulative setting, all study area intersections would continue to operate at satisfactory LOS, with the exception of the previously stated intersections. The increase in ICU does not exceed the thresholds of significance at any of the intersections; therefore, the project can be implemented in the cumulative setting with no significant peak-hour intersection impacts. No mitigation measures are required.

Table E: Cumulative and Cumulative Plus Project LOS Summary

Intersection		Cumulative				Plus Project				Peak-Hour Δ ICU/HCM		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM	
		ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS			
1	I-210 EB Ramps/ Huntington Drive	0.713	C	0.584	A	0.713	C	0.589	A	0.000	0.005	No
2	I-210 WB Ramps/ Huntington Drive	0.641	B	0.648	B	0.642	B	0.650	B	0.001	0.002	No
3	Myrtle Avenue/ Foothill Boulevard	0.748	C	0.780	C	0.748	C	0.780	C	0.000	0.000	No
4	Myrtle Avenue/ Chestnut Avenue	0.469	A	0.544	A	0.472	A	0.562	A	0.003	0.018	No
5	Myrtle Avenue/ Huntington Drive	0.828	D	0.817	D	0.834	D	0.818	D	0.006	0.001	No
6	Myrtle Avenue/ Central Avenue and I-210 WB Ramps	0.872	D	0.946	E	0.876	D	0.947	E	0.004	0.001	No
7	Myrtle Avenue/ Evergreen Avenue and I-210 EB Ramps	0.756	C	0.900	E	0.761	C	0.902	E	0.005	0.002	No
8	Mountain Avenue/ Huntington Drive	0.880	D	0.985	E	0.880	D	0.985	E	0.000	0.000	No

Note: Gray shading indicates values that exceed City of Monrovia’s LOS criteria.

Δ = change

EB = eastbound

HCM = Highway Capacity Manual delay (seconds per vehicle)

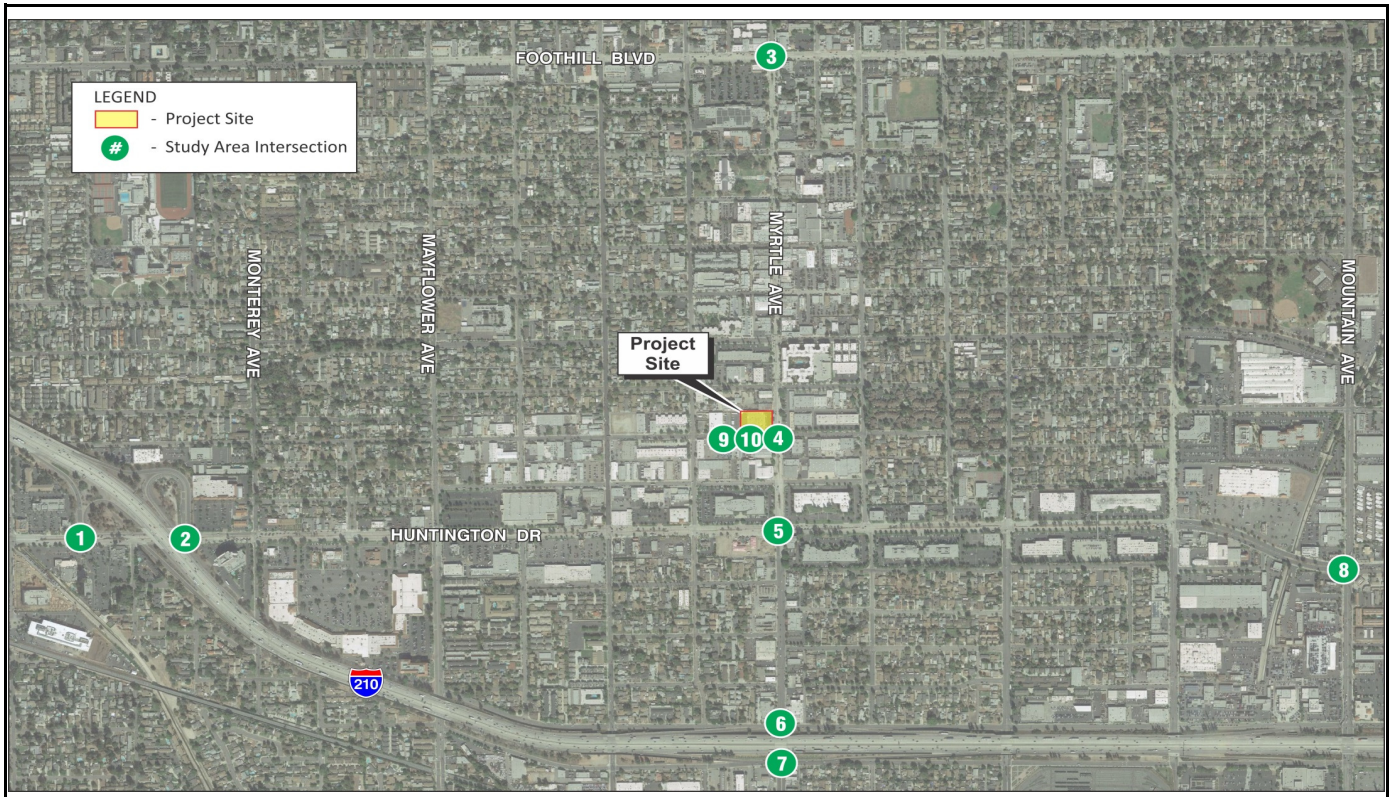
I-210 = Interstate 210

ICU = Intersection Capacity Utilization ratio

LOS = level of service

N/A = not applicable; driveway not in use

WB = westbound



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LSA

FIGURE 13

Legend

123 / 456 AM / PM Volume

Avalon Monrovia
Cumulative Plus Project Peak-Hour Volumes

RAMP INTERSECTION ANALYSIS

Existing (2017) and Existing (2017) Plus Project Ramp Intersection Analysis

To demonstrate the effect that the project would have on the Caltrans jurisdiction ramp intersections in the existing condition, an existing (2017) plus project HCM analysis was prepared.

Appendix D provides the ramp intersection HCM LOS worksheets. Table F presents a summary of existing (2017) and existing (2017) plus project ramp intersections, which indicates that all study area ramp intersections currently operate at satisfactory LOS during the a.m. and p.m. peak hours.

Table F: Existing (2017) and Existing (2017) Plus Project Ramp Intersection Summary

Intersection	Existing				Plus Project				Peak-Hour Δ HCM		Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM	
	HCM	LOS	HCM	LOS	HCM	LOS	HCM	LOS			
1 I-210 EB Ramps/ Huntington Drive	8.7	A	7.2	A	8.7	A	7.3	A	0.0	0.1	No
2 I-210 WB Ramps/ Huntington Drive	10.2	B	12.2	B	10.3	B	12.2	B	0.1	0.0	No
6 Myrtle Avenue/ Central Avenue and I-210 WB Ramps	24.0	C	34.3	C	24.2	C	34.3	C	0.2	0.0	No
7 Myrtle Avenue/ Evergreen Avenue and I-210 EB Ramps	23.4	C	32.2	C	24.0	C	32.3	C	0.6	0.1	No

Δ = change

EB = eastbound

HCM = Highway Capacity Manual delay (seconds per vehicle)

I-210 = Interstate 210

LOS = level of Service

WB = westbound

With the addition of the project in the existing setting, all study area freeway ramp intersections would continue to operate at satisfactory LOS. Therefore, the project can be implemented in the existing setting with no significant peak-hour ramp intersection impacts.

Cumulative and Cumulative Plus Project Ramp Intersection Analysis

To demonstrate the effect that the project would have on the Caltrans jurisdiction ramp intersections in the cumulative (2020) condition, a cumulative plus project HCM analysis was prepared.

Table G presents a summary of cumulative and cumulative plus project ramp intersections, which indicates all study area freeway ramp intersections are projected to operate at satisfactory LOS during the a.m. and p.m. peak hours. With the addition of the project in the cumulative setting, all study area intersections would continue to operate at satisfactory LOS. Therefore, the project can be implemented in the cumulative setting with no significant peak-hour ramp intersection impacts.

Table G: Cumulative and Cumulative Plus Project Ramp Intersection Summary

Intersection	Cumulative				Plus Project				Peak-Hour Δ HCM		Significant Impact?	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM		
	HCM	LOS	HCM	LOS	HCM	LOS	HCM	LOS				
1	I-210 EB Ramps/ Huntington Drive	9.2	A	7.9	A	9.3	A	8.0	A	0.1	0.1	No
2	I-210 WB Ramps/ Huntington Drive	10.8	B	13.8	B	10.9	B	13.9	B	0.1	0.1	No
6	Myrtle Avenue/ Central Avenue and I-210 WB Ramps	41.4	D	46.4	D	41.8	D	46.5	D	0.4	0.1	No
7	Myrtle Avenue/ Evergreen Avenue and I-210 EB Ramps	28.4	C	46.0	D	29.0	C	46.2	D	0.6	0.2	No

Δ = change
EB = eastbound
HCM = Highway Capacity Manual delay (seconds per vehicle)

I-210 = Interstate 210
LOS = level of Service
WB = westbound

SPECIAL ISSUES

Access Analysis

Access to the Avalon Monrovia project site will be provided via two full-access driveways along Chestnut Avenue. Both driveways will have one lane of travel each for inbound and outbound traffic, and will be approximately 25 ft wide. HCM-based intersection analysis has been utilized as the metric to evaluate the adequacy and performance of both unsignalized driveways. Table H presents a summary of the driveway LOS for the existing plus project and cumulative plus project conditions.

Table H: Project Driveway LOS Summary

Intersection	Existing Plus Project				Cumulative Plus Project				
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	HCM	LOS	HCM	LOS	HCM	LOS	HCM	LOS	
9	Western Project Driveway/ Chestnut Avenue	10.4	B	10.9	B	10.4	B	10.9	B
10	Eastern Project Driveway/ Chestnut Avenue	10.7	B	11.3	B	10.7	B	11.3	B

HCM = Highway Capacity Manual delay (seconds per vehicle)
LOS = level of Service

As shown in Table H, the intersections of Western Project Driveway/Chestnut Avenue and Eastern Project Driveway/Chestnut Avenue are anticipated to operate at satisfactory LOS during the a.m. and p.m. peak-hour periods in both the existing (2017) plus project and cumulative plus project conditions.

Sight Distance Analysis

Sight distance has been reviewed at both driveways along Chestnut Avenue. Chestnut Avenue has a speed limit of 25 mph. The Caltrans *Highway Design Manual* (2017) recommends a corner sight distance of 275 feet for a design speed of 25 mph.

More than 275 feet of sight distance is available for both project driveways in both directions. Based on this analysis, no obstructions are anticipated for outbound project vehicles exiting onto Chestnut Avenue.

Queuing Analysis

SimTraffic software was used to analyze whether the eastbound-through lane on Chestnut Avenue could accommodate potential left-turn queues for project trips. SimTraffic is a traffic simulation tool based on Synchro and has been used to demonstrate vehicle interference between closely spaced intersections. No channelization for left-turn movements is proposed. The purpose of this review is to determine whether new left-turn movements would queue and congest the eastbound-through lane along Chestnut Avenue. The distance between the project driveways is approximately 50 feet. The distance between the western project driveway and the existing driveway to the west is approximately 50 feet. Table I presents the results of the queuing analysis for the existing (2017) plus project and cumulative plus project conditions. The queuing analysis worksheets are provided in Appendix E.

Table I: Queuing Analysis

Intersection		Movement	Existing Plus Project 95 th Percentile Queue (ft)		Cumulative Plus Project 95 th Percentile Queue (ft)	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
9	Chestnut Avenue/ Western Project Driveway	EBL	< 25	< 25	< 25	< 25
10	Chestnut Avenue/ Eastern Project Driveway	EBL	< 25	< 25	< 25	< 25

Note: Average vehicle length = 25 ft.
EBL = eastbound left
ft = foot/feet

As shown in Table I, the projected eastbound-left queues at both driveways will be less than one vehicle length. Therefore, project vehicles will be able to enter the project site without affecting the eastbound-through movement on Chestnut Avenue.

Alternative Mobility Modes

The project incorporates design features to accommodate pedestrian circulation on site. Pedestrian traffic is afforded safe travel via sidewalks on the public right-of-way. The proposed project will construct landscape and parking improvements along Myrtle Avenue adjacent to the project site.

The proposed project would relocate the sidewalk along Myrtle Avenue by approximately 4 feet to the west to allow for seven parallel public parking spaces along Myrtle Avenue. The northwestern corner of the intersection of Myrtle Avenue/Chestnut Avenue would be extended by 8 feet, creating a choker at the intersection. This reconstruction would act to protect pedestrians and shadow the parallel parking spaces. The sidewalk adjacent to the project site along Myrtle Avenue would be widened and relocated to accommodate the curb relocation.

Transit facilities are accessible from the project site within a 0.5-mile (mi) radius. In the immediate vicinity, Foothill Transit bus stops are provided at South Primrose Avenue/Walnut Avenue (Line 270) and Huntington Drive/Myrtle Avenue West (Lines 187 and 270). Approximately 10 additional bus stops are within a 0.5 mi radius. These bus routes provide transportation to the neighboring cities of Pasadena, Arcadia, El Monte, Duarte, and Azusa. Additionally, the project site is approximately 0.75 mi northeast of the Metro Gold Line Station. The Foothill Transit bus stops and the train station are accessible via sidewalk and crosswalk connections. The Metro Gold Line provides transportation from Azusa to East Los Angeles via downtown Los Angeles. Figure 14 presents the locations of the transit stations near the project site.

RECOMMENDED IMPROVEMENTS

Based on the results of this analysis, the development of the project can be implemented without significant impacts to the surrounding study area intersections in the existing (2017) or cumulative year horizons. The addition of project traffic to the study area intersections does not exceed City thresholds for performance and is therefore not considered significant. Mitigation measures are not required for project implementation.

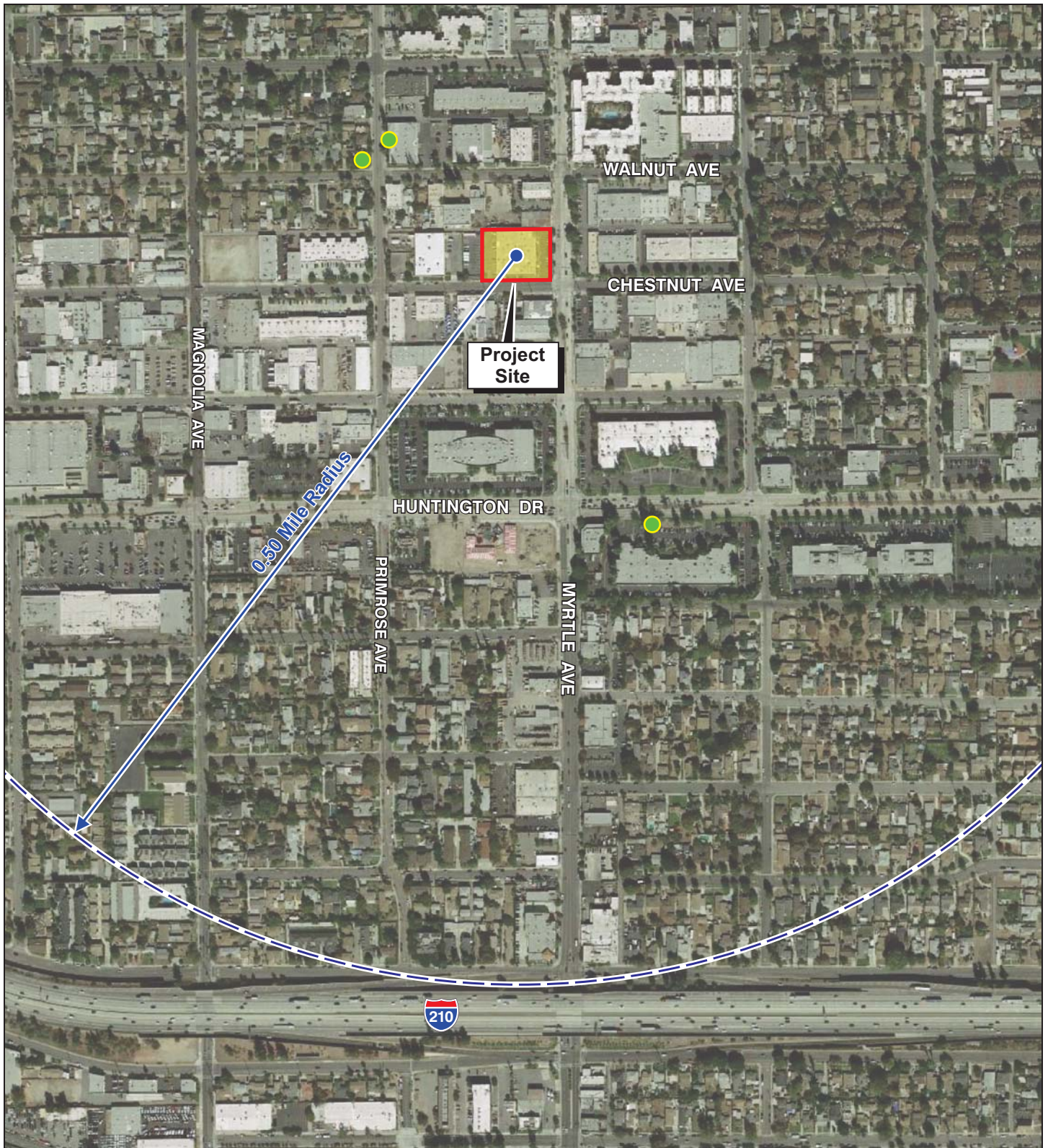


FIGURE 14

LSA

LEGEND

- Project Site
- Foothill Transit Bus Stop



SOURCE: Google Earth

Avalon Monrovia
Transit Locations

APPENDIX A

EXISTING INTERSECTION COUNTS

ITM Peak Hour Summary

Prepared by:

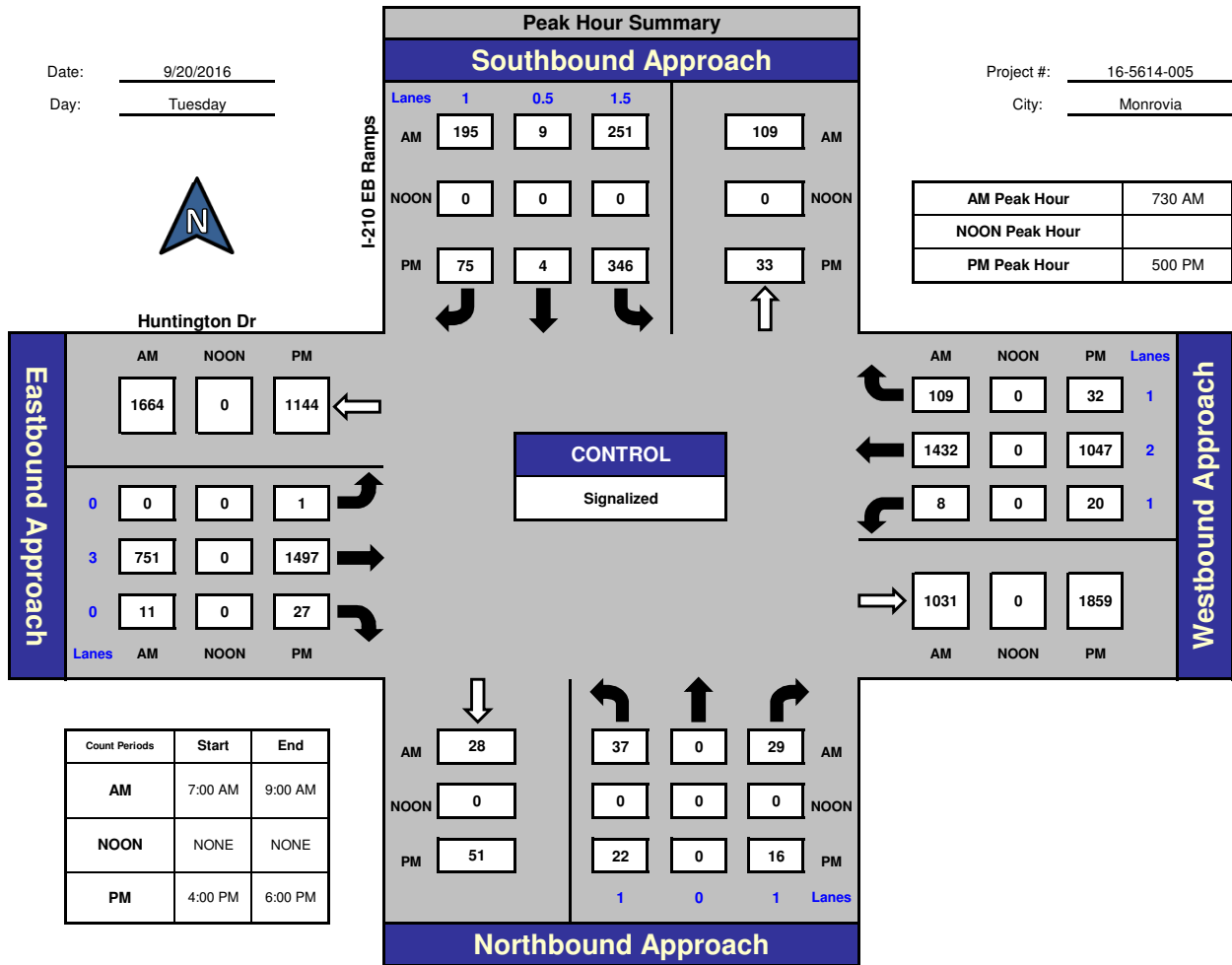


National Data & Surveying Services

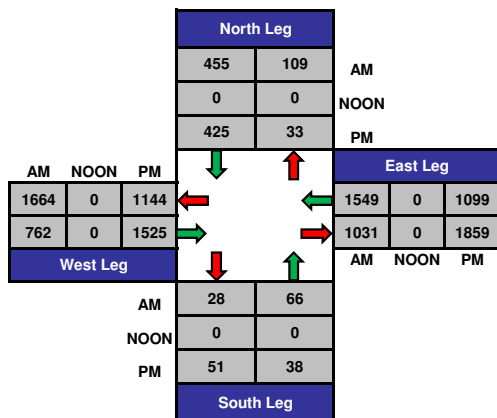
I-210 EB Ramps and Huntington Dr., Monrovia

