Appendix 4.11

Traffic Impact Assessment

The Homestead

TRAFFIC IMPACT ANALYSIS

CITY OF EASTVALE

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CCI	Construction Cost Index
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
DIF	Development Impact Fee
E+P	Existing Plus Project
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
NCHRP	National Cooperative Highway Research Program
PeMS	Performance Measurement System
PCE	Passenger Car Equivalents
PHF	Peak Hour Factor
Project	The Homestead
RBBD	Road and Bridge Benefit District
RCTC	Riverside County Transportation Commission
RivTAM	Riverside Transportation Analysis Model
RTA	Riverside Transport Authority
RTP	Regional Transportation Plan
SBCTA	San Bernardino County Transportation Authority
SBTAM	San Bernardino Transportation Analysis Model
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SHS	State Highway System
SR	State Route
TIA	Traffic Impact Analysis
TUMF	Transportation Uniform Mitigation Fee
v/c	Volume to Capacity
vphgpl	Vehicles per Hour Green per Lane
WRCOG	Western Riverside Council of Governments

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1 EXECUTIVE SUMMARY

This report presents the results of the traffic impact analysis (TIA) for the proposed The Homestead ("Project"), which is located west of Archibald Avenue and on either side of the future extension of Limonite Avenue in the City of Eastvale, as shown on Exhibit 1-1.

The purpose of this TIA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, and to recommend improvements to achieve acceptable circulation system operational conditions. As directed by City of Eastvale staff, this traffic study has been prepared in accordance with the County of Riverside Traffic Impact Analysis Preparation Guidelines, the California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies, and consultation with City staff during the scoping process. (1) (2) Where applicable, the San Bernardino County Transportation Authority (SBCTA) Congestion Management Program (CMP) Guidelines for CMP Traffic Impact Analysis Reports (Appendix B, 2016 Update) has also been followed for the study area intersections located in the City of Ontario. (3) The approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TIA.

1.1 PROJECT OVERVIEW

Exhibit 1-1 illustrates the preliminary site plan. As indicated on Exhibit 1-1, the Project is proposed to consist of the following uses:

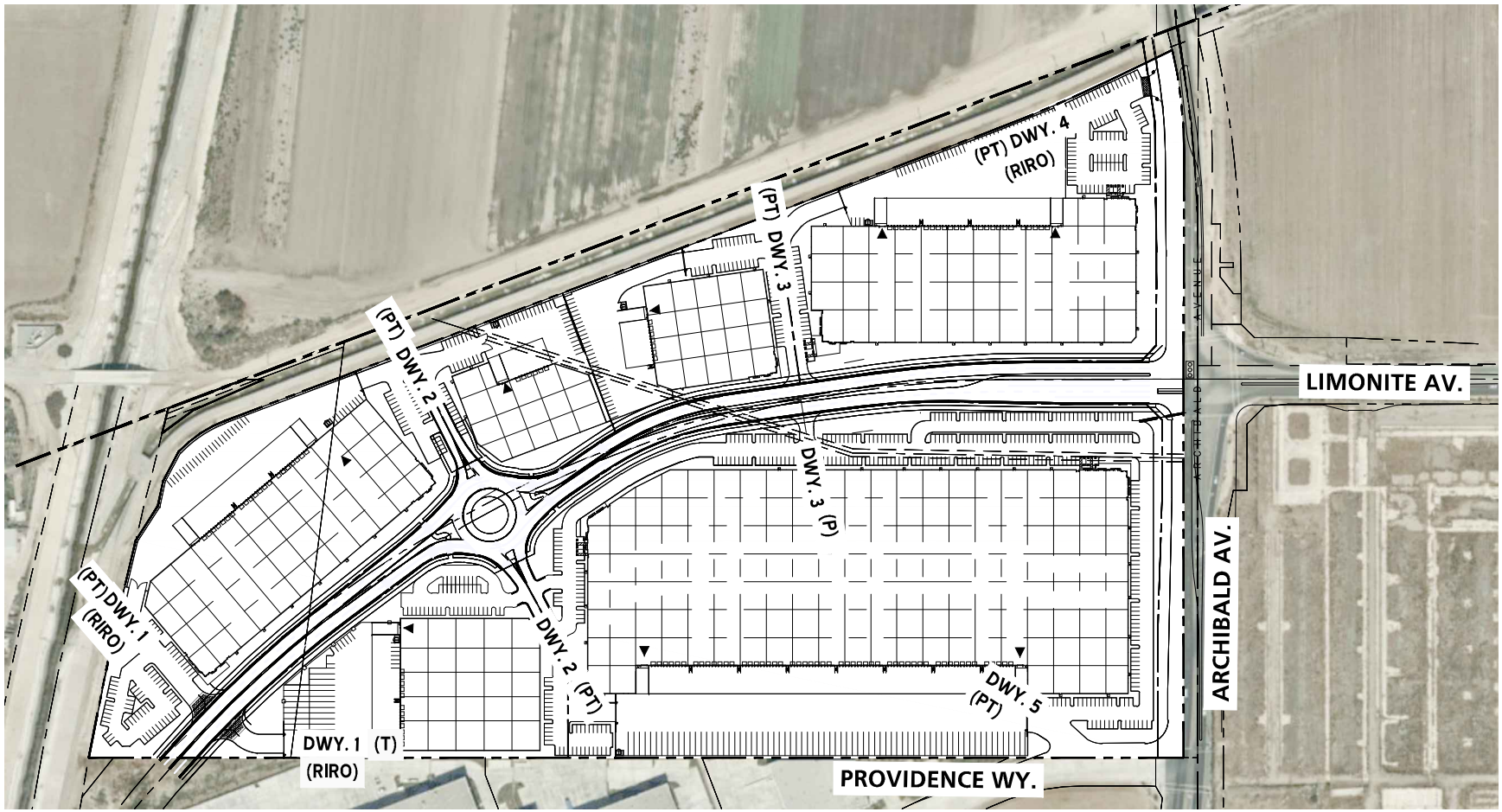
- 560,291 square feet of warehousing use
- 520,317 square feet of high-cube fulfillment center use

Since the time this TIA was prepared, the site plan has been updated. The current site plan shows 541,756 square feet of warehousing use and 507,631 square feet of high-cube fulfillment center warehouse use. These updated site plan building square footages are less intensive, and as such the number of trips would decrease. However, for the purposes of this TIA, the higher square footage (and therefore higher trip generation) has been evaluated in an effort to conduct a conservative analysis and overstate as opposed to understate potential traffic impacts.

Regional access to the Project site is available via the I-15 Freeway at Limonite Avenue and the SR-60 Freeway at Archibald Avenue interchanges. Vehicular and truck traffic access will be provided via the following driveways:

- Driveway 1 via Limonite Avenue – Right-in/right-out access for both passenger cars and trucks at the northern driveway; Right-in/right-out access for trucks only at the southern driveway
- Driveway 2 via Limonite Avenue – Full access for both passenger cars and trucks
- Driveway 3 via Limonite Avenue – Right-in/right-out access for both passenger cars and trucks at the northern driveway; Right-in/right-out access for passenger cars only at the southern driveway
- Driveway 4 via Archibald Avenue – Right-in/right-out access for both passenger cars and trucks
- Driveway 5 via Providence Way – Ingress for trucks only, full access for passenger cars

EXHIBIT 1-1: PRELIMINARY SITE PLAN



LEGEND:

RIRO	= RIGHT-IN/RIGHT-OUT ONLY ACCESS
P	= PASSENGER CARS ONLY
T	= TRUCKS ONLY
PT	= PASSENGER CARS AND TRUCKS

N

NOTE: UNLESS NOTED, ALL DRIVEWAYS ARE ASSUMED TO BE FULL ACCESS.

The Project will construct Archibald Avenue from the northern Project boundary to Providence Way at its ultimate half-section width as a 6-lane Urban Arterial Highway (ultimate 152-foot right-of-way) in compliance with the circulation recommendations found in the City of Eastvale's General Plan.

The Project will also construct the western extension of Limonite Avenue from the Project's western boundary (just east of the future gap closure project bridge) to Archibald Avenue at its ultimate full-section width as a 4-lane Arterial Highway (ultimate 128-foot right-of-way) in compliance with the circulation recommendations found in the City of Eastvale's General Plan. Once the City of Eastvale's gap closure project is completed (bridge over the Cucamonga Creek), Limonite Avenue will connect with the existing Kimball Avenue between Hellman Avenue and Archibald Avenue.

Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017 and the Transportation Uniform Mitigation Fee (TUMF) High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019). (4) (5)

The proposed Project is anticipated to generate a total of 2,704 passenger car equivalent (PCE) trip-ends per day, 206 PCE AM peak hour trips and 243 PCE PM peak hour trips. In comparison, the proposed Project is anticipated to generate a total of 2,102 actual vehicle trip-ends per day with 159 AM peak hour trips and 194 PM peak hour trips. The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

1.2 ANALYSIS SCENARIOS

For the purposes of this traffic study, potential impacts to traffic and circulation have been assessed for each of the following conditions:

- Existing (2019) Conditions
- Existing plus Project (E+P) Conditions
- Opening Year Cumulative (2021) Without Project Conditions
- Opening Year Cumulative (2021) With Project Conditions
- Interim Year (2023) Without Project Conditions, With Limonite Avenue Extension Conditions
- Interim Year (2023) With Project Conditions, With Limonite Avenue Extension Conditions
- Horizon Year (2040) Without Project, With Limonite Avenue Extension Conditions
- Horizon Year (2040) With Project, With Limonite Avenue Extension Conditions

1.2.1 EXISTING (2019) CONDITIONS

Information for Existing (2019) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared.

1.2.2 EXISTING PLUS PROJECT CONDITIONS

The Existing Plus Project (E+P) analysis determines circulation system deficiencies that would occur on the existing roadway system in the scenario of the Project being placed upon Existing conditions. The E+P analysis is intended to identify the project-specific traffic impacts associated solely with the development of the proposed Project based on a comparison of the E+P traffic conditions to Existing (2019) conditions.

1.2.3 OPENING YEAR CUMULATIVE CONDITIONS

The Opening Year Cumulative traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth factor from Existing conditions of 3.23% (for 2021 conditions – 1.6 percent per year compounded over 2 years) are included for Opening Year Cumulative traffic conditions. This comprehensive list was compiled from information provided by the City of Eastvale and other near-by agencies (such as the City of Ontario).

1.2.4 INTERIM YEAR CONDITIONS

The Interim Year traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies and assumes the completion of the Limonite Avenue extension over the Cucamonga Creek. Pursuant to discussions with City staff, the extension of Limonite Avenue to the west over the Cucamonga Creek is anticipated to occur by Year 2023. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth factor from Existing conditions of 6.56% (for 2023 conditions – 1.6 percent per year compounded over 4 years) are included for Interim Year traffic conditions.

1.2.5 HORIZON YEAR (2040) CONDITIONS

Traffic projections for Horizon Year Without Project conditions were derived from the Riverside Transportation Analysis Model (RivTAM) for study area intersections located in Riverside County and the San Bernardino Transportation Analysis Model (SBTAM) for study area intersections located in San Bernardino County. The Horizon Year conditions analysis will be utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the Western Riverside Council of Governments Transportation Uniform Mitigation Fee (TUMF), City of Eastvale Development Impact Fee (DIF) programs, or other approved funding mechanism (e.g., Mira Loma Road and Bridge Benefit District (RBBD), etc.) can accommodate the long-range cumulative traffic at the target Level of Service (LOS) identified in the City of Eastvale (lead agency) General Plan. (6) Other improvements needed beyond the "funded" improvements (such as localized improvements to non-TUMF, non-DIF, or non-RBBD facilities) are identified as such. Each of these regional transportation fee programs are discussed in more detail in Section 9 *Local and Regional Funding Mechanisms*.

1.3 STUDY AREA

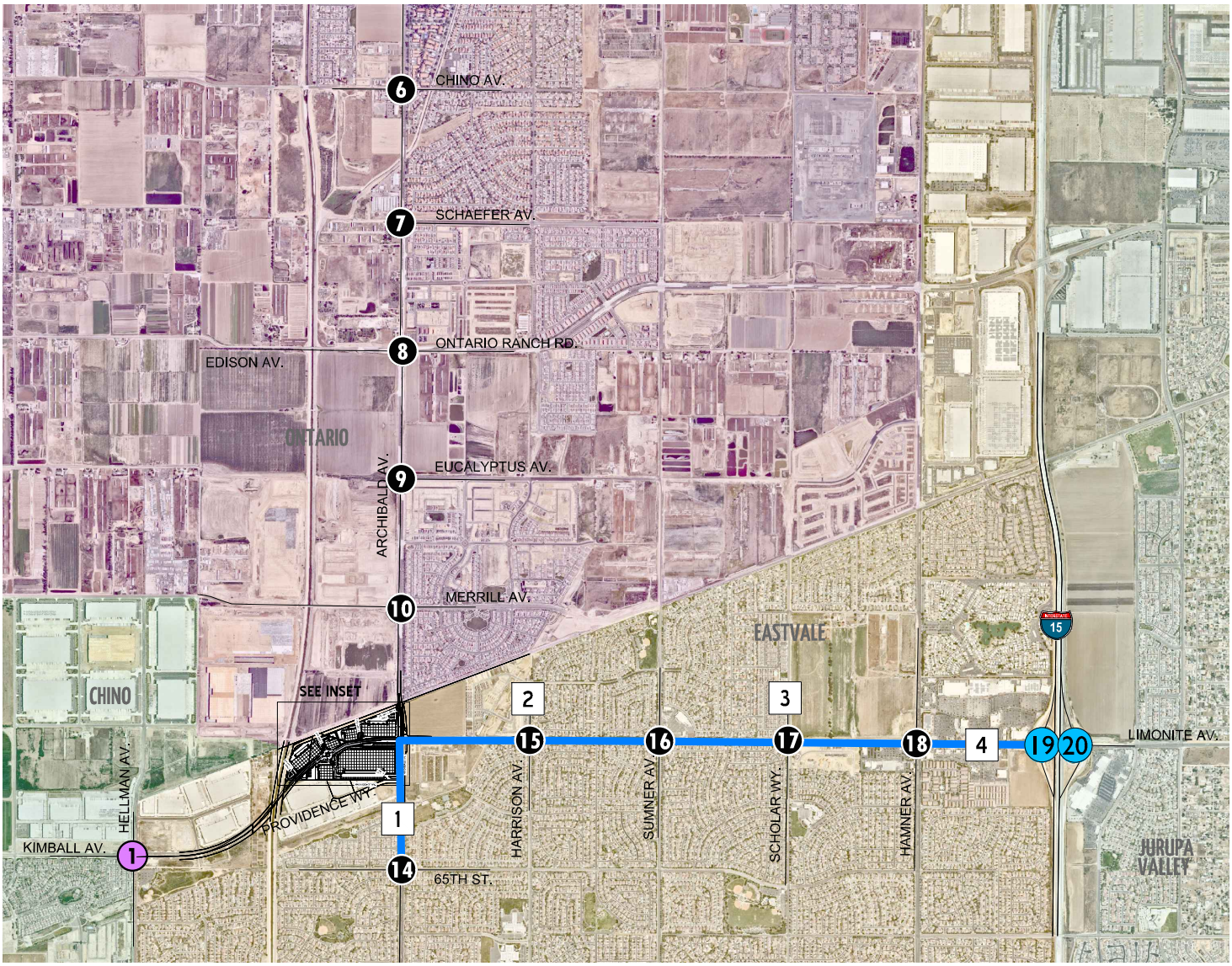
To ensure that this TIA satisfies the City of Eastvale's traffic study requirements, Urban Crossroads, Inc. prepared a project traffic study scoping package for review by City staff prior to the preparation of this report. The Agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology.