Date: 9/20/2016
Day: Tuesday

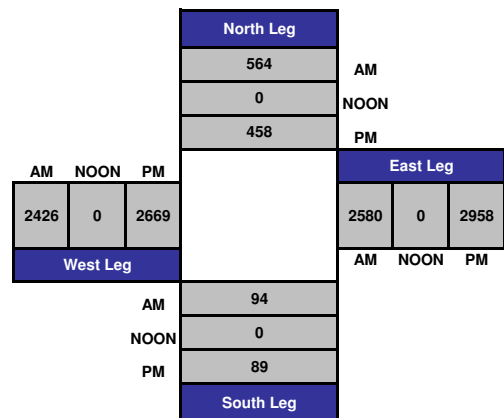
Project #: 16-5614-005
City: Monrovia



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

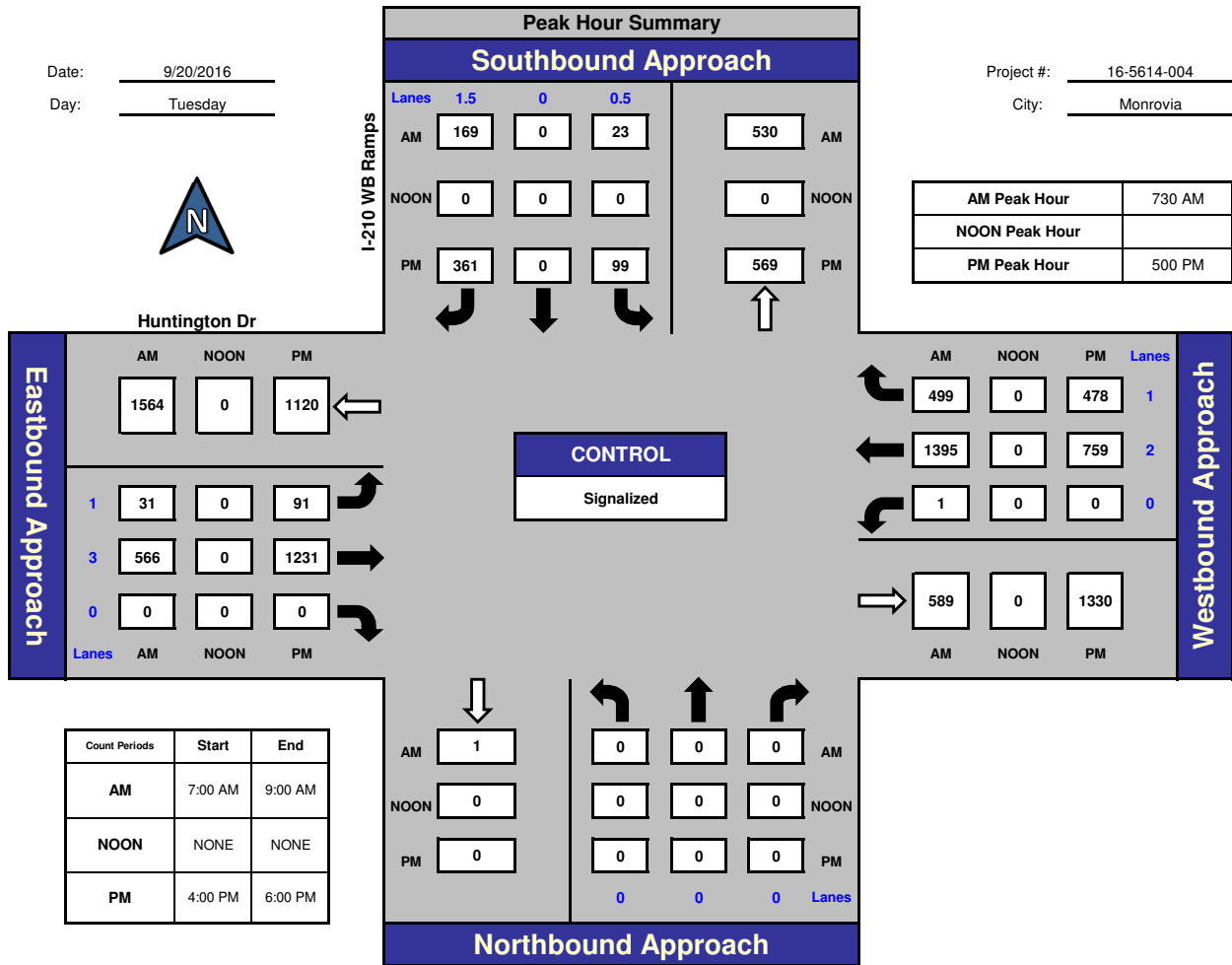


National Data & Surveying Services

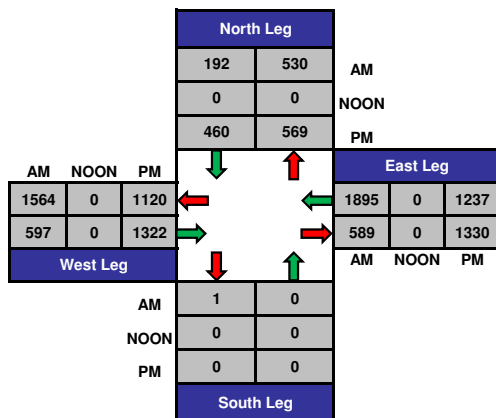
I-210 WB Ramps and Huntington Dr., Monrovia

Date: 9/20/2016
Day: Tuesday

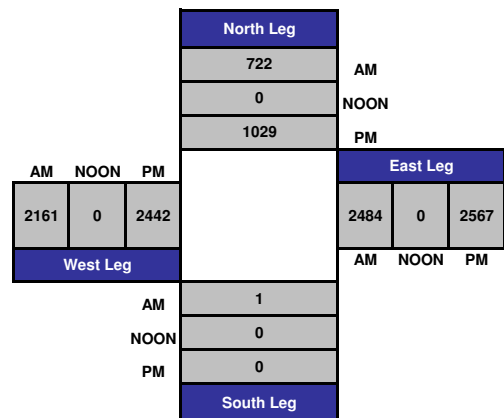
Project #: 16-5614-004
City: Monrovia



Total Ins & Outs



Total Volume Per Leg



Turning Movement Count Report AM

Location ID: 2
 North/South: Myrtle Ave
 East/West: Foothill Blvd

Date: 12/17/15
 City: Monrovia, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	14	10	2	2	325	9	6	1	18	7	84	0	478
7:15	16	12	6	3	379	11	8	1	29	7	67	5	544
7:30	25	5	5	2	383	12	9	7	26	15	105	5	599
7:45	12	15	14	5	360	14	10	10	40	11	193	5	689
8:00	22	16	14	3	321	13	10	5	36	20	177	10	647
8:15	21	17	12	3	249	16	12	5	24	15	128	11	513
8:30	6	15	13	8	278	12	14	4	27	6	109	4	496
8:45	12	13	7	5	268	6	8	12	25	19	94	6	475

Total Volume:	128	103	73	31	2563	93	77	45	225	100	957	46	4441
Approach %	42%	34%	24%	1%	95%	3%	22%	13%	65%	9%	87%	4%	

Peak Hr Begin:	7:15												
PHV	75	48	39	13	1443	50	37	23	131	53	542	25	2479
PHF	0.779			0.948			0.796			0.742			0.899

Turning Movement Count Report PM

Location ID: 2
 North/South: Myrtle Ave
 East/West: Foothill Blvd

Date: 12/17/15
 City: Monrovia, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
16:00	6	11	15	6	130	16	26	19	38	22	330	16	635
16:15	9	13	6	4	140	19	20	12	28	29	369	11	660
16:30	12	13	4	5	130	19	23	14	30	37	350	15	652
16:45	8	11	9	11	151	15	19	12	36	26	338	21	657
17:00	15	14	10	7	158	18	19	12	31	24	341	17	666
17:15	10	22	10	8	138	18	29	15	35	25	325	14	649
17:30	19	10	17	9	161	18	19	11	37	40	346	16	703
17:45	11	10	9	6	165	17	23	10	26	27	365	17	686

Total Volume:	90	104	80	56	1173	140	178	105	261	230	2764	127	5308
Approach %	33%	38%	29%	4%	86%	10%	33%	19%	48%	7%	89%	4%	

Peak Hr Begin:	17:00												
PHV	55	56	46	30	622	71	90	48	129	116	1377	64	2704
PHF	0.853			0.961			0.845			0.952			0.962

ITM Peak Hour Summary

Prepared by:

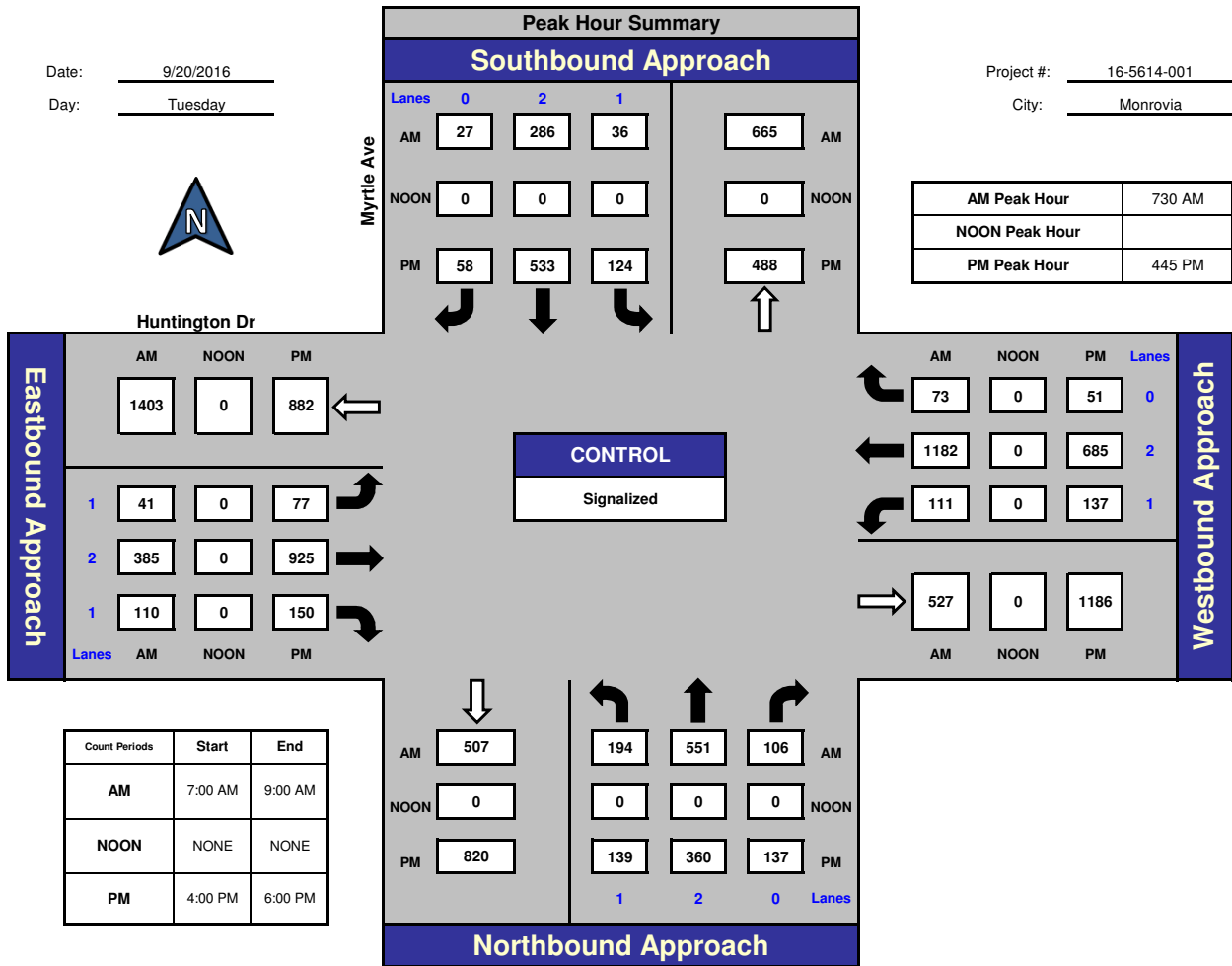


National Data & Surveying Services

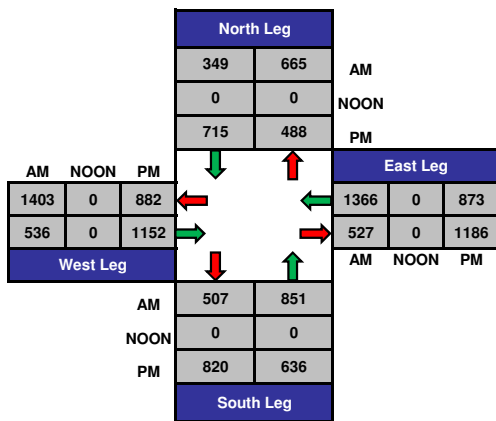
Myrtle Ave and Huntington Dr., Monrovia

Date: 9/20/2016
Day: Tuesday

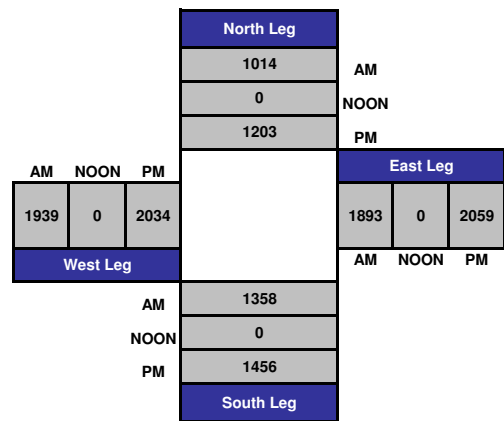
Project #: 16-5614-001
City: Monrovia



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

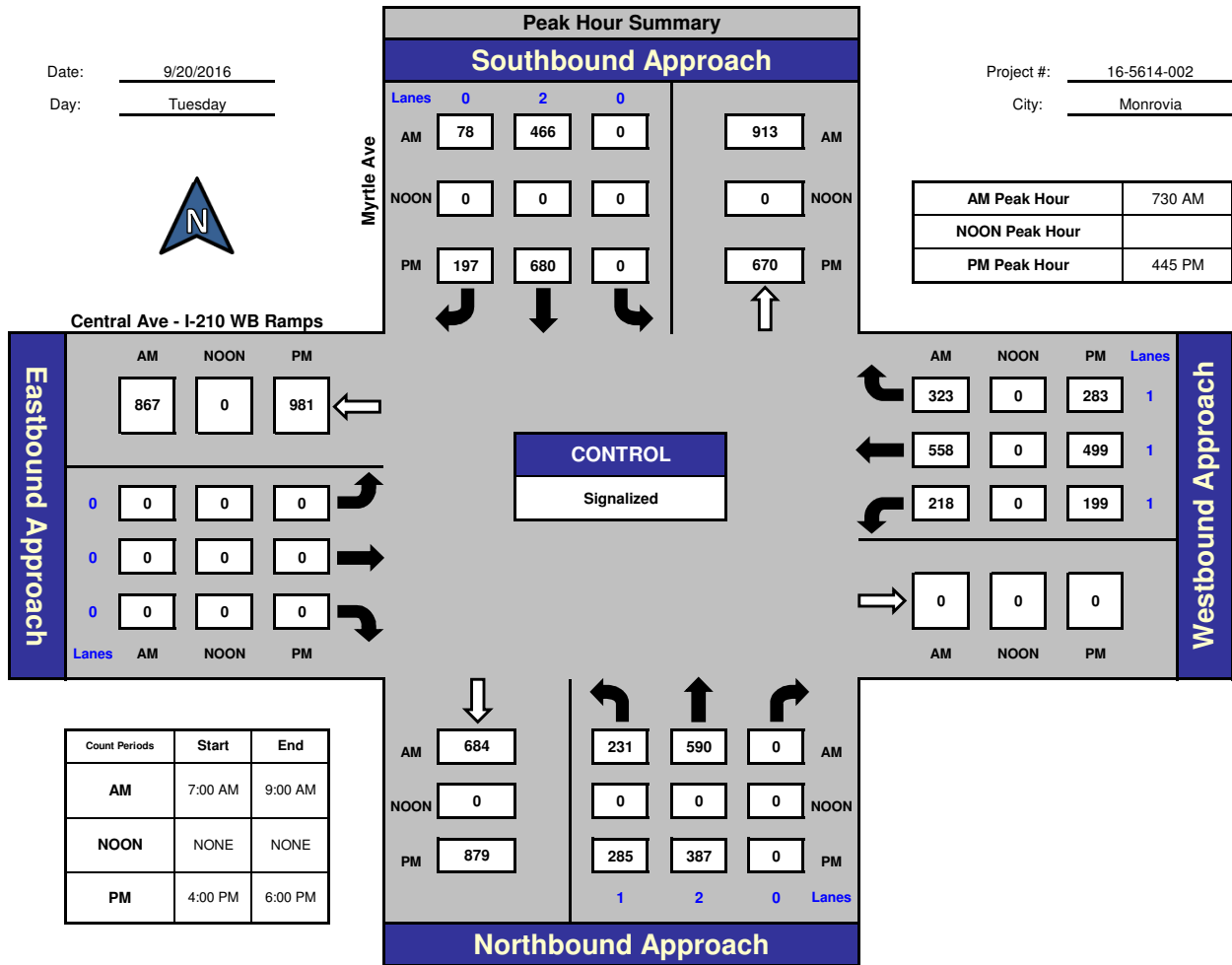


National Data & Surveying Services

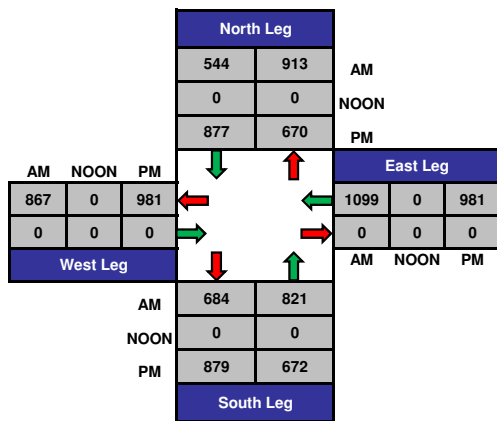
Myrtle Ave and Central Ave - I-210 WB Ramps, Monrovia

Date: 9/20/2016
Day: Tuesday

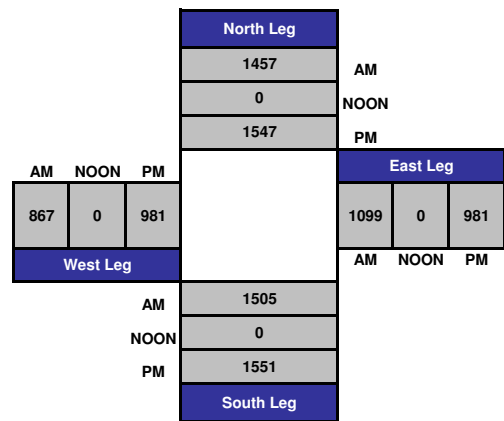
Project #: 16-5614-002
City: Monrovia



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

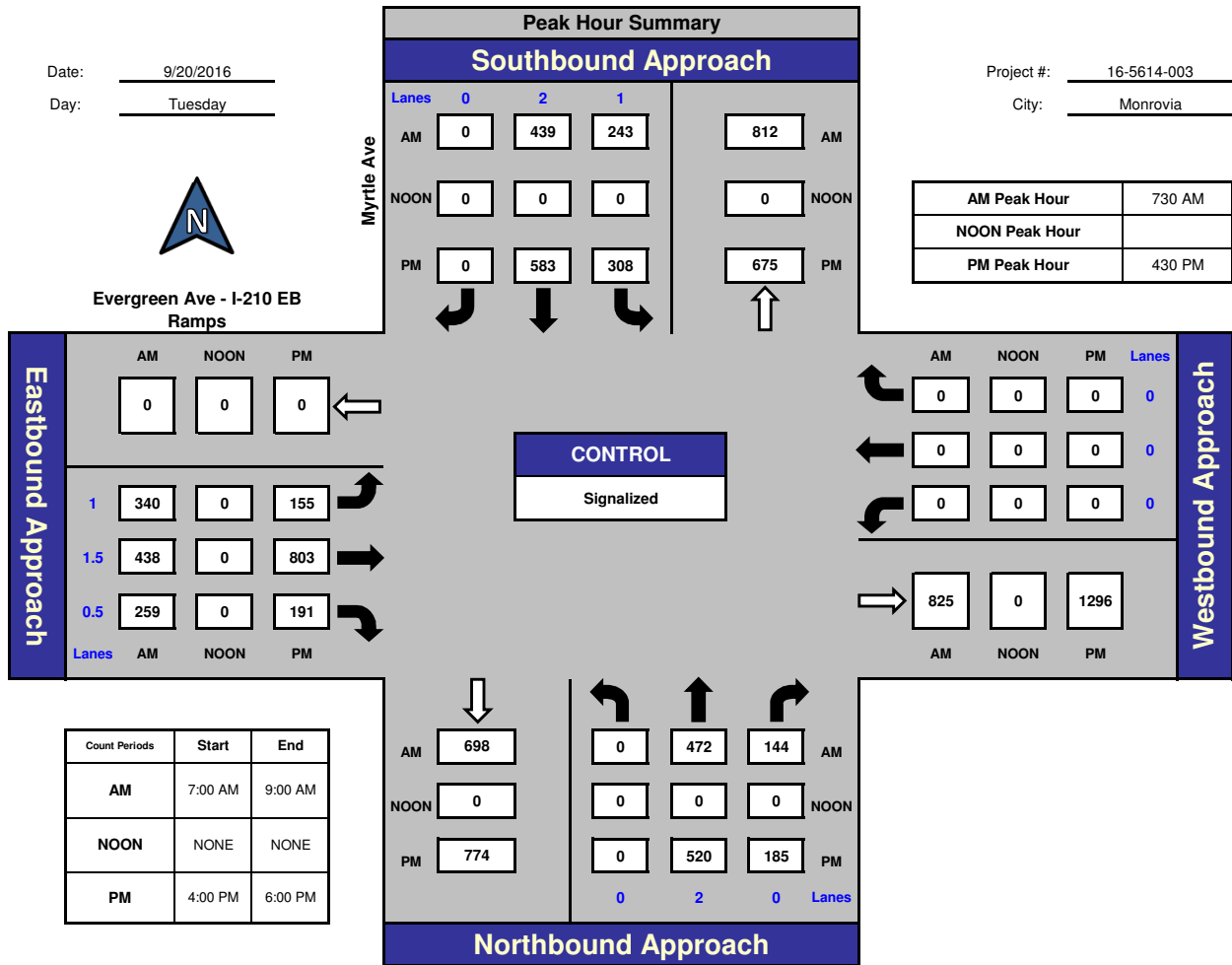


National Data & Surveying Services

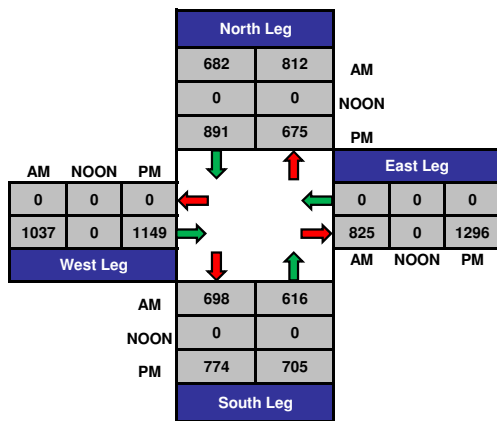
Myrtle Ave and Evergreen Ave - I-210 EB Ramps, Monrovia