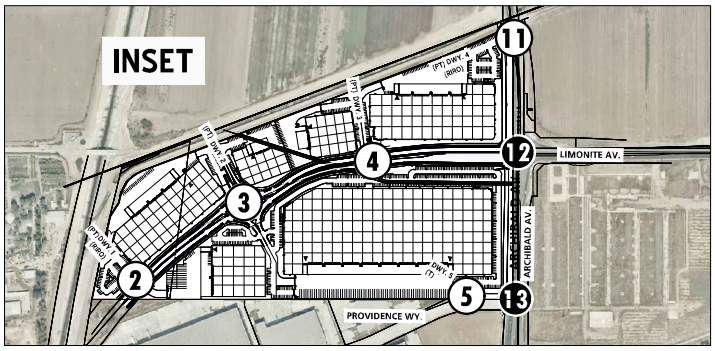
1.3.1 INTERSECTIONS

The following 20 study area intersections shown on Exhibit 1-2 and listed in Table 1-1 were selected for this TIA based on consultation with City of Eastvale staff. The "50 peak hour trip" criterion utilized by the City of Eastvale is consistent with the methodology employed by the County of Riverside, and generally represents a minimum number of trips at which a typical intersection would have the potential to be substantively impacted by a given development proposal. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a widely utilized tool for estimating a potential area of impact (i.e., study area).

The "50 peak hour trip" criterion is also utilized by the County of San Bernardino, including the City of Ontario and City of Chino. Other analysis intersections, within the adjacent cities were not selected for evaluation as the Project is anticipated to contribute less than 50 peak hour trips. It should be noted the intersection of Hellman Avenue & Kimball Avenue is only evaluated under 2023 and 2040 traffic conditions as the Project will not contribute any trips during the peak hours under 2019 and 2021 traffic conditions.

EXHIBIT 1-2: LOCATION MAP





LEGEND:

- = EXISTING INTERSECTION ANALYSIS LOCATION
- = FUTURE INTERSECTION ANALYSIS LOCATION
- = RIVERSIDE COUNTY CMP ANALYSIS LOCATION
- = 2023 & 2040 ANALYSIS LOCATION
- = ROADWAY SEGMENT ANALYSIS LOCATION
- = FUTURE ROADWAY

N

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TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction	CMP?
1	Hellman Av. & Kimball Av.[1] – 2023 and 2040 only	Eastvale, Chino	No
2	Driveway 1 & Limonite Av. – Future Intersection	Eastvale	No
3	Driveway 2 & Limonite Av. – Future Intersection	Eastvale	No
4	Driveway 3 & Limonite Av. – Future Intersection	Eastvale	No
5	Driveway 5 & Providence Wy. – Future Intersection	Eastvale	No
6	Archibald Av. & Chino Av.[1]	Ontario	No
7	Archibald Av. & Schaefer Av.[1]	Ontario	No
8	Archibald Av. & Ontario Ranch Rd.[1]	Ontario	No
9	Archibald Av. & Eucalyptus Av.[1]	Ontario	No
10	Archibald Av. & Merrill Av.[1]	Ontario	No
11	Archibald Av. & Driveway 4 – Future Intersection	Eastvale	No
12	Archibald Av. & Limonite Av.	Eastvale	No
13	Archibald Av. & Providence Wy.	Eastvale	No
14	Archibald Av. & 65th St.	Eastvale	No
15	Harrison Av. & Limonite Av.	Eastvale	No
16	Sumner Av. & Limonite Av.	Eastvale	No
17	Scholar Wy. & Limonite Av.	Eastvale	No
18	Hamner Av. & Limonite Av.	Eastvale	No
19	I-15 SB Ramps & Limonite Av.	Caltrans, Eastvale	Yes
20	I-15 NB Ramps & Limonite Av.	Caltrans, Jurupa Valley	Yes

[1] The intersection wholly or partially lies within the County of San Bernardino. All other locations are within the County of Riverside.

The intent of a Congestion Management Program (CMP) is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related impacts, and improve air quality. The County of Riverside CMP became effective with the passage of Proposition 111 in 1990 and updated most recently updated in 2011. The Riverside County Transportation Commission (RCTC) adopted the 2011 CMP for the County of Riverside in December 2011. (7) CMP intersections are identified in Table 1-1.

1.3.2 ROADWAY SEGMENTS

At the request of City staff, daily volume-to-capacity (v/c) have been evaluated for the following roadway segments list in Table 1-2:

TABLE 1-2: ROADWAY SEGMENT ANALYSIS LOCATIONS

ID	Roadway Segments
1	Archibald Av., Limonite Av. to 65th St.
2	Limonite Av., Archibald Av. to Sumner Av.
3	Limonite Av., Sumner Av. to Hamner Av.
4	Limonite Av., Hamner Av. to I-15 Freeway

1.3.3 FREEWAY MAINLINE AND RAMP JUNCTION ANALYSIS

Study area freeway mainline analysis locations were selected based on Caltrans traffic study guidelines, which may require the analysis of State highway facilities. (2) Consistent with recent Caltrans guidance, and because deficiencies to freeway segments tend to dissipate with distance from the point of State Highway System (SHS) entry, quantitative study of freeway segments beyond those immediately adjacent to the point of entry typically is not required. Although the Project is anticipated to contribute fewer than 50 peak hour trips, this study evaluates the following freeway facilities adjacent to the point of entry to the SHS at the I-15 Freeway and Limonite Avenue (see Table 1-3):

TABLE 1-3: FREEWAY FACILITY ANALYSIS LOCATIONS

ID	Freeway Facilities
1	I-15 Freeway Southbound, North of Limonite Av.
2	I-15 Freeway Southbound, Off-Ramp at Limonite Av.
3	I-15 Freeway Southbound, Loop On-Ramp at Limonite Av.
4	I-15 Freeway Southbound, On-Ramp at Limonite Av.
5	I-15 Freeway Southbound, South of Limonite Av.
6	I-15 Freeway Northbound, North of Limonite Av.
7	I-15 Freeway Northbound, On-Ramp at Limonite Av.
8	I-15 Freeway Northbound, Loop On-Ramp at Limonite Av.
9	I-15 Freeway Northbound, Off-Ramp at Limonite Av.
10	I-15 Freeway Northbound, South of Limonite Av.

1.4 PROJECT DEFICIENCIES

This section provides a summary of Project deficiencies. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 5 *E+P Traffic Conditions*, Section 6 *Opening Year Cumulative (2021) Traffic Conditions*, Section 7 *Interim Year (2023) Traffic Conditions*, and Section 8 *Horizon Year (2040) Traffic Conditions* includes the detailed analysis. A summary of LOS results for all analysis scenarios is presented on Exhibit 1-3.