Date: 9/20/2016
Day: Tuesday

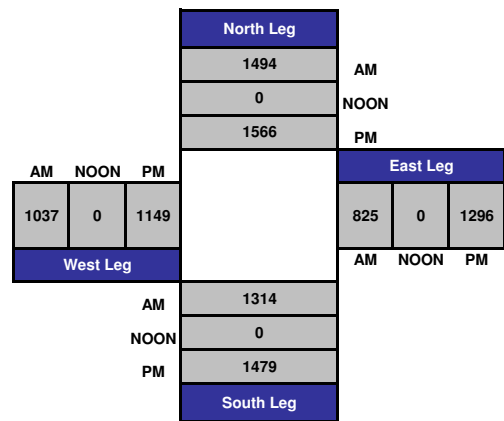
Project #: 16-5614-003
City: Monrovia



Total Ins & Outs



Total Volume Per Leg



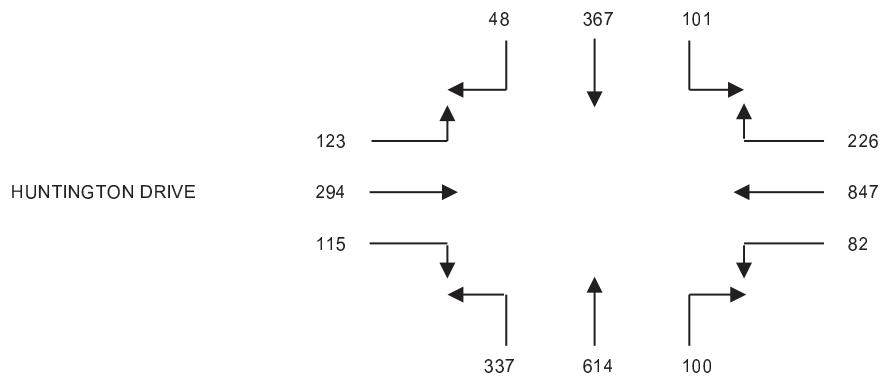
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
 PROJECT: 725 E. HUNTINGTON DRIVE - CITY OF MONROVIA
 DATE: WEDNESDAY, NOVEMBER 30, 2016
 PERIOD: 07:00 AM TO 10:00 AM
 INTERSECTION: N/S MOUNTAIN AVENUE
 E/W HUNTINGTON DRIVE
 FILE NUMBER: 2-AM

15 MINUTE TOTALS	1	2	3	4	5	6	7	8	9	10	11	12
	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	9	73	15	68	256	14	21	98	82	18	40	7
0715-0730	13	65	14	48	277	17	22	108	91	24	56	15
0730-0745	13	87	21	59	232	21	22	132	87	20	50	23
0745-0800	12	111	31	56	219	20	21	135	97	23	75	35
0800-0815	12	97	26	50	180	21	27	163	82	31	88	39
0815-0830	11	72	23	61	216	20	30	184	71	41	81	26
0830-0845	10	70	20	42	205	17	32	142	68	40	60	20
0845-0900	9	80	27	44	206	20	29	136	63	33	80	17
0900-0915	7	78	32	48	175	25	26	152	58	34	82	13
0915-0930	10	65	24	32	156	30	24	127	57	38	72	8
0930-0945	14	76	24	26	145	31	30	104	53	37	89	8
0945-1000	15	83	31	27	122	33	28	101	59	31	70	11

1 HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	
0700-0800	47	336	81	231	984	72	86	473	357	85	221	80	3053
0715-0815	50	360	92	213	908	79	92	538	357	98	269	112	3168
0730-0830	48	367	101	226	847	82	100	614	337	115	294	123	3254
0745-0845	45	350	100	209	820	78	110	624	318	135	304	120	3213
0800-0900	42	319	96	197	807	78	118	625	284	145	309	102	3122
0815-0915	37	300	102	195	802	82	117	614	260	148	303	76	3036
0830-0930	36	293	103	166	742	92	111	557	246	145	294	58	2843
0845-0945	40	299	107	150	682	106	109	519	231	142	323	46	2754
0900-1000	46	302	111	133	598	119	108	484	227	140	313	40	2621

A.M. PEAK HOUR
0730-0830



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
 329 DIAMOND STREET
 ARCADIA, CALIFORNIA 91005
 PH: 626-446-7978
 FAX: 626-446-2877

MOUNTAIN AVENUE

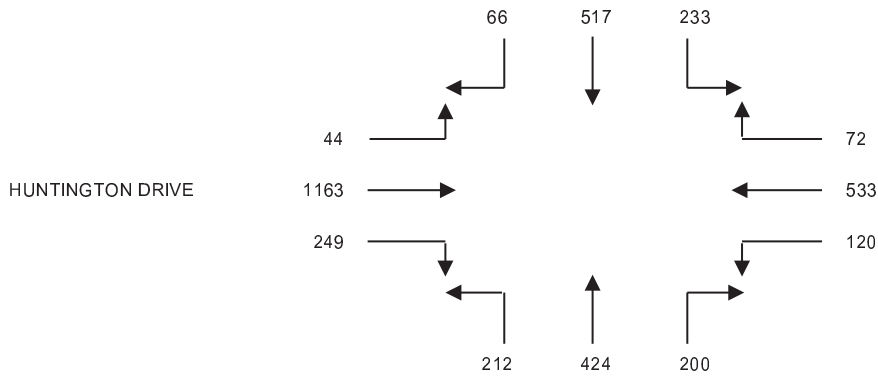
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
 PROJECT: 725 E. HUNTINGTON DRIVE - CITY OF MONROVIA
 DATE: WEDNESDAY, NOVEMBER 30, 2016
 PERIOD: 03:00 PM TO 06:00 PM
 INTERSECTION: N/S MOUNTAIN AVENUE
 E/W HUNTINGTON DRIVE
 FILE NUMBER: 2-PM

15 MINUTE TOTALS	1	2	3	4	5	6	7	8	9	10	11	12
	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0300-0315	9	116	52	30	153	49	50	83	41	50	222	16
0315-0330	8	105	51	31	152	41	55	89	43	52	206	13
0330-0345	10	102	53	26	133	31	33	74	33	57	228	21
0345-0400	13	91	53	33	123	43	37	86	47	42	231	15
0400-0415	13	107	53	20	109	30	43	93	30	59	276	14
0415-0430	20	135	65	35	125	42	52	85	35	52	254	17
0430-0445	24	112	57	20	106	32	41	76	41	61	262	16
0445-0500	17	120	64	14	137	29	54	101	58	47	260	10
0500-0515	10	148	57	19	139	29	44	102	44	69	311	11
0515-0530	16	148	61	19	146	33	56	112	54	73	315	14
0530-0545	23	101	51	20	111	29	46	109	56	60	277	9
0545-0600	15	122	61	22	118	33	50	119	58	50	241	9

1 HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	
0300-0400	40	414	209	120	561	164	175	332	164	201	887	65	3332
0315-0415	44	405	210	110	517	145	168	342	153	210	941	63	3308
0330-0430	56	435	224	114	490	146	165	338	145	210	989	67	3379
0345-0445	70	445	228	108	463	147	173	340	153	214	1023	62	3426
0400-0500	74	474	239	89	477	133	190	355	164	219	1052	57	3523
0415-0515	71	515	243	88	507	132	191	364	178	229	1087	54	3659
0430-0530	67	528	239	72	528	123	195	391	197	250	1148	51	3789
0445-0545	66	517	233	72	533	120	200	424	212	249	1163	44	3833
0500-0600	64	519	230	80	514	124	196	442	212	252	1144	43	3820

P.M. PEAK HOUR
0445-0545



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
 329 DIAMOND STREET
 ARCADIA, CALIFORNIA 91005
 PH: 626-446-7978
 FAX: 626-446-2877

MOUNTAIN AVENUE

APPENDIX B

LOS WORKSHEETS

Avalon Monrovia
AVL1701
Existing AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 I-210 EB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.693
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include I-210 EB Ramps and Huntington Drive with various movement details.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

Avalon Monrovia
AVL1701
Existing AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 I-210 WB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.616
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: B

Street Name: I-210 WB Ramps Huntington Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 0 0 1! 0 1 1 0 3 0 0 0 0 0 2 0 1

Volume Module:
Base Vol: 0 0 0 23 0 169 31 566 0 0 1396 499
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 23 0 169 31 566 0 0 1396 499
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 23 0 169 31 566 0 0 1396 499
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 23 0 169 31 566 0 0 1396 499
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 23 0 169 31 566 0 0 1396 499

Saturation Flow Module:
Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 0.24 0.00 1.76 1.00 3.00 0.00 0.00 2.00 1.00
Final Sat.: 0 0 0 383 0 2817 1600 4800 0 0 3200 1600

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.06 0.00 0.06 0.02 0.12 0.00 0.00 0.44 0.31
Crit Moves: **** *

Avalon Monrovia
AVL1701
Existing AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Myrtle Avenue/Foothill Boulevard

Cycle (sec): 100 Critical Vol./Cap.(X): 0.729
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Myrtle Avenue and Foothill Boulevard with North, South, East, and West bounds.

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

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

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves.

Avalon Monrovia
AVL1701
Existing AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Myrtle Avenue/Chestnut Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.329
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Table with columns for Street Name (Myrtle Avenue, Chestnut Avenue), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for each approach.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat for each approach.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for each approach.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Myrtle Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.746
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Myrtle Avenue and Huntington Drive with various movement details.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Myrtle Avenue/Central Avenue - I-210 WB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.763
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: C

Street Name: Myrtle Avenue Central Avenue - I-210 WB Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

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

Volume Module:
Base Vol: 231 590 0 0 466 78 0 0 0 218 558 323
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 231 590 0 0 466 78 0 0 0 218 558 323
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 231 590 0 0 466 78 0 0 0 218 558 323
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 231 590 0 0 466 78 0 0 0 218 558 323
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 231 590 0 0 466 78 0 0 0 218 558 323

Saturation Flow Module:
Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 1.71 0.29 0.00 0.00 0.00 1.00 1.00 1.00
Final Sat.: 1600 3200 0 0 2741 459 0 0 0 1600 1600 1600

Capacity Analysis Module:
Vol/Sat: 0.14 0.18 0.00 0.00 0.17 0.17 0.00 0.00 0.00 0.14 0.35 0.20
Crit Moves: **** **** ****

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Existing AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Myrtle Avenue/Evergreen Avenue - I-210 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.662
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: B

Street Name: Myrtle Avenue Evergreen Avenue - I-210 EB Ramps

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

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

Volume Module:

Base Vol: 0 472 144 243 439 0 340 438 259 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 472 144 243 439 0 340 438 259 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 472 144 243 439 0 340 438 259 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 472 144 243 439 0 340 438 259 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 472 144 243 439 0 340 438 259 0 0 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 1.53 0.47 1.00 2.00 0.00 1.00 1.26 0.74 0.00 0.00 0.00
Final Sat.: 0 2452 748 1600 3200 0 1600 2011 1189 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.19 0.19 0.15 0.14 0.00 0.21 0.22 0.22 0.00 0.00 0.00
Crit Moves: ****

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Mountain Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.753
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 92 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Mountain Avenue and Huntington Drive with North, South, East, and West Bound movements.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

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Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	85	226	0	0	0
Future Vol, veh/h	0	85	226	0	0	0
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, %	2	2	2	2	2	2
Mvmt Flow	0	92	246	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	246	0	-	0	338 246
Stage 1	-	-	-	-	246 -
Stage 2	-	-	-	-	92 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1320	-	-	-	658 793
Stage 1	-	-	-	-	795 -
Stage 2	-	-	-	-	932 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1320	-	-	-	658 793
Mov Cap-2 Maneuver	-	-	-	-	658 -
Stage 1	-	-	-	-	795 -
Stage 2	-	-	-	-	932 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1320	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

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Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	85	226	0	0	0
Future Vol, veh/h	0	85	226	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	92	246	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	246	0	-	0	338 246
Stage 1	-	-	-	-	246 -
Stage 2	-	-	-	-	92 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1320	-	-	-	658 793
Stage 1	-	-	-	-	795 -
Stage 2	-	-	-	-	932 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1320	-	-	-	658 793
Mov Cap-2 Maneuver	-	-	-	-	658 -
Stage 1	-	-	-	-	795 -
Stage 2	-	-	-	-	932 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1320	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 I-210 EB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.553
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-210 EB Ramps and Huntington Drive with various movement details.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include I-210 EB Ramps and Huntington Drive.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows include I-210 EB Ramps and Huntington Drive.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves. Rows include I-210 EB Ramps and Huntington Drive.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 I-210 WB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.599
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: A

Street Name: I-210 WB Ramps Huntington Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 0 0 1! 0 1 1 0 3 0 0 0 0 0 2 0 1

Volume Module:
Base Vol: 0 0 0 99 0 361 91 1231 0 0 759 478
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 99 0 361 91 1231 0 0 759 478
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 99 0 361 91 1231 0 0 759 478
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 99 0 361 91 1231 0 0 759 478
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 99 0 361 91 1231 0 0 759 478

Saturation Flow Module:
Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 0.43 0.00 1.57 1.00 3.00 0.00 0.00 2.00 1.00
Final Sat.: 0 0 0 689 0 2511 1600 4800 0 0 3200 1600

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.14 0.00 0.14 0.06 0.26 0.00 0.00 0.24 0.30
Crit Moves: **** *

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Existing PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Myrtle Avenue/Foothill Boulevard

Cycle (sec): 100 Critical Vol./Cap.(X): 0.761
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: C

Table with columns for Street Name (Myrtle Avenue, Foothill Boulevard), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

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

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

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves.

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ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Myrtle Avenue/Chestnut Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.407
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Myrtle Avenue and Chestnut Avenue with North and South Bound movements.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

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Existing PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Myrtle Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.746
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Myrtle Avenue and Huntington Drive with various traffic movements and signal settings.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Myrtle Avenue/Central Avenue - I-210 WB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.864
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 85 Level Of Service: D

Street Name: Myrtle Avenue Central Avenue - I-210 WB Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

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

Volume Module:
Base Vol: 285 387 0 0 680 197 0 0 0 199 499 283
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 285 387 0 0 680 197 0 0 0 199 499 283
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 285 387 0 0 680 197 0 0 0 199 499 283
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 285 387 0 0 680 197 0 0 0 199 499 283
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 285 387 0 0 680 197 0 0 0 199 499 283

Saturation Flow Module:
Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 1.55 0.45 0.00 0.00 0.00 1.00 1.00 1.00
Final Sat.: 1600 3200 0 0 2481 719 0 0 0 1600 1600 1600

Capacity Analysis Module:
Vol/Sat: 0.18 0.12 0.00 0.00 0.27 0.27 0.00 0.00 0.00 0.12 0.31 0.18
Crit Moves: **** **** ****

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Myrtle Avenue/Evergreen Avenue - I-210 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.823
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 72 Level Of Service: D

Street Name: Myrtle Avenue Evergreen Avenue - I-210 EB Ramps

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

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

Volume Module:

Base Vol: 0 520 185 308 583 0 155 803 191 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 520 185 308 583 0 155 803 191 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 520 185 308 583 0 155 803 191 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 520 185 308 583 0 155 803 191 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 520 185 308 583 0 155 803 191 0 0 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 1.48 0.52 1.00 2.00 0.00 1.00 1.62 0.38 0.00 0.00 0.00
Final Sat.: 0 2360 840 1600 3200 0 1600 2585 615 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.22 0.22 0.19 0.18 0.00 0.10 0.31 0.31 0.00 0.00 0.00
Crit Moves: ****

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Mountain Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.857
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 159 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for Mountain Avenue and Huntington Drive.

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

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

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Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	313	94	0	0	0
Future Vol, veh/h	0	313	94	0	0	0
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, %	2	2	2	2	2	2
Mvmt Flow	0	340	102	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	102	0	-	0	442 102
Stage 1	-	-	-	-	102 -
Stage 2	-	-	-	-	340 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1490	-	-	-	573 953
Stage 1	-	-	-	-	922 -
Stage 2	-	-	-	-	721 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1490	-	-	-	573 953
Mov Cap-2 Maneuver	-	-	-	-	573 -
Stage 1	-	-	-	-	922 -
Stage 2	-	-	-	-	721 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1490	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 2010 TWSC
 10: Chestnut Avenue & Eastern Project Driveway

01/25/2018

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	313	94	0	0	0
Future Vol, veh/h	0	313	94	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	340	102	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	102	0	-	0	442 102
Stage 1	-	-	-	-	102 -
Stage 2	-	-	-	-	340 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1490	-	-	-	573 953
Stage 1	-	-	-	-	922 -
Stage 2	-	-	-	-	721 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1490	-	-	-	573 953
Mov Cap-2 Maneuver	-	-	-	-	573 -
Stage 1	-	-	-	-	922 -
Stage 2	-	-	-	-	721 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1490	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Avalon Monrovia
 AVL1701
 Existing Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 I-210 EB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.693
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 49 Level Of Service: B

Street Name:	I-210 EB Ramps						Huntington Drive					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	0	0	1	0	0	2	1	0	2

Volume Module:

Base Vol:	37	0	29	251	9	195	0	751	11	8	1434	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	0	29	251	9	195	0	751	11	8	1434	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	37	0	29	251	9	195	0	751	11	8	1434	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	0	29	251	9	195	0	751	11	8	1434	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	37	0	29	251	9	195	0	751	11	8	1434	0

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	1.93	0.07	1.00	0.00	2.96	0.04	1.00	2.00	1.00
Final Sat.:	1600	0	1600	3089	111	1600	0	4731	69	1600	3200	1600

Capacity Analysis Module:

Vol/Sat:	0.02	0.00	0.02	0.08	0.08	0.12	0.00	0.16	0.16	0.01	0.45	0.00
Crit Moves:	****					****	****			****		

Avalon Monrovia
 AVL1701
 Existing Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 I-210 WB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.617
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 41 Level Of Service: B

Street Name:	I-210 WB Ramps						Huntington Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	0	1	1	0	3	0	0	2

Volume Module:

Base Vol:	0	0	0	23	0	169	31	566	0	0	1399	512
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	23	0	169	31	566	0	0	1399	512
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	23	0	169	31	566	0	0	1399	512
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	23	0	169	31	566	0	0	1399	512
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	23	0	169	31	566	0	0	1399	512

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.24	0.00	1.76	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	383	0	2817	1600	4800	0	0	3200	1600

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.06	0.02	0.12	0.00	0.00	0.44	0.32
Crit Moves:				****			****			****		

Avalon Monrovia
 AVL1701
 Existing Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Myrtle Avenue/Foothill Boulevard

Cycle (sec): 100 Critical Vol./Cap.(X): 0.730
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 54 Level Of Service: C

Street Name:	Myrtle Avenue						Foothill Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module:

Base Vol:	132	23	37	39	48	75	25	542	53	50	1443	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	132	23	37	39	48	75	25	542	53	50	1443	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	132	23	37	39	48	75	25	542	53	50	1443	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	23	37	39	48	75	25	542	53	50	1443	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	132	23	37	39	48	75	25	542	53	50	1443	13

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.38	0.62	1.00	0.39	0.61	1.00	1.82	0.18	1.00	1.98	0.02
Final Sat.:	1600	613	987	1600	624	976	1600	2915	285	1600	3171	29

Capacity Analysis Module:

Vol/Sat:	0.08	0.04	0.04	0.02	0.08	0.08	0.02	0.19	0.19	0.03	0.46	0.45
Crit Moves:	****			****			****			****		

Avalon Monrovia
 AVL1701
 Existing Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Myrtle Avenue/Chestnut Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.331
 Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 22 Level Of Service: A

Street Name:	Myrtle Avenue						Chestnut Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	0	0	1	0	0	1	0

Volume Module:

Base Vol:	89	365	8	5	273	15	10	45	57	21	122	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	89	365	8	5	273	15	10	45	57	21	122	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	89	365	8	5	273	15	10	45	57	21	122	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	365	8	5	273	15	10	45	57	21	122	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	365	8	5	273	15	10	45	57	21	122	4

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.96	0.04	1.00	0.95	0.05	0.18	0.82	1.00	0.15	0.85	1.00
Final Sat.:	1600	3131	69	1600	1517	83	291	1309	1600	235	1365	1600

Capacity Analysis Module:

Vol/Sat:	0.06	0.12	0.12	0.00	0.18	0.18	0.01	0.03	0.04	0.01	0.09	0.00
Crit Moves:	****			****			****			****		

Avalon Monrovia
 AVL1701
 Existing Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Myrtle Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.747
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 57 Level Of Service: C

Street Name:	Myrtle Avenue						Huntington Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	1

Volume Module:

Base Vol:	194	551	106	38	299	33	41	385	110	111	1182	73
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	194	551	106	38	299	33	41	385	110	111	1182	73
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	194	551	106	38	299	33	41	385	110	111	1182	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	194	551	106	38	299	33	41	385	110	111	1182	73
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	194	551	106	38	299	33	41	385	110	111	1182	73

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.68	0.32	1.00	1.80	0.20	1.00	2.00	1.00	1.00	1.88	0.12
Final Sat.:	1600	2684	516	1600	2882	318	1600	3200	1600	1600	3014	186

Capacity Analysis Module:

Vol/Sat:	0.12	0.21	0.21	0.02	0.10	0.10	0.03	0.12	0.07	0.07	0.39	0.39
Crit Moves:	****			****			****			****		

Avalon Monrovia
 AVL1701
 Existing Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Myrtle Avenue/Central Avenue - I-210 WB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.768
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 60 Level Of Service: C

Street Name: Myrtle Avenue Central Avenue - I-210 WB Ramps
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

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

Volume Module:

Base Vol:	231	590	0	0	476	82	0	0	0	218	558	323
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	231	590	0	0	476	82	0	0	0	218	558	323
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	231	590	0	0	476	82	0	0	0	218	558	323
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	231	590	0	0	476	82	0	0	0	218	558	323
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	231	590	0	0	476	82	0	0	0	218	558	323

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.71	0.29	0.00	0.00	0.00	1.00	1.00	1.00
Final Sat.:	1600	3200	0	0	2730	470	0	0	0	1600	1600	1600

Capacity Analysis Module:

Vol/Sat:	0.14	0.18	0.00	0.00	0.17	0.17	0.00	0.00	0.00	0.14	0.35	0.20
Crit Moves:	****				****					****		

Avalon Monrovia
 AVL1701
 Existing Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Myrtle Avenue/Evergreen Avenue - I-210 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.667
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 46 Level Of Service: B

Street Name: Myrtle Avenue Evergreen Avenue - I-210 EB Ramps

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

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

Volume Module:

Base Vol:	0	472	144	251	441	0	340	438	259	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	472	144	251	441	0	340	438	259	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	472	144	251	441	0	340	438	259	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	472	144	251	441	0	340	438	259	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	472	144	251	441	0	340	438	259	0	0	0