1.4.1 E+P CONDITIONS

All study area intersections are anticipated to operate at an acceptable LOS during the peak hours under E+P traffic conditions

1.4.2 OPENING YEAR CUMULATIVE (2021) CONDITIONS

All study area intersections are anticipated to operate at an acceptable LOS during the peak hours under Opening Year Cumulative (2021) Without Project traffic conditions. With the addition of Project traffic, the following study area intersection is anticipated to operate at a deficient LOS during one or both peak hours for Opening Year Cumulative (2021) With Project traffic conditions, resulting in a cumulative deficiency:

- Archibald Av. & Limonite Av. (#12) – LOS E PM peak hour only

1.4.3 INTERIM YEAR (2023) CONDITIONS

The following study area intersections are anticipated to operate at a deficient LOS during one or both peak hours for Interim Year (2023) Without Project traffic conditions and the Project is anticipated to contribute to this deficiency by adding traffic (as measured by 50 or more peak hours trips) and is anticipated to increase the delay by more than 2.5 seconds (City of Eastvale threshold), resulting in a cumulative deficiency:

- Hellman Av. & Kimball Av. (#1) – LOS F AM peak hour only
- Archibald Av. & Limonite Av. (#12) – LOS F AM and PM peak hours

1.4.4 HORIZON YEAR (2040) CONDITIONS

The following study area intersections are anticipated to operate at a deficient LOS during one or both peak hours under Horizon Year Without Project traffic conditions:

- Hellman Av. & Kimball Av. (#1) – LOS F AM and PM peak hours
- Archibald Av. & Schaefer Av. (#7) – LOS F PM peak hour only
- Archibald Av. & Ontario Ranch Rd. (#8) – LOS F AM and PM peak hours
- Archibald Av. & Eucalyptus Av. (#9) – LOS F PM peak hour only
- Archibald Av. & Merrill Av. (#10) – LOS F AM and PM peak hours
- Archibald Av. & Limonite Av. (#12) – LOS F AM and PM peak hours
- Archibald Av. & Providence Wy. (#13) – LOS F PM peak hour only
- Archibald Av. & 65th St. (#14) – LOS E AM and PM peak hours

EXHIBIT 1-3: SUMMARY OF DEFICIENT INTERSECTIONS BY ANALYSIS SCENARIO

#	Intersection	Existing (2019)	E+P	Opening Year Cumulative (2021) Without Project	Opening Year Cumulative (2021) With Project	Interim Year (2023) Without Project	Interim Year (2023) With Project	Horizon Year Without Project	Horizon Year With Project
1	Hellman Av. & Kimball Av.	NA	NA	NA	NA	F	F	F	F
2	Dwy. 1 & Limonite Av.	NA	A-D	NA	A-D	NA	A-D	NA	A-D
3	Dwy. 2 & Limonite Av.	NA	A-D	NA	A-D	NA	A-D	NA	A-D
4	Dwy. 3 & Limonite Av.	NA	A-D	NA	A-D	NA	A-D	NA	A-D
5	Dwy. 5 & Providence Wy.	NA	A-D	NA	A-D	NA	A-D	NA	A-D
6	Archibald Av. & Chino Av.	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D
7	Archibald Av. & Schaefer Av.	A-D	A-D	A-D	A-D	A-D	A-D	F	F
8	Archibald Av. & Ontario Ranch Rd.	A-D	A-D	A-D	A-D	A-D	A-D	F	F
9	Archibald Av. & Eucalyptus Av.	A-D	A-D	A-D	A-D	A-D	A-D	F	F
10	Archibald Av. & Merrill Av.	A-D	A-D	A-D	A-D	A-D	A-D	F	F
11	Archibald Av. & Dwy. 4	NA	A-D	NA	A-D	NA	A-D	NA	A-D
12	Archibald Av. & Limonite Av.	A-D	A-D	A-D	E	F	F	F	F
13	Archibald Av. & Providence Wy.	A-D	A-D	A-D	A-D	A-D	A-D	F	F
14	Archibald Av. & 65th St.	A-D	A-D	A-D	A-D	A-D	A-D	E	F
15	Harrison Av. & Limonite Av.	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D
16	Sumner Av. & Limonite Av.	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D
17	Scholar Wy. & Limonite Av.	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D
18	Hamner Av. & Limonite Av.	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D
19	I-15 SB Ramps & Limonite Av.	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D
20	I-15 NB Ramps & Limonite Av.	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D

LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS E
- = LOS F
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

The Project is anticipated to contribute to these deficiencies by adding traffic (as measured by 50 or more peak hours trips) or is anticipated to increase the delay by more than 2.5 seconds (City of Eastvale threshold), resulting in a cumulative deficiency. Cumulative deficiencies are not directly caused by the Project. The Project would, however, contribute traffic to these deficient intersections along with other cumulative development projects.

- Hellman Av. & Kimball Av. (#1) – increases delay by 2.5 seconds or more
- Archibald Av. & Schaefer Av. (#7) – contributes 50 or more peak hour trips
- Archibald Av. & Ontario Ranch Rd. (#8) – contributes 50 or more peak hour trips
- Archibald Av. & Eucalyptus Av. (#9) – contributes 50 or more peak hour trips
- Archibald Av. & Merrill Av. (#10) – contributes 50 or more peak hour trips
- Archibald Av. & Limonite Av. (#12) – increases delay by 2.5 seconds or more

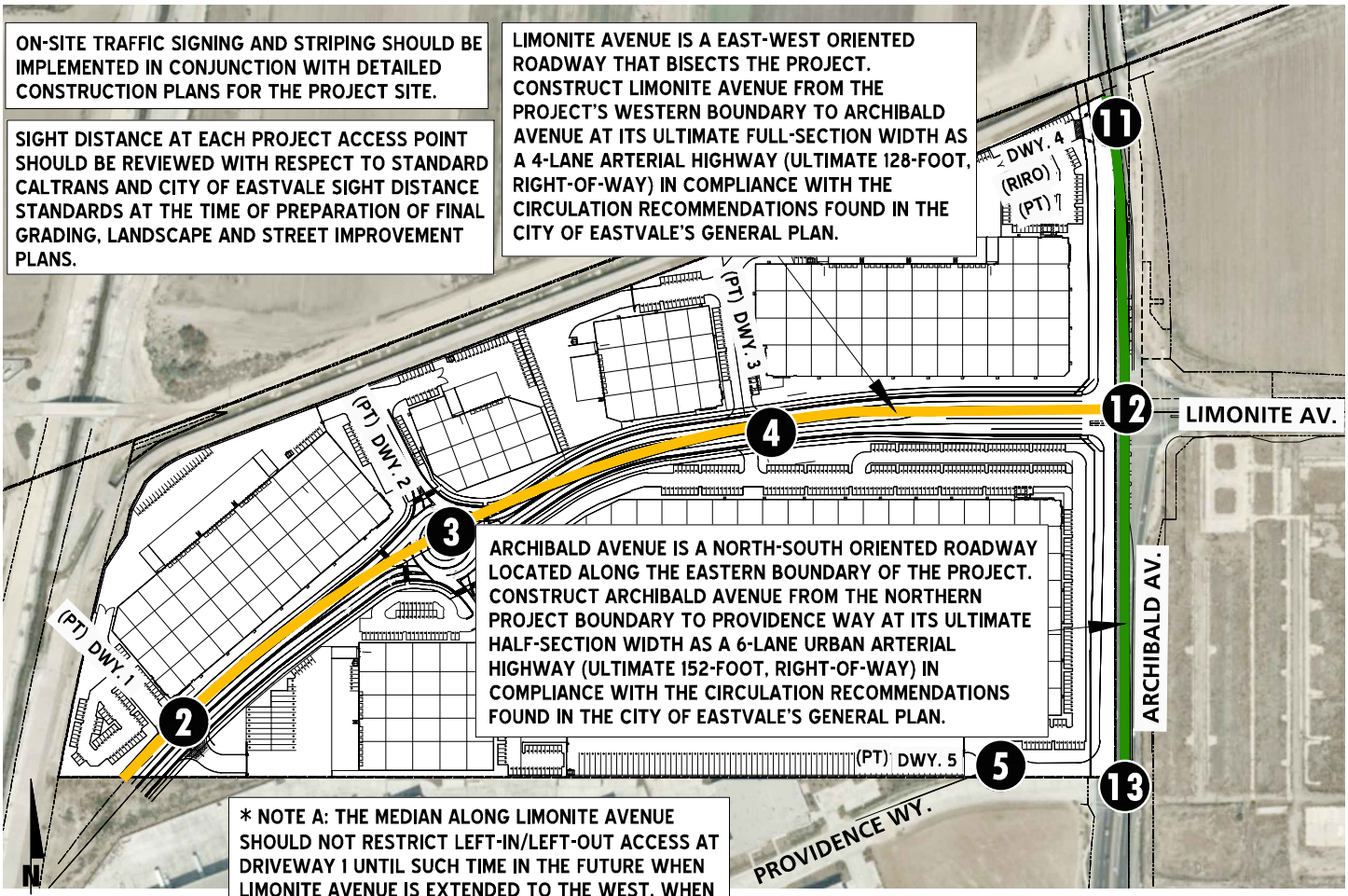
The Project is anticipated to increase the delay by less than 2.5 seconds at the intersections of Archibald Avenue at Providence Way and Archibald Avenue at 65th Street, resulting in a less than significant impact.