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.53	0.47	1.00	2.00	0.00	1.00	1.26	0.74	0.00	0.00	0.00
Final Sat.:	0	2452	748	1600	3200	0	1600	2011	1189	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.19	0.19	0.16	0.14	0.00	0.21	0.22	0.22	0.00	0.00	0.00
Crit Moves:	****			****			****					

Avalon Monrovia
 AVL1701
 Existing Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Mountain Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.753
 Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 92 Level Of Service: C

Street Name:	Mountain Avenue						Huntington Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	337	614	100	101	367	48	123	298	115	82	847	226
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	337	614	100	101	367	48	123	298	115	82	847	226
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	337	614	100	101	367	48	123	298	115	82	847	226
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	337	614	100	101	367	48	123	298	115	82	847	226
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	337	614	100	101	367	48	123	298	115	82	847	226

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.72	0.28	1.00	1.77	0.23	1.00	1.44	0.56	1.00	1.58	0.42
Final Sat.:	1600	2752	448	1600	2830	370	1600	2309	891	1600	2526	674

Capacity Analysis Module:

Vol/Sat:	0.21	0.22	0.22	0.06	0.13	0.13	0.08	0.13	0.13	0.05	0.34	0.34
Crit Moves:	****			****			****			****		

HCM 2010 TWSC
 9: Chestnut Avenue & Western Project Driveway

01/25/2018

Intersection

Int Delay, s/veh 0.1

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	85	236	0	3	1
Future Vol, veh/h	0	85	236	0	3	1
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, %	2	2	2	2	2	2
Mvmt Flow	0	92	257	0	3	1

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	257	0	-	0	349	257
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	92	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1308	-	-	-	648	782
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	932	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1308	-	-	-	648	782
Mov Cap-2 Maneuver	-	-	-	-	648	-
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	932	-

Approach EB WB SB

HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1308	-	-	-	677
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	10.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 2010 TWSC
 10: Chestnut Avenue & Eastern Project Driveway

01/25/2018

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	88	226	0	24	10
Future Vol, veh/h	0	88	226	0	24	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	96	246	0	26	11

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	246	0	-	0	342 246
Stage 1	-	-	-	-	246 -
Stage 2	-	-	-	-	96 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1320	-	-	-	654 793
Stage 1	-	-	-	-	795 -
Stage 2	-	-	-	-	928 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1320	-	-	-	654 793
Mov Cap-2 Maneuver	-	-	-	-	654 -
Stage 1	-	-	-	-	795 -
Stage 2	-	-	-	-	928 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1320	-	-	-	690
HCM Lane V/C Ratio	-	-	-	-	0.054
HCM Control Delay (s)	0	-	-	-	10.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Avalon Monrovia
AVL1701
Existing Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 I-210 EB Ramps/Huntington Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.558
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	I-210 EB Ramps						Huntington Drive													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Permitted			Permitted										
Rights:	Include			Include			Include			Ignore										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0								
Lanes:	1	0	0	0	1	1	1	0	0	1	0	0	2	1	0	1	0	2	0	1

Volume Module:

Base Vol:	22	0	16	361	4	75	0	1500	27	20	1047	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	0	16	361	4	75	0	1500	27	20	1047	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	22	0	16	361	4	75	0	1500	27	20	1047	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	0	16	361	4	75	0	1500	27	20	1047	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	22	0	16	361	4	75	0	1500	27	20	1047	0

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	1.98	0.02	1.00	0.00	2.95	0.05	1.00	2.00	1.00
Final Sat.:	1600	0	1600	3165	35	1600	0	4715	85	1600	3200	1600

Capacity Analysis Module:

Vol/Sat:	0.01	0.00	0.01	0.11	0.11	0.05	0.00	0.32	0.32	0.01	0.33	0.00
Crit Moves:	****			****			****			****		

Avalon Monrovia
 AVL1701
 Existing Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 I-210 WB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.601
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 40 Level Of Service: B

Street Name:	I-210 WB Ramps						Huntington Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	0	1	1	0	3	0	0	2

Volume Module:

Base Vol:	0	0	0	100	0	361	91	1248	0	0	759	480
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	100	0	361	91	1248	0	0	759	480
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	100	0	361	91	1248	0	0	759	480
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	100	0	361	91	1248	0	0	759	480
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	100	0	361	91	1248	0	0	759	480

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.43	0.00	1.57	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	694	0	2506	1600	4800	0	0	3200	1600

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.14	0.00	0.14	0.06	0.26	0.00	0.00	0.24	0.30
Crit Moves:						****	****				****	

Avalon Monrovia
 AVL1701
 Existing Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Myrtle Avenue/Foothill Boulevard

Cycle (sec): 100 Critical Vol./Cap.(X): 0.761
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 59 Level Of Service: C

Street Name:	Myrtle Avenue						Foothill Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module:

Base Vol:	129	48	90	46	56	55	64	1377	117	71	622	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	129	48	90	46	56	55	64	1377	117	71	622	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	129	48	90	46	56	55	64	1377	117	71	622	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	48	90	46	56	55	64	1377	117	71	622	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	129	48	90	46	56	55	64	1377	117	71	622	30

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.35	0.65	1.00	0.50	0.50	1.00	1.84	0.16	1.00	1.91	0.09
Final Sat.:	1600	557	1043	1600	807	793	1600	2949	251	1600	3053	147

Capacity Analysis Module:

Vol/Sat:	0.08	0.09	0.09	0.03	0.07	0.07	0.04	0.47	0.47	0.04	0.20	0.20
Crit Moves:	****			****			****			****		

Avalon Monrovia
 AVL1701
 Existing Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Myrtle Avenue/Chestnut Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.425
 Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 25 Level Of Service: A

Street Name:	Myrtle Avenue						Chestnut Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	0	0	1	0	0	1	0

Volume Module:

Base Vol:	69	429	22	3	380	22	29	153	135	27	32	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	69	429	22	3	380	22	29	153	135	27	32	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	69	429	22	3	380	22	29	153	135	27	32	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	429	22	3	380	22	29	153	135	27	32	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	69	429	22	3	380	22	29	153	135	27	32	4

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.90	0.10	1.00	0.95	0.05	0.16	0.84	1.00	0.46	0.54	1.00
Final Sat.:	1600	3044	156	1600	1512	88	255	1345	1600	732	868	1600

Capacity Analysis Module:

Vol/Sat:	0.04	0.14	0.14	0.00	0.25	0.25	0.02	0.11	0.08	0.02	0.04	0.00
Crit Moves:	****			****			****			****		

Avalon Monrovia
 AVL1701
 Existing Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Myrtle Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.747
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 57 Level Of Service: C

Street Name:	Myrtle Avenue						Huntington Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	1

Volume Module:

Base Vol:	139	375	137	124	535	59	83	925	150	137	685	53
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	139	375	137	124	535	59	83	925	150	137	685	53
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	139	375	137	124	535	59	83	925	150	137	685	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	139	375	137	124	535	59	83	925	150	137	685	53
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	139	375	137	124	535	59	83	925	150	137	685	53

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.46	0.54	1.00	1.80	0.20	1.00	2.00	1.00	1.00	1.86	0.14
Final Sat.:	1600	2344	856	1600	2882	318	1600	3200	1600	1600	2970	230

Capacity Analysis Module:

Vol/Sat:	0.09	0.16	0.16	0.08	0.19	0.19	0.05	0.29	0.09	0.09	0.23	0.23
Crit Moves:	****			****			****			****		

Avalon Monrovia
AVL1701
Existing Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Myrtle Avenue/Central Avenue - I-210 WB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.865
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	85	Level Of Service:	D

Street Name:	Myrtle Avenue			Central Avenue - I-210 WB Ramps											
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected			Permitted			Split Phase			Split Phase					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0			
Lanes:	1	0	2	0	0	0	0	1	1	0	0	0	0	0	0

Volume Module:

Base Vol:	285	393	0	0	682	198	0	0	0	199	499	291
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	285	393	0	0	682	198	0	0	0	199	499	291
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	285	393	0	0	682	198	0	0	0	199	499	291
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	285	393	0	0	682	198	0	0	0	199	499	291
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	285	393	0	0	682	198	0	0	0	199	499	291

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.55	0.45	0.00	0.00	0.00	1.00	1.00	1.00
Final Sat.:	1600	3200	0	0	2480	720	0	0	0	1600	1600	1600

Capacity Analysis Module:

Vol/Sat:	0.18	0.12	0.00	0.00	0.28	0.28	0.00	0.00	0.00	0.12	0.31	0.18
Crit Moves:	****				****					****		

Avalon Monrovia
 AVL1701
 Existing Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Myrtle Avenue/Evergreen Avenue - I-210 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.825
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 73 Level Of Service: D

Street Name: Myrtle Avenue Evergreen Avenue - I-210 EB Ramps

Approach: North Bound South Bound East Bound West Bound

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

-----|-----|-----|-----|

Control: Permitted Protected Split Phase Split Phase

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

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

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 522 185 309 583 0 159 803 191 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 522 185 309 583 0 159 803 191 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 0 522 185 309 583 0 159 803 191 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 522 185 309 583 0 159 803 191 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 522 185 309 583 0 159 803 191 0 0 0

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 1.48 0.52 1.00 2.00 0.00 1.00 1.62 0.38 0.00 0.00 0.00

Final Sat.: 0 2363 837 1600 3200 0 1600 2585 615 0 0 0

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Capacity Analysis Module:

Vol/Sat: 0.00 0.22 0.22 0.19 0.18 0.00 0.10 0.31 0.31 0.00 0.00 0.00

Crit Moves: **** **** ****

Avalon Monrovia
 AVL1701
 Existing Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Mountain Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.857
 Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 160 Level Of Service: D

Street Name:	Mountain Avenue						Huntington Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	212	424	200	233	517	66	44	1164	249	120	537	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	212	424	200	233	517	66	44	1164	249	120	537	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	212	424	200	233	517	66	44	1164	249	120	537	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	212	424	200	233	517	66	44	1164	249	120	537	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	212	424	200	233	517	66	44	1164	249	120	537	72

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.36	0.64	1.00	1.77	0.23	1.00	1.65	0.35	1.00	1.76	0.24
Final Sat.:	1600	2174	1026	1600	2838	362	1600	2636	564	1600	2822	378

Capacity Analysis Module:

Vol/Sat:	0.13	0.20	0.19	0.15	0.18	0.18	0.03	0.44	0.44	0.08	0.19	0.19
Crit Moves:	****			****			****			****		

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Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	324	96	3	0	0
Future Vol, veh/h	1	324	96	3	0	0
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, %	2	2	2	2	2	2
Mvmt Flow	1	352	104	3	0	0

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	108	0	0	460	106
Stage 1	-	-	-	106	-
Stage 2	-	-	-	354	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1483	-	-	559	948
Stage 1	-	-	-	918	-
Stage 2	-	-	-	710	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1483	-	-	558	948
Mov Cap-2 Maneuver	-	-	-	558	-
Stage 1	-	-	-	918	-
Stage 2	-	-	-	709	-

Approach

	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1483	-	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-
HCM Control Delay (s)	7.4	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

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Intersection

Int Delay, s/veh 0.4

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	11	313	97	26	4	2
Future Vol, veh/h	11	313	97	26	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	340	105	28	4	2

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	134	0	-	0	484	120
Stage 1	-	-	-	-	120	-
Stage 2	-	-	-	-	364	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1451	-	-	-	542	931
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	703	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1451	-	-	-	537	931
Mov Cap-2 Maneuver	-	-	-	-	537	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	696	-

Approach EB WB SB

HCM Control Delay, s	0.3	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1451	-	-	-	625
HCM Lane V/C Ratio	0.008	-	-	-	0.01
HCM Control Delay (s)	7.5	0	-	-	10.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Avalon Monrovia
AVL1701
Cumulative AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 I-210 EB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.712
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include I-210 EB Ramps and Huntington Drive with various movement details.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

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Cumulative AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 I-210 WB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.641
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-210 WB Ramps and Huntington Drive with various movement details.

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

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Avalon Monrovia
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Cumulative AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Myrtle Avenue/Foothill Boulevard

Cycle (sec): 100 Critical Vol./Cap.(X): 0.748
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Myrtle Avenue and Foothill Boulevard with various movement details.

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

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Avalon Monrovia
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Myrtle Avenue/Chestnut Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.367
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Myrtle Avenue and Chestnut Avenue with various movement details.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

Avalon Monrovia
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Cumulative AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Myrtle Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.827
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 73 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Myrtle Avenue and Huntington Drive with various movement details.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

Avalon Monrovia
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Cumulative AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Myrtle Avenue/Central Avenue - I-210 WB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.869
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 86 Level Of Service: D

Street Name: Myrtle Avenue Central Avenue - I-210 WB Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

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

Volume Module:
Base Vol: 323 677 0 0 543 127 0 0 0 242 572 336
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 323 677 0 0 543 127 0 0 0 242 572 336
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 323 677 0 0 543 127 0 0 0 242 572 336
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 323 677 0 0 543 127 0 0 0 242 572 336
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 323 677 0 0 543 127 0 0 0 242 572 336

Saturation Flow Module:
Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 1.62 0.38 0.00 0.00 0.00 1.00 1.00 1.00
Final Sat.: 1600 3200 0 0 2593 607 0 0 0 1600 1600 1600

Capacity Analysis Module:
Vol/Sat: 0.20 0.21 0.00 0.00 0.21 0.21 0.00 0.00 0.00 0.15 0.36 0.21
Crit Moves: **** **** ****

Avalon Monrovia
AVL1701
Cumulative AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Myrtle Avenue/Evergreen Avenue - I-210 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.754
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: C

Street Name: Myrtle Avenue Evergreen Avenue - I-210 EB Ramps

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

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

Volume Module:

Base Vol: 0 607 179 258 523 0 386 491 300 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 607 179 258 523 0 386 491 300 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 607 179 258 523 0 386 491 300 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 607 179 258 523 0 386 491 300 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 607 179 258 523 0 386 491 300 0 0 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 1.54 0.46 1.00 2.00 0.00 1.00 1.24 0.76 0.00 0.00 0.00
Final Sat.: 0 2471 729 1600 3200 0 1600 1986 1214 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.25 0.25 0.16 0.16 0.00 0.24 0.25 0.25 0.00 0.00 0.00
Crit Moves: **** **** ****

Avalon Monrovia
AVL1701
Cumulative AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Mountain Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.780
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 103 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Mountain Avenue and Huntington Drive with North, South, East, and West bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movement categories.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different movement types.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

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Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	86	229	0	0	0
Future Vol, veh/h	0	86	229	0	0	0
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, %	2	2	2	2	2	2
Mvmt Flow	0	93	249	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	249	0	-	0	342 249
Stage 1	-	-	-	-	249 -
Stage 2	-	-	-	-	93 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1317	-	-	-	654 790
Stage 1	-	-	-	-	792 -
Stage 2	-	-	-	-	931 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1317	-	-	-	654 790
Mov Cap-2 Maneuver	-	-	-	-	654 -
Stage 1	-	-	-	-	792 -
Stage 2	-	-	-	-	931 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1317	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

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Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	86	229	0	0	0
Future Vol, veh/h	0	86	229	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	93	249	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	249	0	-	0	342 249
Stage 1	-	-	-	-	249 -
Stage 2	-	-	-	-	93 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1317	-	-	-	654 790
Stage 1	-	-	-	-	792 -
Stage 2	-	-	-	-	931 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1317	-	-	-	654 790
Mov Cap-2 Maneuver	-	-	-	-	654 -
Stage 1	-	-	-	-	792 -
Stage 2	-	-	-	-	931 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1317	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Avalon Monrovia
AVL1701
Cumulative PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 I-210 EB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.584
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-210 EB Ramps and Huntington Drive with various movement details.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves for various movements.

Avalon Monrovia
AVL1701
Cumulative PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 I-210 WB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.648
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-210 WB Ramps and Huntington Drive with various movement details.

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

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Avalon Monrovia
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Cumulative PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Myrtle Avenue/Foothill Boulevard

Cycle (sec): 100 Critical Vol./Cap.(X): 0.780
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 62 Level Of Service: C

Table with columns for Street Name (Myrtle Avenue, Foothill Boulevard), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

Avalon Monrovia
AVL1701
Cumulative PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Myrtle Avenue/Chestnut Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.444
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Myrtle Avenue and Chestnut Avenue with North and South Bound movements.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

Avalon Monrovia
AVL1701
Cumulative PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Myrtle Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.816
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 70 Level Of Service: D

Table with columns for Street Name (Myrtle Avenue, Huntington Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

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

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

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves.

Avalon Monrovia
AVL1701
Cumulative PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Myrtle Avenue/Central Avenue - I-210 WB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.943
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 127 Level Of Service: E

Street Name: Myrtle Avenue Central Avenue - I-210 WB Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

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

Volume Module:

Base Vol: 325 423 0 0 739 218 0 0 0 228 545 301
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 325 423 0 0 739 218 0 0 0 228 545 301
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 325 423 0 0 739 218 0 0 0 228 545 301
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 325 423 0 0 739 218 0 0 0 228 545 301
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 325 423 0 0 739 218 0 0 0 228 545 301

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 1.54 0.46 0.00 0.00 0.00 1.00 1.00 1.00
Final Sat.: 1600 3200 0 0 2471 729 0 0 0 1600 1600 1600

Capacity Analysis Module:

Vol/Sat: 0.20 0.13 0.00 0.00 0.30 0.30 0.00 0.00 0.00 0.14 0.34 0.19
Crit Moves: **** **** ****

Avalon Monrovia
AVL1701
Cumulative PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Myrtle Avenue/Evergreen Avenue - I-210 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.897
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 99 Level Of Service: D

Street Name: Myrtle Avenue Evergreen Avenue - I-210 EB Ramps

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

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

Volume Module:
Base Vol: 0 575 197 322 655 0 177 834 301 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 575 197 322 655 0 177 834 301 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 575 197 322 655 0 177 834 301 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 575 197 322 655 0 177 834 301 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 575 197 322 655 0 177 834 301 0 0 0

Saturation Flow Module:
Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 1.49 0.51 1.00 2.00 0.00 1.00 1.47 0.53 0.00 0.00 0.00
Final Sat.: 0 2383 817 1600 3200 0 1600 2351 849 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.24 0.24 0.20 0.20 0.00 0.11 0.35 0.35 0.00 0.00 0.00
Crit Moves: ****

Avalon Monrovia
AVL1701
Cumulative PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Mountain Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.885
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Mountain Avenue and Huntington Drive with North, South, East, and West bound movements.

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

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

HCM 2010 TWSC
 9: Chestnut Avenue & Western Project Driveway

01/25/2018

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	317	95	0	0	0
Future Vol, veh/h	0	317	95	0	0	0
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, %	2	2	2	2	2	2
Mvmt Flow	0	345	103	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	103	0	-	0	448 103
Stage 1	-	-	-	-	103 -
Stage 2	-	-	-	-	345 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1489	-	-	-	568 952
Stage 1	-	-	-	-	921 -
Stage 2	-	-	-	-	717 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1489	-	-	-	568 952
Mov Cap-2 Maneuver	-	-	-	-	568 -
Stage 1	-	-	-	-	921 -
Stage 2	-	-	-	-	717 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1489	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 2010 TWSC
 10: Chestnut Avenue & Eastern Project Driveway

01/25/2018

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	317	95	0	0	0
Future Vol, veh/h	0	317	95	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	345	103	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	103	0	-	0	448 103
Stage 1	-	-	-	-	103 -
Stage 2	-	-	-	-	345 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1489	-	-	-	568 952
Stage 1	-	-	-	-	921 -
Stage 2	-	-	-	-	717 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1489	-	-	-	568 952
Mov Cap-2 Maneuver	-	-	-	-	568 -
Stage 1	-	-	-	-	921 -
Stage 2	-	-	-	-	717 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1489	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Avalon Monrovia
 AVL1701
 Cumulative Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 I-210 EB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.713
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 52 Level Of Service: C

Street Name:	I-210 EB Ramps						Huntington Drive					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	0	0	1	0	0	2	1	0	2

Volume Module:

Base Vol:	37	0	29	278	9	205	0	790	11	8	1476	116
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	0	29	278	9	205	0	790	11	8	1476	116
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	37	0	29	278	9	205	0	790	11	8	1476	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	0	29	278	9	205	0	790	11	8	1476	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	37	0	29	278	9	205	0	790	11	8	1476	0

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	1.94	0.06	1.00	0.00	2.96	0.04	1.00	2.00	1.00
Final Sat.:	1600	0	1600	3100	100	1600	0	4734	66	1600	3200	1600

Capacity Analysis Module:

Vol/Sat:	0.02	0.00	0.02	0.09	0.09	0.13	0.00	0.17	0.17	0.01	0.46	0.00
Crit Moves:	****					****	****			****		

Avalon Monrovia
 AVL1701
 Cumulative Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 I-210 WB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.642
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 44 Level Of Service: B

Street Name:	I-210 WB Ramps						Huntington Drive					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	0	1	1	0	3	0	0	2

Volume Module:

Base Vol:	0	0	0	28	0	174	45	614	0	0	1442	564
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	28	0	174	45	614	0	0	1442	564
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	28	0	174	45	614	0	0	1442	564
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	28	0	174	45	614	0	0	1442	564
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	28	0	174	45	614	0	0	1442	564

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.28	0.00	1.72	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	444	0	2756	1600	4800	0	0	3200	1600

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.06	0.03	0.13	0.00	0.00	0.45	0.35
Crit Moves:						****	****			****		

Avalon Monrovia
 AVL1701
 Cumulative Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Myrtle Avenue/Foothill Boulevard

Cycle (sec): 100 Critical Vol./Cap.(X): 0.748
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 57 Level Of Service: C

Street Name:	Myrtle Avenue						Foothill Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module:

Base Vol:	148	27	41	40	51	76	25	549	63	53	1462	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	148	27	41	40	51	76	25	549	63	53	1462	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	148	27	41	40	51	76	25	549	63	53	1462	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	148	27	41	40	51	76	25	549	63	53	1462	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	148	27	41	40	51	76	25	549	63	53	1462	13

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.40	0.60	1.00	0.40	0.60	1.00	1.79	0.21	1.00	1.98	0.02
Final Sat.:	1600	635	965	1600	643	957	1600	2871	329	1600	3172	28

Capacity Analysis Module:

Vol/Sat:	0.09	0.04	0.04	0.03	0.08	0.08	0.02	0.19	0.19	0.03	0.46	0.46
Crit Moves:	****			****			****			****		

Avalon Monrovia
 AVL1701
 Cumulative Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Myrtle Avenue/Chestnut Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.369
 Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 23 Level Of Service: A

Street Name:	Myrtle Avenue						Chestnut Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	0	0	1	0	0	1	0

Volume Module:

Base Vol:	90	426	8	5	331	15	10	46	57	21	124	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	426	8	5	331	15	10	46	57	21	124	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	426	8	5	331	15	10	46	57	21	124	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	426	8	5	331	15	10	46	57	21	124	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	426	8	5	331	15	10	46	57	21	124	4

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.96	0.04	1.00	0.96	0.04	0.18	0.82	1.00	0.14	0.86	1.00
Final Sat.:	1600	3141	59	1600	1531	69	286	1314	1600	232	1368	1600

Capacity Analysis Module:

Vol/Sat:	0.06	0.14	0.14	0.00	0.22	0.22	0.01	0.04	0.04	0.01	0.09	0.00
Crit Moves:	****			****			****			****		

Avalon Monrovia
 AVL1701
 Cumulative Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Myrtle Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.833
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 75 Level Of Service: D

Street Name:	Myrtle Avenue						Huntington Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	1

Volume Module:

Base Vol:	240	593	125	43	342	75	71	435	139	129	1232	76
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	240	593	125	43	342	75	71	435	139	129	1232	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	240	593	125	43	342	75	71	435	139	129	1232	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	240	593	125	43	342	75	71	435	139	129	1232	76
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	240	593	125	43	342	75	71	435	139	129	1232	76

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.65	0.35	1.00	1.64	0.36	1.00	2.00	1.00	1.00	1.88	0.12
Final Sat.:	1600	2643	557	1600	2624	576	1600	3200	1600	1600	3014	186

Capacity Analysis Module:

Vol/Sat:	0.15	0.22	0.22	0.03	0.13	0.13	0.04	0.14	0.09	0.08	0.41	0.41
Crit Moves:	****			****			****			****		

Avalon Monrovia
AVL1701
Cumulative Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Myrtle Avenue/Central Avenue - I-210 WB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.873
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 88 Level Of Service: D

Street Name: Myrtle Avenue Central Avenue - I-210 WB Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

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

Volume Module:
Base Vol: 323 677 0 0 553 131 0 0 0 242 572 336
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 323 677 0 0 553 131 0 0 0 242 572 336
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 323 677 0 0 553 131 0 0 0 242 572 336
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 323 677 0 0 553 131 0 0 0 242 572 336
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 323 677 0 0 553 131 0 0 0 242 572 336

Saturation Flow Module:
Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 1.62 0.38 0.00 0.00 0.00 1.00 1.00 1.00
Final Sat.: 1600 3200 0 0 2587 613 0 0 0 1600 1600 1600

Capacity Analysis Module:
Vol/Sat: 0.20 0.21 0.00 0.00 0.21 0.21 0.00 0.00 0.00 0.15 0.36 0.21
Crit Moves: **** **** ****

Avalon Monrovia
AVL1701
Cumulative Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Myrtle Avenue/Evergreen Avenue - I-210 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.759
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: C

Street Name: Myrtle Avenue Evergreen Avenue - I-210 EB Ramps

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

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

Volume Module:

Base Vol: 0 607 179 266 525 0 386 491 300 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 607 179 266 525 0 386 491 300 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 607 179 266 525 0 386 491 300 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 607 179 266 525 0 386 491 300 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 607 179 266 525 0 386 491 300 0 0 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 1.54 0.46 1.00 2.00 0.00 1.00 1.24 0.76 0.00 0.00 0.00
Final Sat.: 0 2471 729 1600 3200 0 1600 1986 1214 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.25 0.25 0.17 0.16 0.00 0.24 0.25 0.25 0.00 0.00 0.00
Crit Moves: ****

Avalon Monrovia
 AVL1701
 Cumulative Plus Project AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Mountain Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.780
 Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 103 Level Of Service: C

Street Name:	Mountain Avenue						Huntington Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	342	622	101	102	372	49	125	370	117	83	911	229
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	342	622	101	102	372	49	125	370	117	83	911	229
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	342	622	101	102	372	49	125	370	117	83	911	229
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	342	622	101	102	372	49	125	370	117	83	911	229
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	342	622	101	102	372	49	125	370	117	83	911	229

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.72	0.28	1.00	1.77	0.23	1.00	1.52	0.48	1.00	1.60	0.40
Final Sat.:	1600	2753	447	1600	2828	372	1600	2431	769	1600	2557	643

Capacity Analysis Module:

Vol/Sat:	0.21	0.23	0.23	0.06	0.13	0.13	0.08	0.15	0.15	0.05	0.36	0.36
Crit Moves:	****			****			****			****		

HCM 2010 TWSC
 9: Chestnut Avenue & Western Project Driveway

01/25/2018

Intersection

Int Delay, s/veh 0.1

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	86	239	0	3	1
Future Vol, veh/h	0	86	239	0	3	1
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, %	2	2	2	2	2	2
Mvmt Flow	0	93	260	0	3	1

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	260	0	-	0	353	260
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	93	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1304	-	-	-	645	779
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	931	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1304	-	-	-	645	779
Mov Cap-2 Maneuver	-	-	-	-	645	-
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	931	-

Approach EB WB SB

HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1304	-	-	-	674
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	10.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 2010 TWSC
 10: Chestnut Avenue & Eastern Project Driveway

01/25/2018

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	89	229	0	24	10
Future Vol, veh/h	0	89	229	0	24	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	97	249	0	26	11

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	249	0	346
Stage 1	-	-	249
Stage 2	-	-	97
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1317	-	651
Stage 1	-	-	792
Stage 2	-	-	927
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1317	-	651
Mov Cap-2 Maneuver	-	-	651
Stage 1	-	-	792
Stage 2	-	-	927

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1317	-	-	-	687
HCM Lane V/C Ratio	-	-	-	-	0.054
HCM Control Delay (s)	0	-	-	-	10.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Avalon Monrovia
AVL1701
Cumulative Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 I-210 EB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.589
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: A

Street Name: I-210 EB Ramps Huntington Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

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

Volume Module:
Base Vol: 22 0 16 416 4 115 0 1564 27 20 1102 44
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 22 0 16 416 4 115 0 1564 27 20 1102 44
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Volume: 22 0 16 416 4 115 0 1564 27 20 1102 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 22 0 16 416 4 115 0 1564 27 20 1102 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
FinalVolume: 22 0 16 416 4 115 0 1564 27 20 1102 0

Saturation Flow Module:
Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 1.98 0.02 1.00 0.00 2.95 0.05 1.00 2.00 1.00
Final Sat.: 1600 0 1600 3170 30 1600 0 4719 81 1600 3200 1600

Capacity Analysis Module:
Vol/Sat: 0.01 0.00 0.01 0.13 0.13 0.07 0.00 0.33 0.33 0.01 0.34 0.00
Crit Moves: **** **** **** ****

Avalon Monrovia
AVL1701
Cumulative Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 I-210 WB Ramps/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.649
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-210 WB Ramps and Huntington Drive with various movement and control details.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows list various volume and adjustment factors.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows list saturation flow and lane-related data.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves. Rows list capacity analysis results.

Avalon Monrovia
 AVL1701
 Cumulative Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Myrtle Avenue/Foothill Boulevard

Cycle (sec): 100 Critical Vol./Cap.(X): 0.780
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 62 Level Of Service: C

Street Name:	Myrtle Avenue						Foothill Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module:

Base Vol:	137	49	91	47	59	56	65	1396	128	74	630	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	137	49	91	47	59	56	65	1396	128	74	630	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	137	49	91	47	59	56	65	1396	128	74	630	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	137	49	91	47	59	56	65	1396	128	74	630	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	137	49	91	47	59	56	65	1396	128	74	630	30

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.35	0.65	1.00	0.51	0.49	1.00	1.83	0.17	1.00	1.91	0.09
Final Sat.:	1600	560	1040	1600	821	779	1600	2931	269	1600	3055	145

Capacity Analysis Module:

Vol/Sat:	0.09	0.09	0.09	0.03	0.07	0.07	0.04	0.48	0.48	0.05	0.21	0.21
Crit Moves:	****			****			****			****		

Avalon Monrovia
 AVL1701
 Cumulative Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Myrtle Avenue/Chestnut Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.461
 Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 27 Level Of Service: A

Street Name:	Myrtle Avenue						Chestnut Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	0	0	1	0	0	1	0

Volume Module:

Base Vol:	70	480	22	3	435	22	29	155	137	27	32	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	70	480	22	3	435	22	29	155	137	27	32	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	480	22	3	435	22	29	155	137	27	32	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	480	22	3	435	22	29	155	137	27	32	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	480	22	3	435	22	29	155	137	27	32	4

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.91	0.09	1.00	0.95	0.05	0.16	0.84	1.00	0.46	0.54	1.00
Final Sat.:	1600	3060	140	1600	1523	77	252	1348	1600	732	868	1600

Capacity Analysis Module:

Vol/Sat:	0.04	0.16	0.16	0.00	0.29	0.29	0.02	0.11	0.09	0.02	0.04	0.00
Crit Moves:	****			****			****			****		

Avalon Monrovia
AVL1701
Cumulative Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Myrtle Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.817
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 71 Level Of Service: D

Table with columns for Street Name (Myrtle Avenue, Huntington Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

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

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

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves.

Avalon Monrovia
 AVL1701
 Cumulative Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Myrtle Avenue/Central Avenue - I-210 WB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.944
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 128 Level Of Service: E

Street Name: Myrtle Avenue Central Avenue - I-210 WB Ramps
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

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

Volume Module:

Base Vol:	325	429	0	0	741	219	0	0	0	228	545	309
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	325	429	0	0	741	219	0	0	0	228	545	309
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	325	429	0	0	741	219	0	0	0	228	545	309
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	325	429	0	0	741	219	0	0	0	228	545	309
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	325	429	0	0	741	219	0	0	0	228	545	309

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.54	0.46	0.00	0.00	0.00	1.00	1.00	1.00
Final Sat.:	1600	3200	0	0	2470	730	0	0	0	1600	1600	1600

Capacity Analysis Module:

Vol/Sat:	0.20	0.13	0.00	0.00	0.30	0.30	0.00	0.00	0.00	0.14	0.34	0.19
Crit Moves:	****				****					****		

Avalon Monrovia
 AVL1701
 Cumulative Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Myrtle Avenue/Evergreen Avenue - I-210 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.898
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 99 Level Of Service: D

Street Name: Myrtle Avenue Evergreen Avenue - I-210 EB Ramps

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

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

Volume Module:

Base Vol:	0	577	197	323	655	0	181	834	301	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	577	197	323	655	0	181	834	301	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	577	197	323	655	0	181	834	301	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	577	197	323	655	0	181	834	301	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	577	197	323	655	0	181	834	301	0	0	0

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.49	0.51	1.00	2.00	0.00	1.00	1.47	0.53	0.00	0.00	0.00
Final Sat.:	0	2386	814	1600	3200	0	1600	2351	849	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.24	0.24	0.20	0.20	0.00	0.11	0.35	0.35	0.00	0.00	0.00
Crit Moves:	****			****			****					

Avalon Monrovia
AVL1701
Cumulative Plus Project PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Mountain Avenue/Huntington Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.885
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Mountain Avenue and Huntington Drive with North, South, East, and West bound movements.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include various volume and adjustment factors.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows include saturation flow and lane-related data.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves. Rows include volume per saturation and critical moves.

HCM 2010 TWSC
 9: Chestnut Avenue & Western Project Driveway

01/25/2018

Intersection

Int Delay, s/veh 0

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↕	↔		↕	
Traffic Vol, veh/h	1	328	97	3	0	0
Future Vol, veh/h	1	328	97	3	0	0
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, %	2	2	2	2	2	2
Mvmt Flow	1	357	105	3	0	0

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	109	0	-	0	466	107
Stage 1	-	-	-	-	107	-
Stage 2	-	-	-	-	359	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1481	-	-	-	555	947
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1481	-	-	-	554	947
Mov Cap-2 Maneuver	-	-	-	-	554	-
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	706	-

Approach EB WB SB

HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1481	-	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-
HCM Control Delay (s)	7.4	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 2010 TWSC
 10: Chestnut Avenue & Eastern Project Driveway

01/25/2018

Intersection

Int Delay, s/veh 0.4

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	12	318	98	27	6	2
Future Vol, veh/h	12	318	98	27	6	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	346	107	29	7	2

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	136	0	-	0	493	121
Stage 1	-	-	-	-	121	-
Stage 2	-	-	-	-	372	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1448	-	-	-	535	930
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	697	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1448	-	-	-	529	930
Mov Cap-2 Maneuver	-	-	-	-	529	-
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	689	-

Approach EB WB SB

HCM Control Delay, s	0.3	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1448	-	-	-	593
HCM Lane V/C Ratio	0.009	-	-	-	0.015
HCM Control Delay (s)	7.5	0	-	-	11.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

APPENDIX C

CUMULATIVE PROJECT LIST

City of Monrovia
Cumulative Project List – Land Development Projects

1. **102-140 West Huntington Drive / Towneplace Suites by Marriott - NONRESIDENTIAL**
 - 5-Story – 109 Room Hotel
 - Lot Size: 1.71 Acres
 - Building Area: 68,000 SF (Completing Entitlement Applications and CEQA)

2. **725 East Huntington Drive (Former Albertsons Center) - NONRESIDENTIAL**
 - Commercial center façade renovations and interior tenant improvements to accommodate four brand name retail stores.
 - Lot Size: 6.06 Acres
 - Building Area: 98,000 SF (Existing area under proposed Tenant Improvement)
 - Under Construction

3. **530 Fano Street – NEW MULTIFAMILY**
 - 12 unit residential condominium development with attached two car garages and six guest parking spaces.
 - Lot Size: 22,393 SF
 - Building Area: ±16,920 SF
 - Under Construction

4. **1218 South 5th Avenue (City of Hope –Tenant Improvement) - NONRESIDENTIAL**
 - A façade remodel and additional roof-top equipment and ground level mechanical equipment for a new laboratory and research space.
 - Lot Size: 38,277 SF
 - Building Area: 42,936 SF (Existing area under proposed Tenant Improvement)
 - Under Construction

5. **SWC of Pomona Avenue between Primrose and Magnolia (MODA) - NEW MULTIFAMILY**
 - 261 residential units for lease, including 2 courtyards totaling 18,500 sf and a two-story fitness gym. Total building height is 5 stories.
 - Lot Size: 2.8 acres (93 units per acre)
 - Building Area: 225,220 SF
 - Under Construction

6. **1110 – 1212 South Fifth Avenue (5th and Huntington) – NEW MULTIFAMILY**
 - Residential/Commercial Mixed-Use Project, 4-story mixed use containing 154 residential units for lease and a ground floor retail space.
 - Lot Size: +/- 2.86 Acres
 - Building Area: 131,400 SF (154 Units) + 1,340 Retail Use
 - Constructed – Final issued November 21, 2017

7. 137 West Pomona Avenue (The Lumber Yard) An Artisan Food Village - NONRESIDENTIAL

- Repurpose of two existing industrial buildings into chic food-hall. Existing *Building 1* totals ±9,490 square feet and existing *Building 2* totals ±15,364 square feet. A new ±2,040 square foot building will be added to the site.
- Lot Size: ± 59,368
- Total Floor Area Breakdown:
 - i. Restaurant - 12,617 sf
 - ii. Coffee Shop - 2,165 sf
 - iii. Brewery Manufacturing - 3,477 sf
 - iv. Retail (Wine Retail and Tasting) - 2,675 sf
 - v. Mezzanine Storage- 4,841 sf
- Entitlements Approved December 2016 – Project has not been submitted into building plan check.

8. 239 West Chestnut Avenue (10-Unit Development) NONRESIDENTIAL

- New 10 unit industrial condominium development with 38 parking spaces
- Lot Size: 34,212 SF
- Building Area: 16,349 SF
- In Building Plan Check

9. 303 South Madison Avenue - NEW MULTIFAMILY

- 6 detached, two-story residential units for sale.
- Lot Size: 20,241 SF
- Building Area: 9,305 SF
- Under Construction

10. 717-721 West Duarte Road- NEW MULTIFAMILY

- 11-unit residential condominium development (replacing two existing units)
- Lot Size: 18,652 SF
- Building Area: 13,667 SF
- In Planning Review (entitlements not yet granted)

11. 1601 South Myrtle Avenue – City Park and Ride Lot - NEW MULTIFAMILY & PARKING LOT

- 103 residential units with a public parking structure component
- APNs: 8507-003-915, 916, 907, 908, and 909
- Site Area: 1.07 AC
- In Pre-Application Review (entitlements not yet granted)

12. N/E Corner of Magnolia Avenue and Duarte Road - NEW MULTIFAMILY

- Richman Group – 296 Residential Apartments
- 205 and 225 W Duarte Road, 1725 Peck Rd (8507-003-045, 046, 047 and 048)
- Site Area: 163,254 SF (3.75 Acres)
- Density: 79 units per acre
- Total New Residential Square Footage: 251,348 SF
- In Planning Pre-Application Review (entitlements not yet granted)

13. 1625 South Magnolia Avenue – NEW MULTIFAMILY

- Trammell Crow - 392 Residential Apartments
- APNs: 8507-006-041, 042, 043, 044, 035, 022, 024, 016
- Site Area: 6.77 Acres
- Concept Stage - Pre-Application Review (entitlements not yet granted)

14. 825 South Myrtle Avenue – NEW MULTIFAMILY

- Avalon Bay – 154 Residential Units
- APNs: 8508-006-040, 0039,038, 037, 055, 054
- Site Area: 2.1 acres
- Concept Stage - Pre-Application Review (entitlements not yet granted)

15. 239 West Huntington Drive - NEW STARBUCKS

- New Starbucks with Drive Thru
- APNs: 8508-008-071 and 070
- Building Size: 2,200 SF
- Site Area: 0.67 AC
- In Planning Pre-Application Review (entitlements not yet granted)

16. Corner of Myrtle and Lime – NEW MULTIFAMILY

- Myrtle Lime Apartments - 140 Residential Units
- Former Frontier and Existing City Parking Lot Property
- Very Concept Stage - Massing Study Submitted

APPENDIX D

RAMP LOS WORKSHEETS

HCM 6th Signalized Intersection Summary
 1: Driveway/I-210 EB Off Ramp & Huntington Drive

03/06/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↖	↑↑	↗	↖		↗	↖	↗	↖
Traffic Volume (veh/h)	0	751	11	8	1432	109	37	0	29	251	9	195
Future Volume (veh/h)	0	751	11	8	1432	109	37	0	29	251	9	195
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	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	799	12	9	1523	0	39	0	31	274	0	207
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	2	2	2	2	2	2	0	2	2	2	2
Cap, veh/h	0	3142	47	502	2154		0	0	0	683	0	304
Arrive On Green	0.00	0.61	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.19	0.00	0.19
Sat Flow, veh/h	0	5351	78	673	3554	1585		0		3563	0	1585
Grp Volume(v), veh/h	0	525	286	9	1523	0		0.0		274	0	207
Grp Sat Flow(s),veh/h/ln	0	1702	1856	673	1777	1585				1781	0	1585
Q Serve(g_s), s	0.0	3.6	3.6	0.3	14.9	0.0				3.4	0.0	6.1
Cycle Q Clear(g_c), s	0.0	3.6	3.6	3.9	14.9	0.0				3.4	0.0	6.1
Prop In Lane	0.00		0.04	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2064	1125	502	2154					683	0	304
V/C Ratio(X)	0.00	0.25	0.25	0.02	0.71					0.40	0.00	0.68
Avail Cap(c_a), veh/h	0	2825	1540	652	2949					1750	0	778
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	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.6	4.6	5.5	6.9	0.0				17.9	0.0	19.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.5	0.0				0.4	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
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.9	0.0	3.7	0.0				1.3	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.7	4.7	5.6	7.3	0.0				18.2	0.0	21.6
LnGrp LOS	A	A	A	A	A					B	A	C
Approach Vol, veh/h		811			1532	A						481
Approach Delay, s/veh		4.7			7.3							19.7
Approach LOS		A			A							B
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		14.8		35.7				35.7				
Change Period (Y+Rc), s		5.1		5.1				5.1				
Max Green Setting (Gmax), s		24.8		41.9				41.9				
Max Q Clear Time (g_c+I1), s		8.1		16.9				5.6				
Green Ext Time (p_c), s		1.6		13.7				6.2				

Intersection Summary

HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

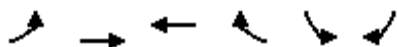
Notes

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

HCM 6th Signalized Intersection Summary

2: Huntington Drive & I-210 WB On Ramp

03/06/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑	↗	↙	↘
Traffic Volume (veh/h)	31	566	1396	499	23	169
Future Volume (veh/h)	31	566	1396	499	23	169
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	602	1485	531	0	206
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	156	3631	1966	877	196	348
Arrive On Green	0.09	0.71	0.55	0.55	0.00	0.11
Sat Flow, veh/h	1781	5274	3647	1585	1781	3170
Grp Volume(v), veh/h	33	602	1485	531	0	206
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1585	1781	1585
Q Serve(g_s), s	1.0	2.2	18.3	12.8	0.0	3.5
Cycle Q Clear(g_c), s	1.0	2.2	18.3	12.8	0.0	3.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	156	3631	1966	877	196	348
V/C Ratio(X)	0.21	0.17	0.76	0.61	0.00	0.59
Avail Cap(c_a), veh/h	563	5188	2239	998	841	1496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.2	2.7	9.8	8.6	0.0	24.1
Incr Delay (d2), s/veh	0.7	0.0	1.3	0.8	0.0	1.6
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	0.4	5.7	3.6	0.0	3.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.8	2.7	11.1	9.4	0.0	25.7
LnGrp LOS	C	A	B	A	A	C
Approach Vol, veh/h		635	2016		206	
Approach Delay, s/veh		3.9	10.6		25.7	
Approach LOS		A	B		C	
Timer - Assigned Phs			4	6	7	8
Phs Duration (G+Y+Rc), s			45.6	11.4	9.0	36.6
Change Period (Y+Rc), s			5.1	5.1	4.0	5.1
Max Green Setting (Gmax), s			57.9	26.9	18.0	35.9
Max Q Clear Time (g_c+I1), s			4.2	5.5	3.0	20.3
Green Ext Time (p_c), s			4.9	0.7	0.0	11.2
Intersection Summary						
HCM 6th Ctrl Delay			10.2			
HCM 6th LOS			B			
Notes						
User approved volume balancing among the lanes for turning movement.						