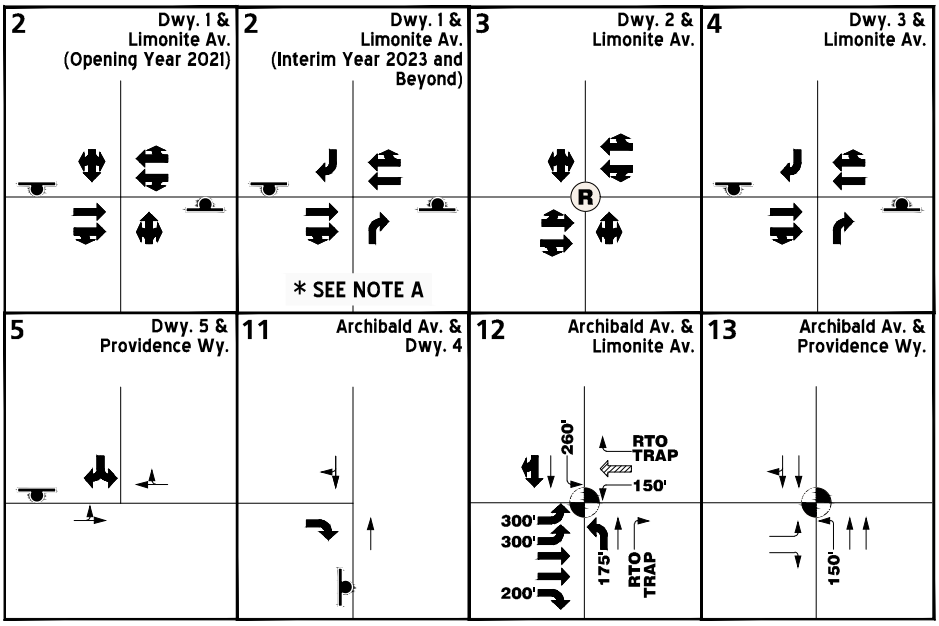
1.5 RECOMMENDATIONS

The following recommendations are based on the improvements needed to address the Project's deficiencies to baseline (Existing) year traffic conditions. Exhibit 1-4 shows the site adjacent recommendations. A queuing analysis was conducted along the site adjacent roadways of Limonite Avenue, Archibald Avenue, and Providence Way at the Project driveways for Horizon Year (2040) traffic conditions to determine the turn pocket lengths necessary to accommodate long-term 95th percentile queues and recommend storage lengths for the turning movements shown on Exhibit 1-4. The analysis was conducted for the weekday AM and weekday PM peak hours using the SimTraffic modeling software. The Horizon Year (2040) queuing results are provided in Appendix 1.2 of this report.

SimTraffic is designed to model networks of signalized and unsignalized intersections, with the primary purpose of checking and fine-tuning signal operations. SimTraffic uses the input parameters from Synchro (Version 10) to generate random simulations. The 95th percentile queue is not necessarily ever observed; it is simply based on statistical calculations (or Average Queue plus 1.65 standard deviations). The random simulations generated by SimTraffic have been utilized to determine the 95th percentile queue lengths observed for each turn lane. A SimTraffic simulation has been recorded 5 times, during the weekday AM and weekday PM peak hours, and has been seeded for 30-minute periods with 60-minute recording intervals.

EXHIBIT 1-4: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS





LEGEND:

- = TRAFFIC SIGNAL
- R = ROUNDABOUT
- = STOP SIGN
- = EXISTING LANE
- = LANE IMPROVEMENT
- = LANE RESTRIPE
- RTO = RIGHT TURN OVERLAP
- DEF = DEFACTO RIGHT TURN
- 150' = MINIMUM TURN POCKET LENGTH
- = ARTERIAL HIGHWAY (128-FOOT R.O.W.)
- = URBAN ARTERIAL HIGHWAY (152-FOOT R.O.W.)

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URBAN CROSSROADS

Recommendation 1.1 – Driveway 1 & Limonite Avenue (#2) – Until Limonite Avenue is extended to the west, interim improvements without a raised median along Limonite Avenue are needed to provide site access (see Exhibit 1-4). The ultimate lane improvements (when Limonite Avenue is extended to the west and the raised median is constructed) are also shown on Exhibit 1-4. The following improvements are necessary to accommodate site access:

- Project to install a stop control on the northbound approach and a northbound shared left-through-right turn lane (right turn lane only when the median along Limonite Avenue is constructed).
- Project to install a stop control on the southbound approach and a southbound shared left-through-right turn lane (right turn lane only when the median along Limonite Avenue is constructed).
- Project to construct an eastbound through lane and an eastbound shared through-right turn lane.
- Project to construct a westbound shared left-through lane (through lane when the median along Limonite Avenue is completed) and a westbound shared through-right turn lane.

Recommendation 2.1 – Driveway 2 & Limonite Avenue (#3) – The following improvements are necessary to accommodate site access:

- Project to install a roundabout.
- Project to construct a northbound shared left-through-right turn lane.
- Project to construct a southbound shared left-through-right turn lane.
- Project to construct an eastbound shared left-through lane and a shared through-right turn lane.
- Project to construct a westbound shared left-through lane and a shared through-right turn lane.

Recommendation 3.1 – Driveway 3 & Limonite Avenue (#4) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the northbound approach and a northbound right turn lane. The intersection should be constructed to prohibit left turns in and out of this driveway (via a raised median).
- Project to install a stop control on the southbound approach and a southbound right turn lane. The intersection should be constructed to prohibit left turns in and out of this driveway (via a raised median).
- Project to construct an eastbound through lane and an eastbound shared through-right turn lane.
- Project to construct a westbound through lane and a westbound shared through-right turn lane.

Recommendation 4.1 – Driveway 5 & Providence Way (#5) – The following improvement is necessary to accommodate site access:

- Project to install a stop control on the southbound approach and a southbound shared left-right turn lane.

Recommendation 5.1 – Driveway 4 & Archibald Avenue (#11) – The following improvement is necessary to accommodate site access:

- Project to install a stop control on the eastbound approach and an eastbound right turn lane. The intersection should be constructed to prohibit left turns in and out of this driveway (via a raised median).

Recommendation 6.1 – Archibald Avenue & Limonite Avenue (#12) – The following improvements are necessary to accommodate site access:

- Project to construct a northbound left turn lane with a minimum of 175-feet of storage.
- Project to construct a 2nd southbound shared through-right turn lane.
- Project to construct dual eastbound left turn lanes with a minimum of 300-feet of storage, two eastbound through lanes, and an eastbound right turn lane with a minimum of 200-feet of storage.
- Project to restripe to accommodate a westbound through lane (westbound left turn lane, westbound through lane, and westbound right turn lane).

No improvements are necessary at the intersection of Archibald Avenue and Providence Way (#13) to accommodate site access.