HCM 6th Signalized Intersection Summary

6: Myrtle Avenue & Central Avenue

03/06/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↗	↖	↖	↗			↗	↖
Traffic Volume (veh/h)	0	0	0	218	558	323	231	590	0	0	466	78
Future Volume (veh/h)	0	0	0	218	558	323	231	590	0	0	466	78
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No				
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				234	600	347	248	634	0	0	501	84
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				645	678	574	267	1662	0	0	765	128
Arrive On Green				0.36	0.36	0.36	0.15	0.47	0.00	0.00	0.25	0.25
Sat Flow, veh/h				1781	1870	1585	1781	3647	0	0	3141	509
Grp Volume(v), veh/h				234	600	347	248	634	0	0	291	294
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	1781	1777	0	0	1777	1779
Q Serve(g_s), s				5.8	18.1	10.7	8.2	6.9	0.0	0.0	8.8	8.9
Cycle Q Clear(g_c), s				5.8	18.1	10.7	8.2	6.9	0.0	0.0	8.8	8.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.29
Lane Grp Cap(c), veh/h				645	678	574	267	1662	0	0	446	446
V/C Ratio(X)				0.36	0.89	0.60	0.93	0.38	0.00	0.00	0.65	0.66
Avail Cap(c_a), veh/h				683	717	608	267	1662	0	0	446	446
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.68	0.68	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				14.0	18.0	15.6	25.2	10.3	0.0	0.0	20.1	20.2
Incr Delay (d2), s/veh				0.3	12.3	1.6	28.1	0.5	0.0	0.0	7.3	7.4
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				2.1	9.0	3.6	5.3	2.3	0.0	0.0	4.2	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				14.4	30.3	17.2	53.3	10.8	0.0	0.0	27.4	27.6
LnGrp LOS				B	C	B	D	B	A	A	C	C
Approach Vol, veh/h					1181			882			585	
Approach Delay, s/veh					23.3			22.7			27.5	
Approach LOS					C			C			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		33.2			13.0	20.2		26.8				
Change Period (Y+Rc), s		5.1			4.0	5.1		5.1				
Max Green Setting (Gmax), s		26.8			9.0	13.8		23.0				
Max Q Clear Time (g_c+I1), s		8.9			10.2	10.9		20.1				
Green Ext Time (p_c), s		3.9			0.0	1.0		1.7				

Intersection Summary

HCM 6th Ctrl Delay	24.0
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary

7: Myrtle Avenue & Evergreen Avenue

03/06/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	438	259	0	0	0	0	472	144	243	439	0
Future Volume (veh/h)	340	438	259	0	0	0	0	472	144	243	439	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	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	374	481	285				0	519	158	267	482	0
Peak Hour Factor	0.91	0.91	0.91				0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	527	636	375				0	851	258	301	1945	0
Arrive On Green	0.30	0.30	0.30				0.00	0.32	0.32	0.17	0.55	0.00
Sat Flow, veh/h	1781	2151	1268				0	2780	814	1781	3647	0
Grp Volume(v), veh/h	374	397	369				0	342	335	267	482	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1642				0	1777	1724	1781	1777	0
Q Serve(g_s), s	12.2	13.2	13.3				0.0	10.6	10.7	9.5	4.6	0.0
Cycle Q Clear(g_c), s	12.2	13.2	13.3				0.0	10.6	10.7	9.5	4.6	0.0
Prop In Lane	1.00		0.77				0.00		0.47	1.00		0.00
Lane Grp Cap(c), veh/h	527	525	485				0	563	546	301	1945	0
V/C Ratio(X)	0.71	0.76	0.76				0.00	0.61	0.61	0.89	0.25	0.00
Avail Cap(c_a), veh/h	658	656	606				0	563	546	301	1945	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	1.00	1.00				0.00	1.00	1.00	0.76	0.76	0.00
Uniform Delay (d), s/veh	20.4	20.8	20.8				0.0	18.8	18.8	26.4	7.7	0.0
Incr Delay (d2), s/veh	2.7	3.9	4.4				0.0	4.8	5.1	20.6	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	4.9	5.5	5.2				0.0	4.7	4.6	5.5	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	24.7	25.2				0.0	23.6	23.9	47.0	7.9	0.0
LnGrp LOS	C	C	C				A	C	C	D	A	A
Approach Vol, veh/h		1140						677			749	
Approach Delay, s/veh		24.3						23.8			21.9	
Approach LOS		C						C			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	5.0	25.7	24.3	40.7								
Change Period (Y+Rc), s	4.0	5.1	5.1	5.1								
Max Green Setting (Gmax), s	1.0	15.8	24.0	30.8								
Max Q Clear Time (g_c+I1), s	1.0	12.7	15.3	6.6								
Green Ext Time (p_c), s	0.0	1.2	3.9	3.2								

Intersection Summary

HCM 6th Ctrl Delay		23.4		
HCM 6th LOS		C		

HCM 6th Signalized Intersection Summary
 1: Driveway/I-210 EB Off Ramp & Huntington Drive

03/06/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↖	↑↑	↗	↖		↗	↖	↗	↖
Traffic Volume (veh/h)	0	1498	27	20	1047	32	22	0	16	346	4	75
Future Volume (veh/h)	0	1498	27	20	1047	32	22	0	16	346	4	75
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	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1529	28	20	1068	0	22	0	16	356	0	77
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	2	2	2	2	2	2	0	2	2	2	2
Cap, veh/h	0	2626	48	312	1808		0	0	0	682	0	304
Arrive On Green	0.00	0.51	0.51	0.51	0.51	0.00	0.00	0.00	0.00	0.19	0.00	0.19
Sat Flow, veh/h	0	5331	95	331	3554	1585		0		3563	0	1585
Grp Volume(v), veh/h	0	1008	549	20	1068	0		0.0		356	0	77
Grp Sat Flow(s),veh/h/ln	0	1702	1853	331	1777	1585				1781	0	1585
Q Serve(g_s), s	0.0	7.0	7.0	1.5	7.2	0.0				3.1	0.0	1.4
Cycle Q Clear(g_c), s	0.0	7.0	7.0	8.6	7.2	0.0				3.1	0.0	1.4
Prop In Lane	0.00		0.05	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1732	943	312	1808					682	0	304
V/C Ratio(X)	0.00	0.58	0.58	0.06	0.59					0.52	0.00	0.25
Avail Cap(c_a), veh/h	0	2191	1193	356	2287					2596	0	1155
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	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.8	5.8	8.8	5.9	0.0				12.4	0.0	11.7
Incr Delay (d2), s/veh	0.0	0.3	0.6	0.1	0.3	0.0				0.6	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	1.3	1.5	0.1	1.4	0.0				1.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.1	6.4	8.9	6.2	0.0				13.0	0.0	12.1
LnGrp LOS	A	A	A	A	A					B	A	B
Approach Vol, veh/h		1557			1088	A						433
Approach Delay, s/veh		6.2			6.2							12.8
Approach LOS		A			A							B
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		11.6		22.4				22.4				
Change Period (Y+Rc), s		5.1		5.1				5.1				
Max Green Setting (Gmax), s		24.8		21.9				21.9				
Max Q Clear Time (g_c+I1), s		5.1		10.6				9.0				
Green Ext Time (p_c), s		1.5		5.9				8.3				

Intersection Summary

HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

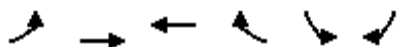
Notes

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

HCM 6th Signalized Intersection Summary

2: Huntington Drive & I-210 WB On Ramp

03/06/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑↑	↑↑	↗	↖	↗	
Traffic Volume (veh/h)	91	1231	759	478	99	361	
Future Volume (veh/h)	91	1231	759	478	99	361	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	99	1338	825	520	241	250	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	170	3018	1489	664	381	339	
Arrive On Green	0.10	0.59	0.42	0.42	0.21	0.21	
Sat Flow, veh/h	1781	5274	3647	1585	1781	1585	
Grp Volume(v), veh/h	99	1338	825	520	241	250	
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1585	1781	1585	
Q Serve(g_s), s	2.8	7.6	9.2	14.8	6.4	7.7	
Cycle Q Clear(g_c), s	2.8	7.6	9.2	14.8	6.4	7.7	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	170	3018	1489	664	381	339	
V/C Ratio(X)	0.58	0.44	0.55	0.78	0.63	0.74	
Avail Cap(c_a), veh/h	613	4687	1767	788	913	812	
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	22.6	5.9	11.5	13.1	18.7	19.2	
Incr Delay (d2), s/veh	3.1	0.1	0.3	4.4	1.7	3.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1.2	1.9	3.0	5.1	2.6	6.8	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.8	6.0	11.8	17.5	20.4	22.3	
LnGrp LOS	C	A	B	B	C	C	
Approach Vol, veh/h		1437	1345		491		
Approach Delay, s/veh		7.4	14.0		21.4		
Approach LOS		A	B		C		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			36.0		16.3	9.0	27.0
Change Period (Y+Rc), s			5.1		5.1	4.0	5.1
Max Green Setting (Gmax), s			48.0		26.8	18.0	26.0
Max Q Clear Time (g_c+I1), s			9.6		9.7	4.8	16.8
Green Ext Time (p_c), s			13.2		1.5	0.2	5.1

Intersection Summary

HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary

6: Myrtle Avenue & Central Avenue

03/06/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↘	↗	↗	↘	↗	↗		↗	↘
Traffic Volume (veh/h)	0	0	0	199	499	283	285	387	0	0	680	197
Future Volume (veh/h)	0	0	0	199	499	283	285	387	0	0	680	197
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				No
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				214	537	304	306	416	0	0	731	212
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				556	584	495	333	1961	0	0	847	246
Arrive On Green				0.31	0.31	0.31	0.19	0.55	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1781	1870	1585	1781	3647	0	0	2811	788
Grp Volume(v), veh/h				214	537	304	306	416	0	0	478	465
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	1781	1777	0	0	1777	1729
Q Serve(g_s), s				7.0	20.8	12.2	12.7	4.5	0.0	0.0	19.0	19.0
Cycle Q Clear(g_c), s				7.0	20.8	12.2	12.7	4.5	0.0	0.0	19.0	19.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.46
Lane Grp Cap(c), veh/h				556	584	495	333	1961	0	0	554	539
V/C Ratio(X)				0.38	0.92	0.61	0.92	0.21	0.00	0.00	0.86	0.86
Avail Cap(c_a), veh/h				568	596	505	333	1961	0	0	554	539
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.63	0.63	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				20.2	24.9	22.0	30.0	8.5	0.0	0.0	24.3	24.3
Incr Delay (d2), s/veh				0.4	19.4	2.2	21.5	0.2	0.0	0.0	16.2	16.5
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				2.8	11.6	4.5	7.1	1.5	0.0	0.0	9.8	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				20.6	44.3	24.1	51.5	8.7	0.0	0.0	40.5	40.8
LnGrp LOS				C	D	C	D	A	A	A	D	D
Approach Vol, veh/h					1055			722			943	
Approach Delay, s/veh					33.7			26.8			40.6	
Approach LOS					C			C			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		46.5			18.0	28.5		28.5				
Change Period (Y+Rc), s		5.1			4.0	5.1		5.1				
Max Green Setting (Gmax), s		40.9			14.0	22.9		23.9				
Max Q Clear Time (g_c+I1), s		6.5			14.7	21.0		22.8				
Green Ext Time (p_c), s		2.9			0.0	1.1		0.6				
Intersection Summary												
HCM 6th Ctrl Delay											34.3	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary

7: Myrtle Avenue & Evergreen Avenue

03/06/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	803	191	0	0	0	0	520	185	308	583	0
Future Volume (veh/h)	155	803	191	0	0	0	0	520	185	308	583	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	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	165	854	203				0	553	197	328	620	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	594	949	226				0	678	241	356	1851	0
Arrive On Green	0.33	0.33	0.33				0.00	0.26	0.26	0.20	0.52	0.00
Sat Flow, veh/h	1781	2848	677				0	2664	913	1781	3647	0
Grp Volume(v), veh/h	165	533	524				0	382	368	328	620	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1749				0	1777	1706	1781	1777	0
Q Serve(g_s), s	4.8	20.0	20.0				0.0	14.1	14.2	12.6	7.1	0.0
Cycle Q Clear(g_c), s	4.8	20.0	20.0				0.0	14.1	14.2	12.6	7.1	0.0
Prop In Lane	1.00		0.39				0.00		0.53	1.00		0.00
Lane Grp Cap(c), veh/h	594	592	583				0	469	450	356	1851	0
V/C Ratio(X)	0.28	0.90	0.90				0.00	0.81	0.82	0.92	0.33	0.00
Avail Cap(c_a), veh/h	611	609	599				0	469	450	356	1851	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	1.00	1.00				0.00	1.00	1.00	0.54	0.54	0.00
Uniform Delay (d), s/veh	17.1	22.2	22.2				0.0	24.2	24.2	27.5	9.7	0.0
Incr Delay (d2), s/veh	0.3	16.1	16.3				0.0	14.4	15.2	18.3	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
%ile BackOfQ(50%),veh/ln	1.8	10.1	10.0				0.0	7.3	7.2	6.8	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	38.3	38.6				0.0	38.5	39.4	45.8	10.0	0.0
LnGrp LOS	B	D	D				A	D	D	D	A	A
Approach Vol, veh/h		1222						750			948	
Approach Delay, s/veh		35.6						38.9			22.4	
Approach LOS		D						D			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	8.0	23.6	28.4	41.6								
Change Period (Y+Rc), s	4.0	5.1	5.1	5.1								
Max Green Setting (Gmax), s	17.8	17.8	24.0	35.8								
Max Q Clear Time (g_c+1/4), s	14.6	16.2	22.0	9.1								
Green Ext Time (p_c), s	0.0	0.8	1.3	4.4								

Intersection Summary

HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
 1: Driveway/I-210 EB Off Ramp & Huntington Drive

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↖	↑↑	↗	↖		↗	↖	↗	↖
Traffic Volume (veh/h)	0	751	11	8	1434	110	37	0	29	251	9	195
Future Volume (veh/h)	0	751	11	8	1434	110	37	0	29	251	9	195
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	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	799	12	9	1526	0	39	0	31	274	0	207
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	2	2	2	2	2	2	0	2	2	2	2
Cap, veh/h	0	3144	47	502	2156		0	0	0	683	0	304
Arrive On Green	0.00	0.61	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.19	0.00	0.19
Sat Flow, veh/h	0	5351	78	673	3554	1585		0		3563	0	1585
Grp Volume(v), veh/h	0	525	286	9	1526	0		0.0		274	0	207
Grp Sat Flow(s),veh/h/ln	0	1702	1856	673	1777	1585				1781	0	1585
Q Serve(g_s), s	0.0	3.6	3.6	0.3	15.0	0.0				3.4	0.0	6.1
Cycle Q Clear(g_c), s	0.0	3.6	3.6	3.9	15.0	0.0				3.4	0.0	6.1
Prop In Lane	0.00		0.04	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2065	1126	502	2156					683	0	304
V/C Ratio(X)	0.00	0.25	0.25	0.02	0.71					0.40	0.00	0.68
Avail Cap(c_a), veh/h	0	2820	1538	651	2944					1747	0	777
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	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.6	4.6	5.5	6.9	0.0				17.9	0.0	19.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.5	0.0				0.4	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
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.9	0.0	3.7	0.0				1.3	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.7	4.7	5.6	7.4	0.0				18.3	0.0	21.7
LnGrp LOS	A	A	A	A	A					B	A	C
Approach Vol, veh/h		811			1535	A						481
Approach Delay, s/veh		4.7			7.3							19.7
Approach LOS		A			A							B
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		14.8		35.8				35.8				
Change Period (Y+Rc), s		5.1		5.1				5.1				
Max Green Setting (Gmax), s		24.8		41.9				41.9				
Max Q Clear Time (g_c+I1), s		8.1		17.0				5.6				
Green Ext Time (p_c), s		1.6		13.7				6.2				

Intersection Summary

HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

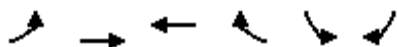
Notes

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

HCM 6th Signalized Intersection Summary

2: Huntington Drive & I-210 WB On Ramp

03/09/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑↑	↗	↗	↘	↘	
Traffic Volume (veh/h)	31	566	1399	512	23	169	
Future Volume (veh/h)	31	566	1399	512	23	169	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	33	602	1488	545	0	206	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	156	3633	1968	878	196	348	
Arrive On Green	0.09	0.71	0.55	0.55	0.00	0.11	
Sat Flow, veh/h	1781	5274	3647	1585	1781	3170	
Grp Volume(v), veh/h	33	602	1488	545	0	206	
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1585	1781	1585	
Q Serve(g_s), s	1.0	2.2	18.3	13.3	0.0	3.5	
Cycle Q Clear(g_c), s	1.0	2.2	18.3	13.3	0.0	3.5	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	156	3633	1968	878	196	348	
V/C Ratio(X)	0.21	0.17	0.76	0.62	0.00	0.59	
Avail Cap(c_a), veh/h	562	5179	2235	997	839	1494	
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	0.00	1.00	
Uniform Delay (d), s/veh	24.2	2.7	9.8	8.7	0.0	24.2	
Incr Delay (d2), s/veh	0.7	0.0	1.3	1.0	0.0	1.6	
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	0.4	5.7	3.7	0.0	3.2	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.9	2.7	11.1	9.6	0.0	25.8	
LnGrp LOS	C	A	B	A	A	C	
Approach Vol, veh/h		635	2033		206		
Approach Delay, s/veh		3.9	10.7		25.8		
Approach LOS		A	B		C		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			45.7		11.4	9.0	36.7
Change Period (Y+Rc), s			5.1		5.1	4.0	5.1
Max Green Setting (Gmax), s			57.9		26.9	18.0	35.9
Max Q Clear Time (g_c+I1), s			4.2		5.5	3.0	20.3
Green Ext Time (p_c), s			4.9		0.7	0.0	11.3
Intersection Summary							
HCM 6th Ctrl Delay			10.3				
HCM 6th LOS			B				
Notes							
User approved volume balancing among the lanes for turning movement.							

HCM 6th Signalized Intersection Summary

6: Myrtle Avenue & Central Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↘	↕	↗	↘	↕			↕	↗
Traffic Volume (veh/h)	0	0	0	218	558	323	231	590	0	0	476	82
Future Volume (veh/h)	0	0	0	218	558	323	231	590	0	0	476	82
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				No
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				234	600	347	248	634	0	0	512	88
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				645	678	574	267	1662	0	0	762	130
Arrive On Green				0.36	0.36	0.36	0.15	0.47	0.00	0.00	0.25	0.25
Sat Flow, veh/h				1781	1870	1585	1781	3647	0	0	3128	519
Grp Volume(v), veh/h				234	600	347	248	634	0	0	299	301
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	1781	1777	0	0	1777	1777
Q Serve(g_s), s				5.8	18.1	10.7	8.2	6.9	0.0	0.0	9.1	9.2
Cycle Q Clear(g_c), s				5.8	18.1	10.7	8.2	6.9	0.0	0.0	9.1	9.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.29
Lane Grp Cap(c), veh/h				645	678	574	267	1662	0	0	446	446
V/C Ratio(X)				0.36	0.89	0.60	0.93	0.38	0.00	0.00	0.67	0.68
Avail Cap(c_a), veh/h				683	717	608	267	1662	0	0	446	446
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.67	0.67	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				14.0	18.0	15.6	25.2	10.3	0.0	0.0	20.2	20.3
Incr Delay (d2), s/veh				0.3	12.3	1.6	27.8	0.4	0.0	0.0	7.8	8.0
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				2.1	9.0	3.6	5.2	2.3	0.0	0.0	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				14.4	30.3	17.2	53.0	10.8	0.0	0.0	28.0	28.2
LnGrp LOS				B	C	B	D	B	A	A	C	C
Approach Vol, veh/h				1181			882			600		
Approach Delay, s/veh				23.3			22.7			28.1		
Approach LOS				C			C			C		
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		33.2			13.0	20.2		26.8				
Change Period (Y+Rc), s		5.1			4.0	5.1		5.1				
Max Green Setting (Gmax), s		26.8			9.0	13.8		23.0				
Max Q Clear Time (g_c+I1), s		8.9			10.2	11.2		20.1				
Green Ext Time (p_c), s		3.9			0.0	0.9		1.7				
Intersection Summary												
HCM 6th Ctrl Delay				24.2								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

7: Myrtle Avenue & Evergreen Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	438	259	0	0	0	0	472	144	251	441	0
Future Volume (veh/h)	340	438	259	0	0	0	0	472	144	251	441	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	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	374	481	285				0	519	158	276	485	0
Peak Hour Factor	0.91	0.91	0.91				0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	527	636	375				0	851	258	301	1945	0
Arrive On Green	0.30	0.30	0.30				0.00	0.32	0.32	0.17	0.55	0.00
Sat Flow, veh/h	1781	2151	1268				0	2780	814	1781	3647	0
Grp Volume(v), veh/h	374	397	369				0	342	335	276	485	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1642				0	1777	1724	1781	1777	0
Q Serve(g_s), s	12.2	13.2	13.3				0.0	10.6	10.7	9.9	4.6	0.0
Cycle Q Clear(g_c), s	12.2	13.2	13.3				0.0	10.6	10.7	9.9	4.6	0.0
Prop In Lane	1.00		0.77				0.00		0.47	1.00		0.00
Lane Grp Cap(c), veh/h	527	525	485				0	563	546	301	1945	0
V/C Ratio(X)	0.71	0.76	0.76				0.00	0.61	0.61	0.92	0.25	0.00
Avail Cap(c_a), veh/h	658	656	606				0	563	546	301	1945	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	1.00	1.00				0.00	1.00	1.00	0.75	0.75	0.00
Uniform Delay (d), s/veh	20.4	20.8	20.8				0.0	18.8	18.8	26.5	7.7	0.0
Incr Delay (d2), s/veh	2.7	3.9	4.4				0.0	4.8	5.1	25.3	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	4.9	5.5	5.2				0.0	4.7	4.6	6.0	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	24.7	25.2				0.0	23.6	23.9	51.8	7.9	0.0
LnGrp LOS	C	C	C				A	C	C	D	A	A
Approach Vol, veh/h		1140						677			761	
Approach Delay, s/veh		24.3						23.8			23.9	
Approach LOS		C						C			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	5.0	25.7	24.3	40.7								
Change Period (Y+Rc), s	4.0	5.1	5.1	5.1								
Max Green Setting (Gmax), s	1.0	15.8	24.0	30.8								
Max Q Clear Time (g_c+I1), s	1.0	12.7	15.3	6.6								
Green Ext Time (p_c), s	0.0	1.2	3.9	3.2								

Intersection Summary

HCM 6th Ctrl Delay	24.0
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
 1: Driveway/I-210 EB Off Ramp & Huntington Drive

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↖	↑↑	↗	↖		↗	↖	↗	↖
Traffic Volume (veh/h)	0	1500	27	20	1047	32	22	0	16	361	4	75
Future Volume (veh/h)	0	1500	27	20	1047	32	22	0	16	361	4	75
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	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1531	28	20	1068	0	22	0	16	371	0	77
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	2	2	2	2	2	2	0	2	2	2	2
Cap, veh/h	0	2615	48	309	1800		0	0	0	699	0	311
Arrive On Green	0.00	0.51	0.51	0.51	0.51	0.00	0.00	0.00	0.00	0.20	0.00	0.20
Sat Flow, veh/h	0	5331	94	331	3554	1585		0		3563	0	1585
Grp Volume(v), veh/h	0	1009	550	20	1068	0		0.0		371	0	77
Grp Sat Flow(s),veh/h/ln	0	1702	1853	331	1777	1585				1781	0	1585
Q Serve(g_s), s	0.0	7.1	7.1	1.5	7.3	0.0				3.2	0.0	1.4
Cycle Q Clear(g_c), s	0.0	7.1	7.1	8.7	7.3	0.0				3.2	0.0	1.4
Prop In Lane	0.00		0.05	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1724	939	309	1800					699	0	311
V/C Ratio(X)	0.00	0.59	0.59	0.06	0.59					0.53	0.00	0.25
Avail Cap(c_a), veh/h	0	2174	1183	352	2269					2576	0	1146
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	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.9	5.9	9.0	6.0	0.0				12.4	0.0	11.6
Incr Delay (d2), s/veh	0.0	0.3	0.6	0.1	0.3	0.0				0.6	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	1.4	1.6	0.1	1.5	0.0				1.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.3	6.5	9.1	6.3	0.0				13.0	0.0	12.1
LnGrp LOS	A	A	A	A	A					B	A	B
Approach Vol, veh/h		1559			1088	A						448
Approach Delay, s/veh		6.3			6.3							12.8
Approach LOS		A			A							B
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		11.8		22.5				22.5				
Change Period (Y+Rc), s		5.1		5.1				5.1				
Max Green Setting (Gmax), s		24.8		21.9				21.9				
Max Q Clear Time (g_c+I1), s		5.2		10.7				9.1				
Green Ext Time (p_c), s		1.5		5.9				8.2				

Intersection Summary

HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

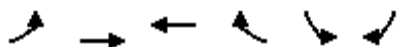
Notes

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

HCM 6th Signalized Intersection Summary

2: Huntington Drive & I-210 WB On Ramp

03/09/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑↑	↗	↗	↘	↘	
Traffic Volume (veh/h)	91	1249	760	481	100	361	
Future Volume (veh/h)	91	1249	760	481	100	361	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	99	1358	826	523	241	250	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	170	3021	1492	666	381	339	
Arrive On Green	0.10	0.59	0.42	0.42	0.21	0.21	
Sat Flow, veh/h	1781	5274	3647	1585	1781	1585	
Grp Volume(v), veh/h	99	1358	826	523	241	250	
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1585	1781	1585	
Q Serve(g_s), s	2.8	7.8	9.2	15.0	6.4	7.7	
Cycle Q Clear(g_c), s	2.8	7.8	9.2	15.0	6.4	7.7	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	170	3021	1492	666	381	339	
V/C Ratio(X)	0.58	0.45	0.55	0.79	0.63	0.74	
Avail Cap(c_a), veh/h	612	4677	1763	786	911	811	
HCM Platoon Ratio	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	
Uniform Delay (d), s/veh	22.7	6.0	11.5	13.2	18.7	19.2	
Incr Delay (d2), s/veh	3.1	0.1	0.3	4.5	1.7	3.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1.2	1.9	3.1	5.2	2.6	0.3	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.8	6.1	11.8	17.7	20.5	22.4	
LnGrp LOS	C	A	B	B	C	C	
Approach Vol, veh/h		1457	1349		491		
Approach Delay, s/veh		7.4	14.1		21.4		
Approach LOS		A	B		C		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			36.1		16.3	9.0	27.1
Change Period (Y+Rc), s			5.1		5.1	4.0	5.1
Max Green Setting (Gmax), s			48.0		26.8	18.0	26.0
Max Q Clear Time (g_c+I1), s			9.8		9.7	4.8	17.0
Green Ext Time (p_c), s			13.4		1.5	0.2	5.0

Intersection Summary

HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary

6: Myrtle Avenue & Central Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↷	↶	↷			↷	↷
Traffic Volume (veh/h)	0	0	0	199	499	292	285	394	0	0	682	198
Future Volume (veh/h)	0	0	0	199	499	292	285	394	0	0	682	198
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			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				214	537	314	306	424	0	0	733	213
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				556	584	495	333	1961	0	0	847	246
Arrive On Green				0.31	0.31	0.31	0.19	0.55	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1781	1870	1585	1781	3647	0	0	2809	789
Grp Volume(v), veh/h				214	537	314	306	424	0	0	480	466
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	1781	1777	0	0	1777	1728
Q Serve(g_s), s				7.0	20.8	12.7	12.7	4.6	0.0	0.0	19.1	19.1
Cycle Q Clear(g_c), s				7.0	20.8	12.7	12.7	4.6	0.0	0.0	19.1	19.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.46
Lane Grp Cap(c), veh/h				556	584	495	333	1961	0	0	554	539
V/C Ratio(X)				0.38	0.92	0.63	0.92	0.22	0.00	0.00	0.87	0.87
Avail Cap(c_a), veh/h				568	596	505	333	1961	0	0	554	539
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.63	0.63	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				20.2	24.9	22.1	30.0	8.6	0.0	0.0	24.3	24.3
Incr Delay (d2), s/veh				0.4	19.4	2.5	21.5	0.2	0.0	0.0	16.4	16.8
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				2.8	11.6	4.7	7.1	1.5	0.0	0.0	9.9	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				20.6	44.3	24.7	51.5	8.7	0.0	0.0	40.8	41.1
LnGrp LOS				C	D	C	D	A	A	A	D	D
Approach Vol, veh/h					1065			730			946	
Approach Delay, s/veh					33.7			26.6			41.0	
Approach LOS					C			C			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		46.5			18.0	28.5		28.5				
Change Period (Y+Rc), s		5.1			4.0	5.1		5.1				
Max Green Setting (Gmax), s		40.9			14.0	22.9		23.9				
Max Q Clear Time (g_c+I1), s		6.6			14.7	21.1		22.8				
Green Ext Time (p_c), s		2.9			0.0	1.1		0.6				
Intersection Summary												
HCM 6th Ctrl Delay											34.3	
HCM 6th LOS											C	

HCM 6th Signalized Intersection Summary

7: Myrtle Avenue & Evergreen Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	803	191	0	0	0	0	522	185	310	583	0
Future Volume (veh/h)	159	803	191	0	0	0	0	522	185	310	583	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	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	169	854	203				0	555	197	330	620	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	594	950	226				0	679	240	356	1851	0
Arrive On Green	0.33	0.33	0.33				0.00	0.26	0.26	0.20	0.52	0.00
Sat Flow, veh/h	1781	2848	677				0	2666	910	1781	3647	0
Grp Volume(v), veh/h	169	533	524				0	383	369	330	620	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1749				0	1777	1706	1781	1777	0
Q Serve(g_s), s	4.9	20.0	20.0				0.0	14.1	14.2	12.7	7.1	0.0
Cycle Q Clear(g_c), s	4.9	20.0	20.0				0.0	14.1	14.2	12.7	7.1	0.0
Prop In Lane	1.00		0.39				0.00		0.53	1.00		0.00
Lane Grp Cap(c), veh/h	594	592	583				0	469	450	356	1851	0
V/C Ratio(X)	0.28	0.90	0.90				0.00	0.82	0.82	0.93	0.33	0.00
Avail Cap(c_a), veh/h	611	609	599				0	469	450	356	1851	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	1.00	1.00				0.00	1.00	1.00	0.54	0.54	0.00
Uniform Delay (d), s/veh	17.2	22.2	22.2				0.0	24.2	24.2	27.5	9.7	0.0
Incr Delay (d2), s/veh	0.3	16.1	16.3				0.0	14.5	15.3	19.2	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
%ile BackOfQ(50%),veh/ln	1.9	10.1	10.0				0.0	7.4	7.2	6.9	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	38.3	38.6				0.0	38.7	39.5	46.7	10.0	0.0
LnGrp LOS	B	D	D				A	D	D	D	A	A
Approach Vol, veh/h		1226						752			950	
Approach Delay, s/veh		35.5						39.1			22.7	
Approach LOS		D						D			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	8.0	23.6	28.4	41.6								
Change Period (Y+Rc), s	4.0	5.1	5.1	5.1								
Max Green Setting (Gmax), s	17.8	17.8	24.0	35.8								
Max Q Clear Time (g_c+1/4), s	14.8	16.2	22.0	9.1								
Green Ext Time (p_c), s	0.0	0.7	1.3	4.4								
Intersection Summary												
HCM 6th Ctrl Delay			32.3									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
 1: Driveway/I-210 EB Off Ramp & Huntington Drive

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↔	↑↑	↔	↔		↔	↔	↔	↔
Traffic Volume (veh/h)	0	790	11	8	1474	115	37	0	29	278	9	206
Future Volume (veh/h)	0	790	11	8	1474	115	37	0	29	278	9	206
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	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	840	12	9	1568	0	39	0	31	303	0	219
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	2	2	2	2	2	2	0	2	2	2	2
Cap, veh/h	0	3153	45	481	2160		0	0	0	707	0	315
Arrive On Green	0.00	0.61	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.20	0.00	0.20
Sat Flow, veh/h	0	5355	74	647	3554	1585		0		3563	0	1585
Grp Volume(v), veh/h	0	551	301	9	1568	0		0.0		303	0	219
Grp Sat Flow(s),veh/h/ln	0	1702	1857	647	1777	1585				1781	0	1585
Q Serve(g_s), s	0.0	4.0	4.0	0.3	16.3	0.0				3.9	0.0	6.8
Cycle Q Clear(g_c), s	0.0	4.0	4.0	4.3	16.3	0.0				3.9	0.0	6.8
Prop In Lane	0.00		0.04	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2069	1129	481	2160					707	0	315
V/C Ratio(X)	0.00	0.27	0.27	0.02	0.73					0.43	0.00	0.70
Avail Cap(c_a), veh/h	0	2708	1477	603	2827					1678	0	746
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	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.8	4.8	5.8	7.2	0.0				18.5	0.0	19.6
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.7	0.0				0.4	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.0	1.1	0.0	4.2	0.0				1.5	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.9	5.0	5.9	7.9	0.0				18.9	0.0	22.4
LnGrp LOS	A	A	A	A	A					B	A	C
Approach Vol, veh/h		852			1577	A						522
Approach Delay, s/veh		4.9			7.9							20.4
Approach LOS		A			A							C
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		15.6		37.1				37.1				
Change Period (Y+Rc), s		5.1		5.1				5.1				
Max Green Setting (Gmax), s		24.8		41.9				41.9				
Max Q Clear Time (g_c+I1), s		8.8		18.3				6.0				
Green Ext Time (p_c), s		1.7		13.7				6.6				

Intersection Summary

HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

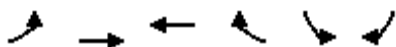
Notes

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

HCM 6th Signalized Intersection Summary

2: Huntington Drive & I-210 WB On Ramp

03/09/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑↑	↗	→	↙	↘	
Traffic Volume (veh/h)	45	615	1439	552	28	174	
Future Volume (veh/h)	45	615	1439	552	28	174	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	48	654	1531	587	0	217	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	153	3634	1980	883	201	358	
Arrive On Green	0.09	0.71	0.56	0.56	0.00	0.11	
Sat Flow, veh/h	1781	5274	3647	1585	1781	3170	
Grp Volume(v), veh/h	48	654	1531	587	0	217	
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1585	1781	1585	
Q Serve(g_s), s	1.5	2.5	19.5	15.2	0.0	3.8	
Cycle Q Clear(g_c), s	1.5	2.5	19.5	15.2	0.0	3.8	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	153	3634	1980	883	201	358	
V/C Ratio(X)	0.31	0.18	0.77	0.66	0.00	0.61	
Avail Cap(c_a), veh/h	551	5080	2192	978	823	1465	
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	0.00	1.00	
Uniform Delay (d), s/veh	25.0	2.8	10.0	9.1	0.0	24.6	
Incr Delay (d2), s/veh	1.2	0.0	1.6	1.5	0.0	1.7	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.6	0.4	6.2	4.3	0.0	3.4	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	26.1	2.8	11.6	10.6	0.0	26.2	
LnGrp LOS	C	A	B	B	A	C	
Approach Vol, veh/h		702	2118		217		
Approach Delay, s/veh		4.4	11.3		26.2		
Approach LOS		A	B		C		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			46.5		11.7	9.0	37.5
Change Period (Y+Rc), s			5.1		5.1	4.0	5.1
Max Green Setting (Gmax), s			57.9		26.9	18.0	35.9
Max Q Clear Time (g_c+I1), s			4.5		5.8	3.5	21.5
Green Ext Time (p_c), s			5.3		0.8	0.1	10.9
Intersection Summary							
HCM 6th Ctrl Delay			10.8				
HCM 6th LOS			B				
Notes							
User approved volume balancing among the lanes for turning movement.							

HCM 6th Signalized Intersection Summary

6: Myrtle Avenue & Central Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↘	↗	↗	↘	↕			↕	↘
Traffic Volume (veh/h)	0	0	0	242	573	336	324	677	0	0	544	131
Future Volume (veh/h)	0	0	0	242	573	336	324	677	0	0	544	131
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			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				260	616	361	348	728	0	0	585	141
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				655	688	583	267	1643	0	0	698	168
Arrive On Green				0.37	0.37	0.37	0.15	0.46	0.00	0.00	0.25	0.25
Sat Flow, veh/h				1781	1870	1585	1781	3647	0	0	2935	683
Grp Volume(v), veh/h				260	616	361	348	728	0	0	365	361
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	1781	1777	0	0	1777	1747
Q Serve(g_s), s				6.5	18.6	11.2	9.0	8.3	0.0	0.0	11.7	11.8
Cycle Q Clear(g_c), s				6.5	18.6	11.2	9.0	8.3	0.0	0.0	11.7	11.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.39
Lane Grp Cap(c), veh/h				655	688	583	267	1643	0	0	436	429
V/C Ratio(X)				0.40	0.90	0.62	1.30	0.44	0.00	0.00	0.84	0.84
Avail Cap(c_a), veh/h				683	717	608	267	1643	0	0	436	429
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.40	0.40	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				14.0	17.9	15.5	25.5	10.9	0.0	0.0	21.5	21.5
Incr Delay (d2), s/veh				0.4	13.6	1.8	146.8	0.3	0.0	0.0	17.2	17.7
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				2.3	9.4	3.8	14.4	2.8	0.0	0.0	6.4	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				14.4	31.5	17.3	172.3	11.3	0.0	0.0	38.7	39.3
LnGrp LOS				B	C	B	F	B	A	A	D	D
Approach Vol, veh/h					1237			1076			726	
Approach Delay, s/veh					23.8			63.4			39.0	
Approach LOS					C			E			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		32.8			13.0	19.8		27.2				
Change Period (Y+Rc), s		5.1			4.0	5.1		5.1				
Max Green Setting (Gmax), s		26.8			9.0	13.8		23.0				
Max Q Clear Time (g_c+I1), s		10.3			11.0	13.8		20.6				
Green Ext Time (p_c), s		4.5			0.0	0.0		1.4				
Intersection Summary												
HCM 6th Ctrl Delay				41.4								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary

7: Myrtle Avenue & Evergreen Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	387	495	303	0	0	0	0	607	179	258	524	0
Future Volume (veh/h)	387	495	303	0	0	0	0	607	179	258	524	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	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	425	544	333				0	667	197	284	576	0
Peak Hour Factor	0.91	0.91	0.91				0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	575	684	418				0	783	231	301	1849	0
Arrive On Green	0.32	0.32	0.32				0.00	0.29	0.29	0.17	0.52	0.00
Sat Flow, veh/h	1781	2119	1295				0	2799	798	1781	3647	0
Grp Volume(v), veh/h	425	456	421				0	438	426	284	576	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1637				0	1777	1727	1781	1777	0
Q Serve(g_s), s	13.8	15.2	15.2				0.0	15.1	15.1	10.2	6.0	0.0
Cycle Q Clear(g_c), s	13.8	15.2	15.2				0.0	15.1	15.1	10.2	6.0	0.0
Prop In Lane	1.00		0.79				0.00		0.46	1.00		0.00
Lane Grp Cap(c), veh/h	575	573	528				0	515	500	301	1849	0
V/C Ratio(X)	0.74	0.80	0.80				0.00	0.85	0.85	0.94	0.31	0.00
Avail Cap(c_a), veh/h	658	656	604				0	515	500	301	1849	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	1.00	1.00				0.00	1.00	1.00	0.57	0.57	0.00
Uniform Delay (d), s/veh	19.6	20.1	20.1				0.0	21.8	21.8	26.7	8.9	0.0
Incr Delay (d2), s/veh	3.8	6.0	6.5				0.0	16.1	16.6	25.5	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
%ile BackOfQ(50%),veh/ln	5.7	6.6	6.1				0.0	8.0	7.8	6.1	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	26.0	26.6				0.0	37.9	38.4	52.2	9.2	0.0
LnGrp LOS	C	C	C				A	D	D	D	A	A
Approach Vol, veh/h		1302						864			860	
Approach Delay, s/veh		25.4						38.1			23.4	
Approach LOS		C						D			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	5.0	23.9	26.1	38.9								
Change Period (Y+Rc), s	4.0	5.1	5.1	5.1								
Max Green Setting (Gmax), s	1.0	15.8	24.0	30.8								
Max Q Clear Time (g_c+1/2), s	11.2	17.1	17.2	8.0								
Green Ext Time (p_c), s	0.0	0.0	3.7	3.8								

Intersection Summary

HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
 1: Driveway/I-210 EB Off Ramp & Huntington Drive

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↖	↑↑	↗	↖		↗	↖	↗	↖
Traffic Volume (veh/h)	0	1562	27	20	1102	44	22	0	16	401	4	119
Future Volume (veh/h)	0	1562	27	20	1102	44	22	0	16	401	4	119
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	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1594	28	20	1124	0	22	0	16	412	0	121
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	2	2	2	2	2	2	0	2	2	2	2
Cap, veh/h	0	2606	46	289	1792		0	0	0	749	0	333
Arrive On Green	0.00	0.50	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.21	0.00	0.21
Sat Flow, veh/h	0	5336	91	311	3554	1585		0		3563	0	1585
Grp Volume(v), veh/h	0	1050	572	20	1124	0		0.0		412	0	121
Grp Sat Flow(s),veh/h/ln	0	1702	1854	311	1777	1585				1781	0	1585
Q Serve(g_s), s	0.0	7.9	7.9	1.8	8.2	0.0				3.7	0.0	2.3
Cycle Q Clear(g_c), s	0.0	7.9	7.9	9.7	8.2	0.0				3.7	0.0	2.3
Prop In Lane	0.00		0.05	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1717	935	289	1792					749	0	333
V/C Ratio(X)	0.00	0.61	0.61	0.07	0.63					0.55	0.00	0.36
Avail Cap(c_a), veh/h	0	2085	1136	323	2177					2471	0	1099
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	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.3	6.4	9.8	6.4	0.0				12.6	0.0	12.1
Incr Delay (d2), s/veh	0.0	0.4	0.7	0.1	0.4	0.0				0.6	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	1.6	1.9	0.1	1.8	0.0				1.2	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.7	7.0	9.9	6.8	0.0				13.2	0.0	12.7
LnGrp LOS	A	A	A	A	A					B	A	B
Approach Vol, veh/h		1622			1144	A						533
Approach Delay, s/veh		6.8			6.9							13.1
Approach LOS		A			A							B
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		12.6		23.1				23.1				
Change Period (Y+Rc), s		5.1		5.1				5.1				
Max Green Setting (Gmax), s		24.8		21.9				21.9				
Max Q Clear Time (g_c+I1), s		5.7		11.7				9.9				
Green Ext Time (p_c), s		1.8		5.8				8.1				

Intersection Summary

HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

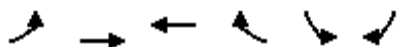
Notes

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

HCM 6th Signalized Intersection Summary

2: Huntington Drive & I-210 WB On Ramp

03/09/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑↑	↗	↗	↘	↘	
Traffic Volume (veh/h)	100	1363	811	533	112	376	
Future Volume (veh/h)	100	1363	811	533	112	376	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	109	1482	882	579	256	266	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	174	3054	1525	680	393	350	
Arrive On Green	0.10	0.60	0.43	0.43	0.22	0.22	
Sat Flow, veh/h	1781	5274	3647	1585	1781	1585	
Grp Volume(v), veh/h	109	1482	882	579	256	266	
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1585	1781	1585	
Q Serve(g_s), s	3.3	9.2	10.6	18.5	7.4	8.8	
Cycle Q Clear(g_c), s	3.3	9.2	10.6	18.5	7.4	8.8	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	174	3054	1525	680	393	350	
V/C Ratio(X)	0.63	0.49	0.58	0.85	0.65	0.76	
Avail Cap(c_a), veh/h	570	4358	1643	733	849	755	
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	24.4	6.4	12.2	14.4	20.0	20.5	
Incr Delay (d2), s/veh	3.7	0.1	0.4	9.0	1.8	3.4	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1.5	2.4	3.6	7.2	3.0	0.3	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	28.0	6.5	12.6	23.4	21.8	24.0	
LnGrp LOS	C	A	B	C	C	C	
Approach Vol, veh/h		1591	1461		522		
Approach Delay, s/veh		8.0	16.9		22.9		
Approach LOS		A	B		C		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			38.7		17.5	9.5	29.2
Change Period (Y+Rc), s			5.1		5.1	4.0	5.1
Max Green Setting (Gmax), s			48.0		26.8	18.0	26.0
Max Q Clear Time (g_c+I1), s			11.2		10.8	5.3	20.5
Green Ext Time (p_c), s			15.0		1.6	0.2	3.7

Intersection Summary

HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary

6: Myrtle Avenue & Central Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations				↖	↗	↖	↖	↗			↗	↖	
Traffic Volume (veh/h)	0	0	0	228	549	301	325	424	0	0	739	221	
Future Volume (veh/h)	0	0	0	228	549	301	325	424	0	0	739	221	
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				No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870	
Adj Flow Rate, veh/h				245	590	324	349	456	0	0	795	238	
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2	
Cap, veh/h				568	596	505	333	1938	0	0	823	246	
Arrive On Green				0.32	0.32	0.32	0.19	0.55	0.00	0.00	0.31	0.31	
Sat Flow, veh/h				1781	1870	1585	1781	3647	0	0	2789	807	
Grp Volume(v), veh/h				245	590	324	349	456	0	0	524	509	
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	1781	1777	0	0	1777	1725	
Q Serve(g_s), s				8.1	23.5	13.1	14.0	5.0	0.0	0.0	21.8	21.8	
Cycle Q Clear(g_c), s				8.1	23.5	13.1	14.0	5.0	0.0	0.0	21.8	21.8	
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.47	
Lane Grp Cap(c), veh/h				568	596	505	333	1938	0	0	543	527	
V/C Ratio(X)				0.43	0.99	0.64	1.05	0.24	0.00	0.00	0.97	0.97	
Avail Cap(c_a), veh/h				568	596	505	333	1938	0	0	543	527	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)				1.00	1.00	1.00	0.51	0.51	0.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh				20.2	25.4	21.9	30.5	8.9	0.0	0.0	25.7	25.7	
Incr Delay (d2), s/veh				0.5	34.2	2.7	49.0	0.1	0.0	0.0	31.1	31.7	
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln				3.2	15.2	4.9	10.2	1.7	0.0	0.0	13.1	12.8	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh				20.7	59.6	24.6	79.5	9.0	0.0	0.0	56.7	57.4	
LnGrp LOS				C	E	C	F	A	A	A	E	E	
Approach Vol, veh/h				1159				805				1033	
Approach Delay, s/veh				41.6				39.6				57.0	
Approach LOS				D				D				E	
Timer - Assigned Phs		2			5	6		8					
Phs Duration (G+Y+Rc), s		46.0			18.0	28.0		29.0					
Change Period (Y+Rc), s		5.1			4.0	5.1		5.1					
Max Green Setting (Gmax), s		40.9			14.0	22.9		23.9					
Max Q Clear Time (g_c+I1), s		7.0			16.0	23.8		25.5					
Green Ext Time (p_c), s		3.2			0.0	0.0		0.0					
Intersection Summary													
HCM 6th Ctrl Delay				46.4									
HCM 6th LOS				D									