Recommendation 7.1 – Archibald Avenue – Archibald Avenue is a north-south oriented roadway located along the eastern boundary of the Project. Project to construct Archibald Avenue from the northern Project boundary to Providence Way at its ultimate half-section width as a 6-lane Urban Arterial Highway (ultimate 152-foot right-of-way) in compliance with the circulation recommendations found in the City of Eastvale's General Plan.

Recommendation 8.1 – Limonite Avenue – Limonite Avenue is an east-west oriented roadway that bisects the Project. Project to construct Limonite Avenue from the Project's western boundary to Archibald Avenue at its ultimate full-section width as a 4-lane Arterial Highway (ultimate 128-foot right-of-way) in compliance with the circulation recommendations found in the City of Eastvale's General Plan.

The median along Limonite Avenue should not restrict left-in/left-out access at Driveway 1 until such time in the future when Limonite Avenue is extended to the west. When Limonite Avenue is extended to the west, a median shall be constructed to prohibit left-in/left-out access at Driveway 1.

Wherever necessary, roadways adjacent to the Project, site access points and site-adjacent intersections will be constructed to be consistent with the identified roadway classifications and respective cross-sections in the City of Eastvale General Plan Circulation Element.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the Project site.

Table 1-4

Summary of Improvements and Rough Order of Magnitude Costs

#	Intersection Location	Jurisdiction	E+P	2021 With Project	2023 With Project	Horizon Year (2040) With Project	Improvements in City DIF, County TUMF, RBBD?[1]	Project Responsibility[6]	Total Cost[2,3,4]	Fair Share %[4]	Fair Share Cost[5]
1	Hellman Av. & Kimball Av.	Chino, Eastvale	Not Analyzed[7]	Not Analyzed[7]	Add 2nd NB left turn lane	Same	No	Fair Share	$74,200	2.35%	$1,744
								Total	**$74,200**		**$1,744**
7	Archibald Av. & Schaefer Av.	Ontario	None	None	None	Add 3rd SB through lane	No	Fair Share	$267,120	4.05%	$10,807
						Add EB left turn lane	No	Fair Share	$74,200		$3,002
								Total	**$341,320**		**$13,809**
8	Archibald Av. & Ontario Ranch Rd.	Ontario	None	None	None	Add 2nd WB through lane	No	Fair Share	$267,120	1.13%	$3,012
						Add 2nd NB left turn lane	No	Fair Share	$74,200		$837
						Add 3rd NB through lane	No	Fair Share	$267,120		$3,012
						Add 3rd SB through lane	No	Fair Share	$267,120		$3,012
						Add 3rd EB through lane	No	Fair Share	$267,120		$3,012
						Add 4th EB through lane	No	Fair Share	$267,120		$3,012
						Add 3rd WB through lane	No	Fair Share	$267,120		$3,012
						Add 4th WB through lane	No	Fair Share	$267,120		$3,012
						Add 2nd SB left turn lane	No	Fair Share	$74,200		$837
						Modify the traffic signal to implement overlap phasing for the SB right turn lane	No	Fair Share	$111,300		$1,255
								Total	**$2,129,540**		**$24,009**
9	Archibald Av. & Eucalyptus Av.	Ontario	None	None	None	NB left turn lane	No	Fair Share	$74,200	2.24%	$1,663
						Add 3rd NB through lane	No	Fair Share	$267,120		$3,012
						Add 3rd SB through lane	No	Fair Share	$267,120		$3,012
						Add EB left turn lane	No	Fair Share	$74,200		$837
						Add EB through lane	No	Fair Share	$267,120		$3,012
						Restripe the WB to accommodate 2 left turn lanes, 1 through lane, and 1 right turn lane	No	Fair Share	$37,100		$832
								Total	**$986,860**		**$12,366**
10	Archibald Av. & Merrill Av.	Ontario	None	None	None	Add 3rd NB through lane	No	Fair Share	$371,000	2.48%	$4,183
						Add 3rd SB through lane	No	Fair Share	$111,300		$1,255
						Modify the traffic signal to implement overlap phasing for the SB right turn lane	No	Fair Share	$111,300		$2,763
						Add 2nd EB left turn lane	No	Fair Share	$74,200		$1,842
						Add EB free right turn lane	No	Fair Share	$111,300		$2,763
								Total	**$779,100**		**$12,805**

Summary of Improvements and Rough Order of Magnitude Costs

#	Intersection Location	Jurisdiction	E+P	2021 With Project	2023 With Project	Horizon Year (2040) With Project	Improvements in City DIF, County TUMF, RBBD?[1]	Project Responsibility[6]	Total Cost[2,3,4]	Fair Share %[4]	Fair Share Cost[5]
12	Archibald Av. & Limonite Av.	Eastvale	Add NB left turn lane	Same	Same	Same	No	Construct	$0	3.14%	$0
			Add 2nd SB shared through-right turn lane	Same	Same	Same	Yes (TUMF, RBBD)	Construct	$0		$0
			Add EB left turn lane	Same	Same	Same	No	Construct	$0		$0
			Add 2nd EB left turn lane	Same	Same	Same	No	Construct	$0		$0
			Add EB through lane	Same	Same	Same	Yes (TUMF)	Construct	$0		$0
			Add 2nd EB through lane	Same	Same	Same	Yes (TUMF)	Construct	$0		$0
			Add EB right turn lane	Same	Same	Same	No	Construct	$0		$0
			Restripe to accommodate WB through lane	Same	Same	Same	Yes (TUMF)	Construct	$0		$0
				Add 2nd SB left turn lane	Same	Same	No	Fair Share	$74,200		$2,328
				Add 2nd WB through lane	Same	Same	Yes (TUMF, RBBD)	Fees	$0		$0
						Add 2nd NB through lane	Yes (TUMF, RBBD)	Fees	$0		$0
						Add 3rd NB through lane	Yes (RBBD)	Fair Share	$267,120		$8,383
						Add 3rd SB through lane	Yes (RBBD)	Fair Share	$267,120		$8,383
								Total	**$608,440**		**$19,094**
								Total Costs for Horizon Year Improvements	**$4,919,460**		**$83,827**

Total Project Fair Share Contribution to the City of Eastvale (non-DIF/other)[10]	**$19,965**
Total Project Fair Share Contribution to the City of Ontario[11]	**$62,989**
Total Project Fair Share Contribution to the City of Jurupa Valley[12]	**$0**
Total Project Fair Share Contribution to the City of Chino[13]	**$872**
Total Project Fair Share Contribution to Caltrans[14]	**$0**

[1] Improvements included in City of Eastvale DIF, County TUMF, or Mira Loma RBBD (Zone D) programs for local and regional components.

[2] Costs have been estimated using the data provided in Appendix "G" of the CMP (2003 Update) for preliminary construction costs.

[3] Appendix "G" costs escalated by a factor of 1.484 except Traffic Signals.

[4] Program improvements constructed by Project may be eligible for fee credit, at discretion of City. See Table 9-1 for Fair Share Calculations.

[5] Rough order of magnitude cost estimate.

[6] Identifies the Project's responsibility to construct an improvement or contribute fair share or fee payment towards the implementation of the improvement shown.

[7] Intersection is only analyzed under 2023 and 2040 traffic conditions.

[8] Improvement is consistent with the I-15 Freeway/Limonite Avenue interchange improvement project currently under construction. Interchange is anticipated to be completed by early 2020.

[9] The I-15 Freeway/Limonite Avenue interchange improvements are expected to be completed by Year 2020. As such, the improvements are assumed to be in place.

[10] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Eastvale.

[11] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Ontario.

[12] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Jurupa Valley.

[13] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Chino.

[14] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within Caltrans' jurisdiction.