HCM 6th Signalized Intersection Summary

7: Myrtle Avenue & Evergreen Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	837	306	0	0	0	0	575	198	322	655	0
Future Volume (veh/h)	177	837	306	0	0	0	0	575	198	322	655	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	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	188	890	326				0	612	211	343	697	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	611	874	319				0	660	227	356	1817	0
Arrive On Green	0.34	0.34	0.34				0.00	0.25	0.25	0.20	0.51	0.00
Sat Flow, veh/h	1781	2550	930				0	2687	893	1781	3647	0
Grp Volume(v), veh/h	188	619	597				0	419	404	343	697	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1703				0	1777	1710	1781	1777	0
Q Serve(g_s), s	5.4	24.0	24.0				0.0	16.1	16.2	13.4	8.3	0.0
Cycle Q Clear(g_c), s	5.4	24.0	24.0				0.0	16.1	16.2	13.4	8.3	0.0
Prop In Lane	1.00		0.55				0.00		0.52	1.00		0.00
Lane Grp Cap(c), veh/h	611	609	584				0	452	435	356	1817	0
V/C Ratio(X)	0.31	1.02	1.02				0.00	0.93	0.93	0.96	0.38	0.00
Avail Cap(c_a), veh/h	611	609	584				0	452	435	356	1817	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	1.00	1.00				0.00	1.00	1.00	0.40	0.40	0.00
Uniform Delay (d), s/veh	16.9	23.0	23.0				0.0	25.5	25.5	27.7	10.4	0.0
Incr Delay (d2), s/veh	0.3	40.6	43.0				0.0	27.6	28.6	21.5	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	2.1	15.8	15.5				0.0	9.7	9.5	7.4	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	63.6	66.0				0.0	53.1	54.1	49.3	10.6	0.0
LnGrp LOS	B	F	F				A	D	D	D	B	A
Approach Vol, veh/h		1404						823			1040	
Approach Delay, s/veh		58.4						53.6			23.4	
Approach LOS		E						D			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	8.0	22.9	29.1	40.9								
Change Period (Y+Rc), s	4.0	5.1	5.1	5.1								
Max Green Setting (Gmax), s	17.8	17.8	24.0	35.8								
Max Q Clear Time (g_c+1), s	15.4	18.2	26.0	10.3								
Green Ext Time (p_c), s	0.0	0.0	0.0	4.9								

Intersection Summary

HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
 1: Driveway/I-210 EB Off Ramp & Huntington Drive

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↖	↑↑	↗	↖		↗	↖	↗	↖
Traffic Volume (veh/h)	0	790	11	8	1476	116	37	0	29	278	9	206
Future Volume (veh/h)	0	790	11	8	1476	116	37	0	29	278	9	206
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	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	840	12	9	1570	0	39	0	31	303	0	219
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	2	2	2	2	2	2	0	2	2	2	2
Cap, veh/h	0	3154	45	481	2161		0	0	0	707	0	315
Arrive On Green	0.00	0.61	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.20	0.00	0.20
Sat Flow, veh/h	0	5355	74	647	3554	1585		0		3563	0	1585
Grp Volume(v), veh/h	0	551	301	9	1570	0		0.0		303	0	219
Grp Sat Flow(s),veh/h/ln	0	1702	1857	647	1777	1585				1781	0	1585
Q Serve(g_s), s	0.0	4.0	4.0	0.3	16.4	0.0				3.9	0.0	6.8
Cycle Q Clear(g_c), s	0.0	4.0	4.0	4.3	16.4	0.0				3.9	0.0	6.8
Prop In Lane	0.00		0.04	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2070	1129	481	2161					707	0	315
V/C Ratio(X)	0.00	0.27	0.27	0.02	0.73					0.43	0.00	0.70
Avail Cap(c_a), veh/h	0	2705	1476	602	2824					1676	0	746
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	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.8	4.8	5.8	7.3	0.0				18.5	0.0	19.7
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.7	0.0				0.4	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.0	1.1	0.0	4.2	0.0				1.5	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.9	5.0	5.9	7.9	0.0				18.9	0.0	22.4
LnGrp LOS	A	A	A	A	A					B	A	C
Approach Vol, veh/h		852			1579	A						522
Approach Delay, s/veh		4.9			7.9							20.4
Approach LOS		A			A							C
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		15.6		37.2				37.2				
Change Period (Y+Rc), s		5.1		5.1				5.1				
Max Green Setting (Gmax), s		24.8		41.9				41.9				
Max Q Clear Time (g_c+I1), s		8.8		18.4				6.0				
Green Ext Time (p_c), s		1.7		13.7				6.6				

Intersection Summary

HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

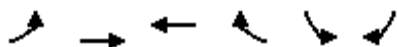
Notes

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

HCM 6th Signalized Intersection Summary

2: Huntington Drive & I-210 WB On Ramp

03/09/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑↑	↗	↑	↙	↘	
Traffic Volume (veh/h)	45	615	1442	565	28	174	
Future Volume (veh/h)	45	615	1442	565	28	174	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	48	654	1534	601	0	217	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	153	3636	1982	884	201	358	
Arrive On Green	0.09	0.71	0.56	0.56	0.00	0.11	
Sat Flow, veh/h	1781	5274	3647	1585	1781	3170	
Grp Volume(v), veh/h	48	654	1534	601	0	217	
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1585	1781	1585	
Q Serve(g_s), s	1.5	2.5	19.6	15.7	0.0	3.8	
Cycle Q Clear(g_c), s	1.5	2.5	19.6	15.7	0.0	3.8	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	153	3636	1982	884	201	358	
V/C Ratio(X)	0.31	0.18	0.77	0.68	0.00	0.61	
Avail Cap(c_a), veh/h	550	5073	2189	976	822	1463	
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	0.00	1.00	
Uniform Delay (d), s/veh	25.0	2.8	10.0	9.2	0.0	24.6	
Incr Delay (d2), s/veh	1.2	0.0	1.6	1.7	0.0	1.7	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.6	0.4	6.2	4.6	0.0	3.4	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	26.2	2.8	11.7	10.9	0.0	26.3	
LnGrp LOS	C	A	B	B	A	C	
Approach Vol, veh/h		702	2135		217		
Approach Delay, s/veh		4.4	11.4		26.3		
Approach LOS		A	B		C		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			46.6		11.7	9.0	37.6
Change Period (Y+Rc), s			5.1		5.1	4.0	5.1
Max Green Setting (Gmax), s			57.9		26.9	18.0	35.9
Max Q Clear Time (g_c+I1), s			4.5		5.8	3.5	21.6
Green Ext Time (p_c), s			5.3		0.8	0.1	10.9

Intersection Summary

HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 6: Myrtle Avenue & Central Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↗	↖	↖	↗			↗	↖
Traffic Volume (veh/h)	0	0	0	242	573	336	324	677	0	0	554	135
Future Volume (veh/h)	0	0	0	242	573	336	324	677	0	0	554	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		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No				
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				260	616	361	348	728	0	0	596	145
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				655	688	583	267	1643	0	0	696	169
Arrive On Green				0.37	0.37	0.37	0.15	0.46	0.00	0.00	0.25	0.25
Sat Flow, veh/h				1781	1870	1585	1781	3647	0	0	2929	688
Grp Volume(v), veh/h				260	616	361	348	728	0	0	373	368
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	1781	1777	0	0	1777	1746
Q Serve(g_s), s				6.5	18.6	11.2	9.0	8.3	0.0	0.0	12.0	12.1
Cycle Q Clear(g_c), s				6.5	18.6	11.2	9.0	8.3	0.0	0.0	12.0	12.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.39
Lane Grp Cap(c), veh/h				655	688	583	267	1643	0	0	436	429
V/C Ratio(X)				0.40	0.90	0.62	1.30	0.44	0.00	0.00	0.85	0.86
Avail Cap(c_a), veh/h				683	717	608	267	1643	0	0	436	429
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.38	0.38	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				14.0	17.9	15.5	25.5	10.9	0.0	0.0	21.6	21.6
Incr Delay (d2), s/veh				0.4	13.6	1.8	146.3	0.3	0.0	0.0	18.8	19.4
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				2.3	9.4	3.8	14.3	2.8	0.0	0.0	6.7	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				14.4	31.5	17.3	171.8	11.2	0.0	0.0	40.5	41.1
LnGrp LOS				B	C	B	F	B	A	A	D	D
Approach Vol, veh/h					1237			1076			741	
Approach Delay, s/veh					23.8			63.2			40.8	
Approach LOS					C			E			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		32.8			13.0	19.8		27.2				
Change Period (Y+Rc), s		5.1			4.0	5.1		5.1				
Max Green Setting (Gmax), s		26.8			9.0	13.8		23.0				
Max Q Clear Time (g_c+I1), s		10.3			11.0	14.1		20.6				
Green Ext Time (p_c), s		4.5			0.0	0.0		1.4				
Intersection Summary												
HCM 6th Ctrl Delay											41.8	
HCM 6th LOS											D	

HCM 6th Signalized Intersection Summary

7: Myrtle Avenue & Evergreen Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗						↖		↖	↗	
Traffic Volume (veh/h)	387	495	303	0	0	0	0	607	179	266	526	0
Future Volume (veh/h)	387	495	303	0	0	0	0	607	179	266	526	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	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	425	544	333				0	667	197	292	578	0
Peak Hour Factor	0.91	0.91	0.91				0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	575	684	418				0	783	231	301	1849	0
Arrive On Green	0.32	0.32	0.32				0.00	0.29	0.29	0.17	0.52	0.00
Sat Flow, veh/h	1781	2119	1295				0	2799	798	1781	3647	0
Grp Volume(v), veh/h	425	456	421				0	438	426	292	578	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1637				0	1777	1727	1781	1777	0
Q Serve(g_s), s	13.8	15.2	15.2				0.0	15.1	15.1	10.6	6.1	0.0
Cycle Q Clear(g_c), s	13.8	15.2	15.2				0.0	15.1	15.1	10.6	6.1	0.0
Prop In Lane	1.00		0.79				0.00		0.46	1.00		0.00
Lane Grp Cap(c), veh/h	575	573	528				0	515	500	301	1849	0
V/C Ratio(X)	0.74	0.80	0.80				0.00	0.85	0.85	0.97	0.31	0.00
Avail Cap(c_a), veh/h	658	656	604				0	515	500	301	1849	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	1.00	1.00				0.00	1.00	1.00	0.55	0.55	0.00
Uniform Delay (d), s/veh	19.6	20.1	20.1				0.0	21.8	21.8	26.8	8.9	0.0
Incr Delay (d2), s/veh	3.8	6.0	6.5				0.0	16.1	16.6	30.5	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	5.7	6.6	6.1				0.0	8.0	7.8	6.7	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	26.0	26.6				0.0	37.9	38.4	57.3	9.2	0.0
LnGrp LOS	C	C	C				A	D	D	E	A	A
Approach Vol, veh/h		1302						864			870	
Approach Delay, s/veh		25.4						38.1			25.3	
Approach LOS		C						D			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	5.0	23.9	26.1	38.9								
Change Period (Y+Rc), s	4.0	5.1	5.1	5.1								
Max Green Setting (Gmax), s	1.0	15.8	24.0	30.8								
Max Q Clear Time (g_c+1), s	12.6	17.1	17.2	8.1								
Green Ext Time (p_c), s	0.0	0.0	3.7	3.8								

Intersection Summary

HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
 1: Driveway/I-210 EB Off Ramp & Huntington Drive

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↖	↑↑	↗	↖		↗	↖	↗	↖
Traffic Volume (veh/h)	0	1564	27	20	1102	44	22	0	16	416	4	119
Future Volume (veh/h)	0	1564	27	20	1102	44	22	0	16	416	4	119
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	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1596	28	20	1124	0	22	0	16	427	0	121
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	2	2	2	2	2	2	0	2	2	2	2
Cap, veh/h	0	2595	46	287	1785		0	0	0	765	0	340
Arrive On Green	0.00	0.50	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.21	0.00	0.21
Sat Flow, veh/h	0	5336	91	310	3554	1585		0		3563	0	1585
Grp Volume(v), veh/h	0	1051	573	20	1124	0		0.0		427	0	121
Grp Sat Flow(s),veh/h/ln	0	1702	1854	310	1777	1585				1781	0	1585
Q Serve(g_s), s	0.0	8.0	8.0	1.8	8.3	0.0				3.9	0.0	2.3
Cycle Q Clear(g_c), s	0.0	8.0	8.0	9.8	8.3	0.0				3.9	0.0	2.3
Prop In Lane	0.00		0.05	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1710	931	287	1785					765	0	340
V/C Ratio(X)	0.00	0.61	0.62	0.07	0.63					0.56	0.00	0.36
Avail Cap(c_a), veh/h	0	2069	1127	319	2160					2452	0	1091
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	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.5	6.5	10.0	6.5	0.0				12.6	0.0	12.0
Incr Delay (d2), s/veh	0.0	0.4	0.7	0.1	0.4	0.0				0.6	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
%ile BackOfQ(50%),veh/ln	0.0	1.7	1.9	0.1	1.8	0.0				1.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.8	7.2	10.1	7.0	0.0				13.3	0.0	12.7
LnGrp LOS	A	A	A	B	A					B	A	B
Approach Vol, veh/h		1624			1144	A						548
Approach Delay, s/veh		7.0			7.0							13.1
Approach LOS		A			A							B
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		12.8		23.2				23.2				
Change Period (Y+Rc), s		5.1		5.1				5.1				
Max Green Setting (Gmax), s		24.8		21.9				21.9				
Max Q Clear Time (g_c+I1), s		5.9		11.8				10.0				
Green Ext Time (p_c), s		1.9		5.7				8.1				

Intersection Summary

HCM 6th Ctrl Delay	8.0
HCM 6th LOS	A

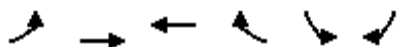
Notes

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

HCM 6th Signalized Intersection Summary

2: Huntington Drive & I-210 WB On Ramp

03/09/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑↑	↗	↗	↘	↘	
Traffic Volume (veh/h)	100	1381	812	536	113	376	
Future Volume (veh/h)	100	1381	812	536	113	376	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	109	1501	883	583	256	266	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	174	3057	1528	682	393	349	
Arrive On Green	0.10	0.60	0.43	0.43	0.22	0.22	
Sat Flow, veh/h	1781	5274	3647	1585	1781	1585	
Grp Volume(v), veh/h	109	1501	883	583	256	266	
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1585	1781	1585	
Q Serve(g_s), s	3.3	9.4	10.6	18.7	7.4	8.9	
Cycle Q Clear(g_c), s	3.3	9.4	10.6	18.7	7.4	8.9	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	174	3057	1528	682	393	349	
V/C Ratio(X)	0.63	0.49	0.58	0.86	0.65	0.76	
Avail Cap(c_a), veh/h	569	4347	1639	731	847	753	
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	24.4	6.4	12.2	14.5	20.0	20.6	
Incr Delay (d2), s/veh	3.7	0.1	0.4	9.3	1.8	3.4	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1.5	2.5	3.7	7.3	3.0	7.7	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	28.1	6.6	12.6	23.8	21.8	24.0	
LnGrp LOS	C	A	B	C	C	C	
Approach Vol, veh/h		1610	1466		522		
Approach Delay, s/veh		8.0	17.1		23.0		
Approach LOS		A	B		C		
Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			38.8		17.5	9.5	29.3
Change Period (Y+Rc), s			5.1		5.1	4.0	5.1
Max Green Setting (Gmax), s			48.0		26.8	18.0	26.0
Max Q Clear Time (g_c+I1), s			11.4		10.9	5.3	20.7
Green Ext Time (p_c), s			15.3		1.6	0.2	3.5

Intersection Summary

HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary

6: Myrtle Avenue & Central Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↗	↖	↖	↗			↗	↖
Traffic Volume (veh/h)	0	0	0	228	549	310	325	431	0	0	741	222
Future Volume (veh/h)	0	0	0	228	549	310	325	431	0	0	741	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		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			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				245	590	333	349	463	0	0	797	239
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				568	596	505	333	1938	0	0	823	247
Arrive On Green				0.32	0.32	0.32	0.19	0.55	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1781	1870	1585	1781	3647	0	0	2788	808
Grp Volume(v), veh/h				245	590	333	349	463	0	0	526	510
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	1781	1777	0	0	1777	1725
Q Serve(g_s), s				8.1	23.5	13.6	14.0	5.1	0.0	0.0	21.9	21.9
Cycle Q Clear(g_c), s				8.1	23.5	13.6	14.0	5.1	0.0	0.0	21.9	21.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.47
Lane Grp Cap(c), veh/h				568	596	505	333	1938	0	0	543	527
V/C Ratio(X)				0.43	0.99	0.66	1.05	0.24	0.00	0.00	0.97	0.97
Avail Cap(c_a), veh/h				568	596	505	333	1938	0	0	543	527
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.51	0.51	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				20.2	25.4	22.0	30.5	8.9	0.0	0.0	25.7	25.7
Incr Delay (d2), s/veh				0.5	34.2	3.1	49.0	0.1	0.0	0.0	31.6	32.3
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				3.2	15.2	5.1	10.2	1.7	0.0	0.0	13.2	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				20.7	59.6	25.2	79.5	9.1	0.0	0.0	57.3	58.0
LnGrp LOS				C	E	C	F	A	A	A	E	E
Approach Vol, veh/h				1168			812			1036		
Approach Delay, s/veh				41.6			39.3			57.7		
Approach LOS				D			D			E		
Timer - Assigned Phs		2		5	6		8					
Phs Duration (G+Y+Rc), s		46.0		18.0	28.0		29.0					
Change Period (Y+Rc), s		5.1		4.0	5.1		5.1					
Max Green Setting (Gmax), s		40.9		14.0	22.9		23.9					
Max Q Clear Time (g_c+I1), s		7.1		16.0	23.9		25.5					
Green Ext Time (p_c), s		3.2		0.0	0.0		0.0					
Intersection Summary												
HCM 6th Ctrl Delay				46.5								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary

7: Myrtle Avenue & Evergreen Avenue

03/09/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	837	306	0	0	0	0	577	198	324	655	0
Future Volume (veh/h)	181	837	306	0	0	0	0	577	198	324	655	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	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	193	890	326				0	614	211	345	697	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	611	874	319				0	660	227	356	1817	0
Arrive On Green	0.34	0.34	0.34				0.00	0.25	0.25	0.20	0.51	0.00
Sat Flow, veh/h	1781	2550	930				0	2689	891	1781	3647	0
Grp Volume(v), veh/h	193	619	597				0	420	405	345	697	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1703				0	1777	1710	1781	1777	0
Q Serve(g_s), s	5.6	24.0	24.0				0.0	16.2	16.2	13.5	8.3	0.0
Cycle Q Clear(g_c), s	5.6	24.0	24.0				0.0	16.2	16.2	13.5	8.3	0.0
Prop In Lane	1.00		0.55				0.00		0.52	1.00		0.00
Lane Grp Cap(c), veh/h	611	609	584				0	452	435	356	1817	0
V/C Ratio(X)	0.32	1.02	1.02				0.00	0.93	0.93	0.97	0.38	0.00
Avail Cap(c_a), veh/h	611	609	584				0	452	435	356	1817	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	1.00	1.00				0.00	1.00	1.00	0.39	0.39	0.00
Uniform Delay (d), s/veh	17.0	23.0	23.0				0.0	25.5	25.5	27.8	10.4	0.0
Incr Delay (d2), s/veh	0.3	40.6	43.0				0.0	27.9	29.0	22.3	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	2.1	15.8	15.5				0.0	9.8	9.5	7.5	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	63.6	66.0				0.0	53.4	54.5	50.1	10.6	0.0
LnGrp LOS	B	F	F				A	D	D	D	B	A
Approach Vol, veh/h		1409						825			1042	
Approach Delay, s/veh		58.3						54.0			23.7	
Approach LOS		E						D			C	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	8.0	22.9	29.1	40.9								
Change Period (Y+Rc), s	4.0	5.1	5.1	5.1								
Max Green Setting (Gmax), s	17.8	17.8	24.0	35.8								
Max Q Clear Time (g_c+1), s	15.5	18.2	26.0	10.3								
Green Ext Time (p_c), s	0.0	0.0	0.0	4.9								

Intersection Summary

HCM 6th Ctrl Delay	46.2
HCM 6th LOS	D

APPENDIX E

QUEUING WORKSHEETS

Queuing and Blocking Report

Existing Plus Project - AM Peak Hour

03/07/2018

Intersection: 9: Chestnut Avenue & Western Project Driveway

Movement	SB
Directions Served	LR
Maximum Queue (ft)	35
Average Queue (ft)	4
95th Queue (ft)	22
Link Distance (ft)	300
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Chestnut Avenue & Eastern Project Driveway

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	12	55
Average Queue (ft)	1	23
95th Queue (ft)	8	49
Link Distance (ft)	185	291
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 0

Queuing and Blocking Report

Existing Plus Project - PM Peak Hour

03/07/2018

Intersection: 9: Chestnut Avenue & Western Project Driveway

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	4
95th Queue (ft)	21
Link Distance (ft)	273
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Chestnut Avenue & Eastern Project Driveway

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	30	44
Average Queue (ft)	3	19
95th Queue (ft)	18	44
Link Distance (ft)	198	291
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 0

Queuing and Blocking Report

Cumulative Plus Project - AM Peak Hour

03/07/2018

Intersection: 9: Chestnut Avenue & Western Project Driveway

Movement	SB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	4
95th Queue (ft)	19
Link Distance (ft)	300
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Chestnut Avenue & Eastern Project Driveway

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	12	52
Average Queue (ft)	0	22
95th Queue (ft)	6	48
Link Distance (ft)	185	291
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 0

Queuing and Blocking Report

Cumulative Plus Project - PM Peak Hour

03/07/2018

Intersection: 9: Chestnut Avenue & Western Project Driveway

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	5
95th Queue (ft)	23
Link Distance (ft)	273
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Chestnut Avenue & Eastern Project Driveway

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	34	40
Average Queue (ft)	2	19
95th Queue (ft)	13	43
Link Distance (ft)	198	291
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 0