The recommended improvements needed to address the cumulative deficiencies identified under E+P, Opening Year Cumulative (2021), Interim Year (2023), and Horizon Year (2040) traffic conditions are shown in Table 1-4. For those improvements listed in Table 1-4 and not constructed as part of the Project, the Applicant's responsibility for the Project's contributions towards deficient intersections is fulfilled through payment of fair share and/or TUMF, DIF, or RBBD fees (if applicable) that would be assigned to construction of the identified recommended improvements. Preliminary cost estimates and fee assessments for these improvements are summarized in Table 1-4. The Project Applicant would be required to pay TUMF, DIF, RBBD, and fair share fees consistent with the City's requirements (see Section 9 *Local and Regional Funding Mechanisms*).

Recommendation 9.1 – Prior to the issuance of building permits, the Project Applicant shall participate in the City's city-wide DIF, County TUMF, and Mira Loma RBBD fee programs by paying the requisite TUMF, DIF, and RBBD fees. TUMF, DIF, and RBBD fees may be reduced or off-set based on the cost of TUMF/DIF/RBBD eligible facilities constructed by the Project Applicant.

Recommendation 10.1 – Prior to the issuance of building permits, the Project Applicant shall pay the Project's fair share amount of $19,965 for the improvements identified in Table 1-4 at intersections located within the City of Eastvale, or as agreed to by the City and Project Applicant.

Recommendation 11.1 – The Developer's fair-share amount for the intersections that either share a mutual border with or are wholly located within the City of Ontario that have recommended improvements which are not covered by DIF is $62,989. Developer shall be required to pay the amount shown above to the City of Eastvale prior to the issuance of building permits. The City of Eastvale shall hold Developer's Fair Share contribution in trust and shall apply Developer's Fair Share Contribution to any fee program adopted or agreed upon by the City of Eastvale and other agencies as a result of implementation of Mitigation Measure 13.1.

Recommendation 12.1 – The Developer's fair-share amount for the intersections that either share a mutual border with or are wholly located within the City of Chino that have recommended improvements which are not covered by DIF is $872. Developer shall be required to pay the amount shown above to the City of Eastvale prior to the issuance of building permits. The City of Eastvale shall hold Developer's Fair Share contribution in trust and shall apply Developer's Fair Share Contribution to any fee program adopted or agreed upon by the City of Eastvale and other agencies as a result of implementation of Mitigation Measure 14.1.

1.6 TRUCK ACCESS AND CIRCULATION

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at each applicable Project driveway anticipated to be utilized by heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers (see Exhibit 1-5). A WB-67 (53-foot trailer) and WB-50 (42.5-foot trailer) have been utilized for the purposes of this analysis, where applicable. As shown on Exhibit 1-5, the Project driveway intersections and internal drive aisles are anticipated to accommodate the wide turning radius of heavy trucks as currently designed.

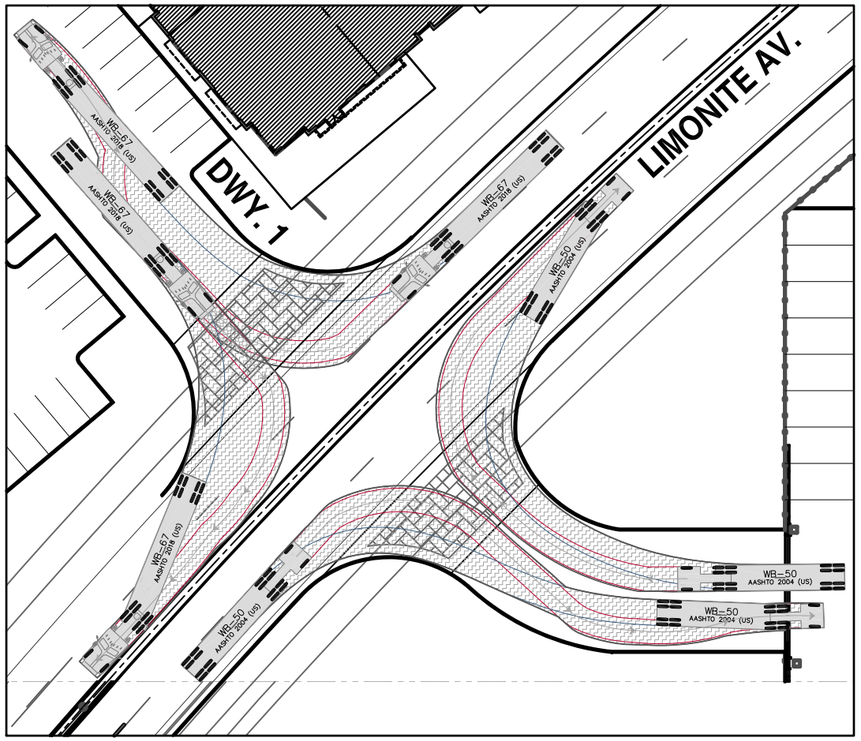
1.7 SIGHT DISTANCE ANALYSIS

Sight distance has been evaluated for the Project driveway intersections. As defined by the California Department of Transportation (Caltrans) Highway Design Manual, sight distance is the continuous length of highway ahead visible to the driver.

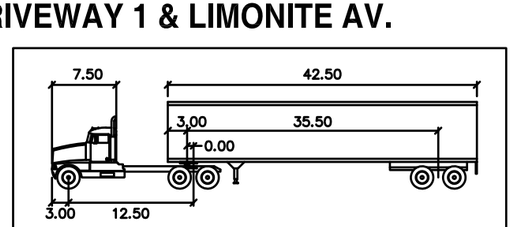
At unsignalized intersections, corner sight distance must provide a substantially clear line of sight between the driver of the vehicle waiting on the minor road (driveway) and the driver of an approaching vehicle. For the purposes of this analysis, a 7 ½ second criterion has been applied to the outside travel lanes in either direction to provide the most conservative sight distance. The 7 ½ second criterion allows waiting vehicles to either cross all lanes of through traffic by turning left or cross the near lanes by turning right without requiring through traffic to radically alter their speed.

Adequate visibility for vehicular and pedestrian traffic can be provided at each Project driveway by limiting sight obstructions within the limited use area. Any landscaping/hardscape within the limited use area should not exceed 30-inches (2.5-feet) in height. The limited use area should be kept clear of any landscaping or any other obstructions that may impede the visibility of the driver, including on-street parking.

Based on the anticipated speed of Limonite Avenue, the minimum sight distance is 495-feet along the Project's frontage on Limonite Avenue. The minimum sight distance for Driveway 4 on Archibald Avenue is 550-feet. Minimum sight distance for the Project driveways is illustrated on Exhibit 1-6, however, sight distance should be re-evaluated in the field once the driveway has been constructed.



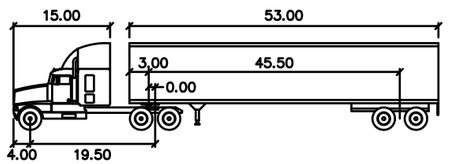
DRIVEWAY 1 & LIMONITE AV.



WB–50 (NOT TO SCALE)

feet

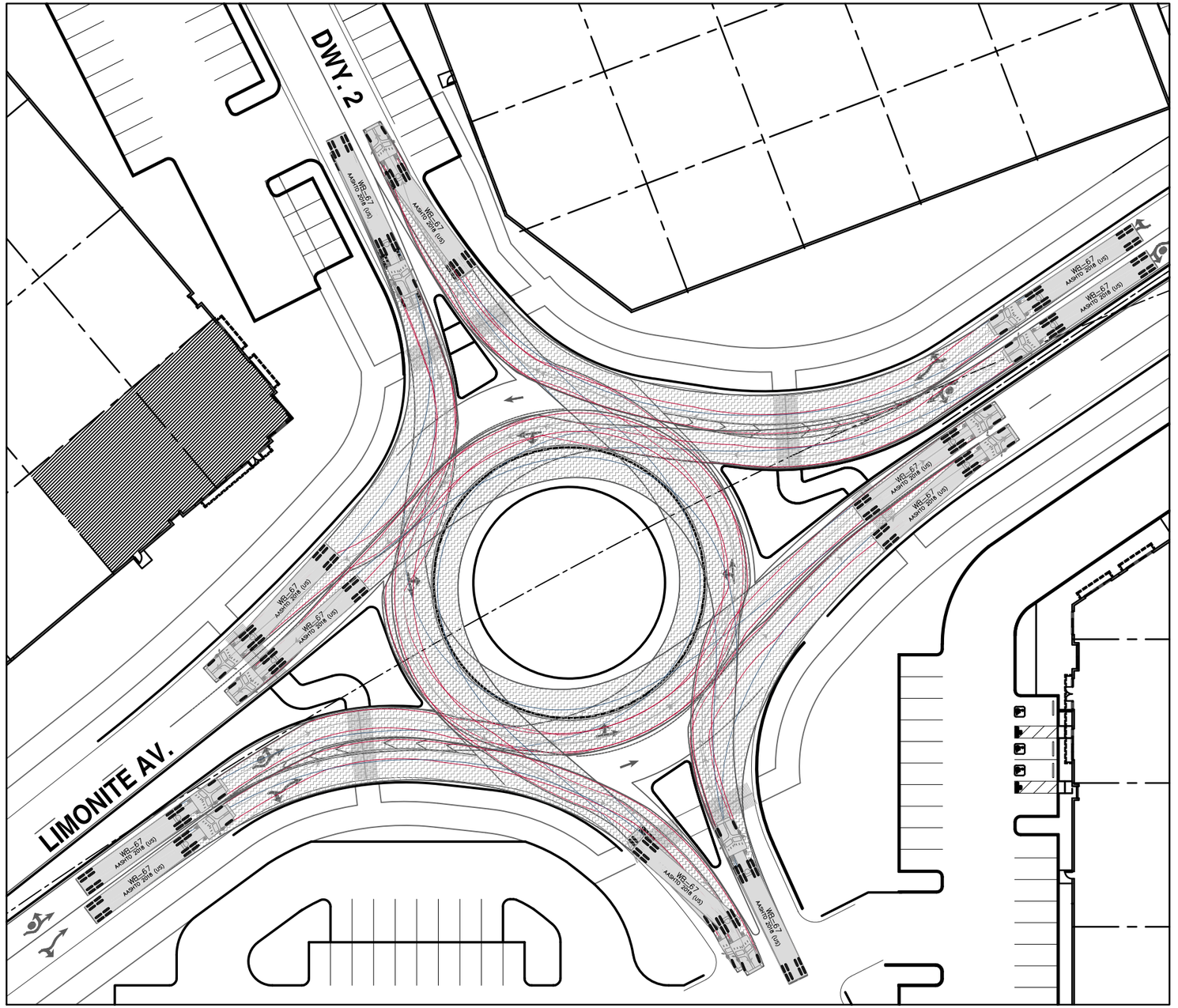
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Trailer Width	: 8.50	Steering Angle	: 17.7
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



WB–67 (NOT TO SCALE)

feet

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



DRIVEWAY 2 & LIMONITE AV.

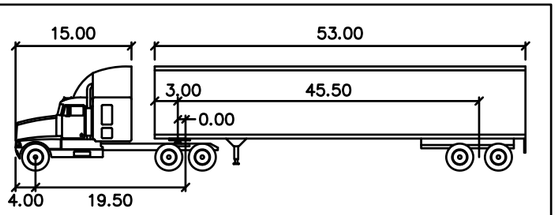
SCALE: 1" = 50' (ON 11" x 17" SHEET)

0 25 50 100 150

EXHIBIT 1-5 (1 OF 3): TRUCK ACCESS

URBAN CROSSROADS
260 E. BAKER STREET, SUITE 200
COSTA MESA, CA 92626
TELEPHONE # 949-660-1994

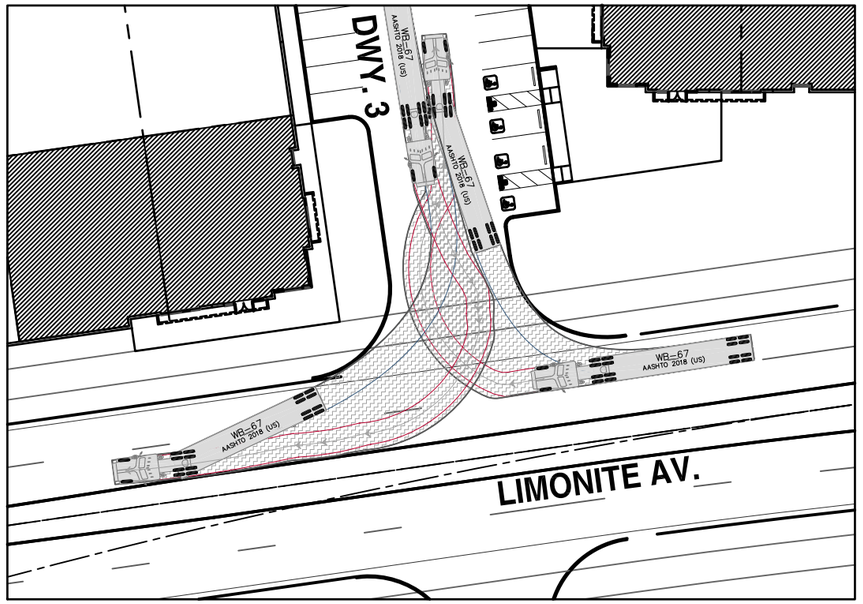
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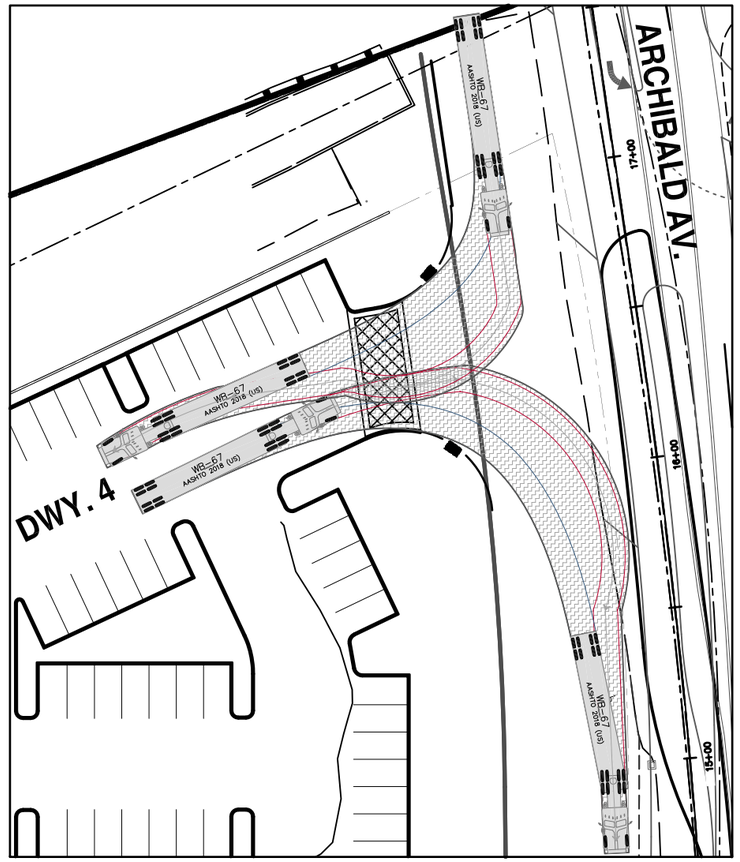
WB–67 (NOT TO SCALE)

feet

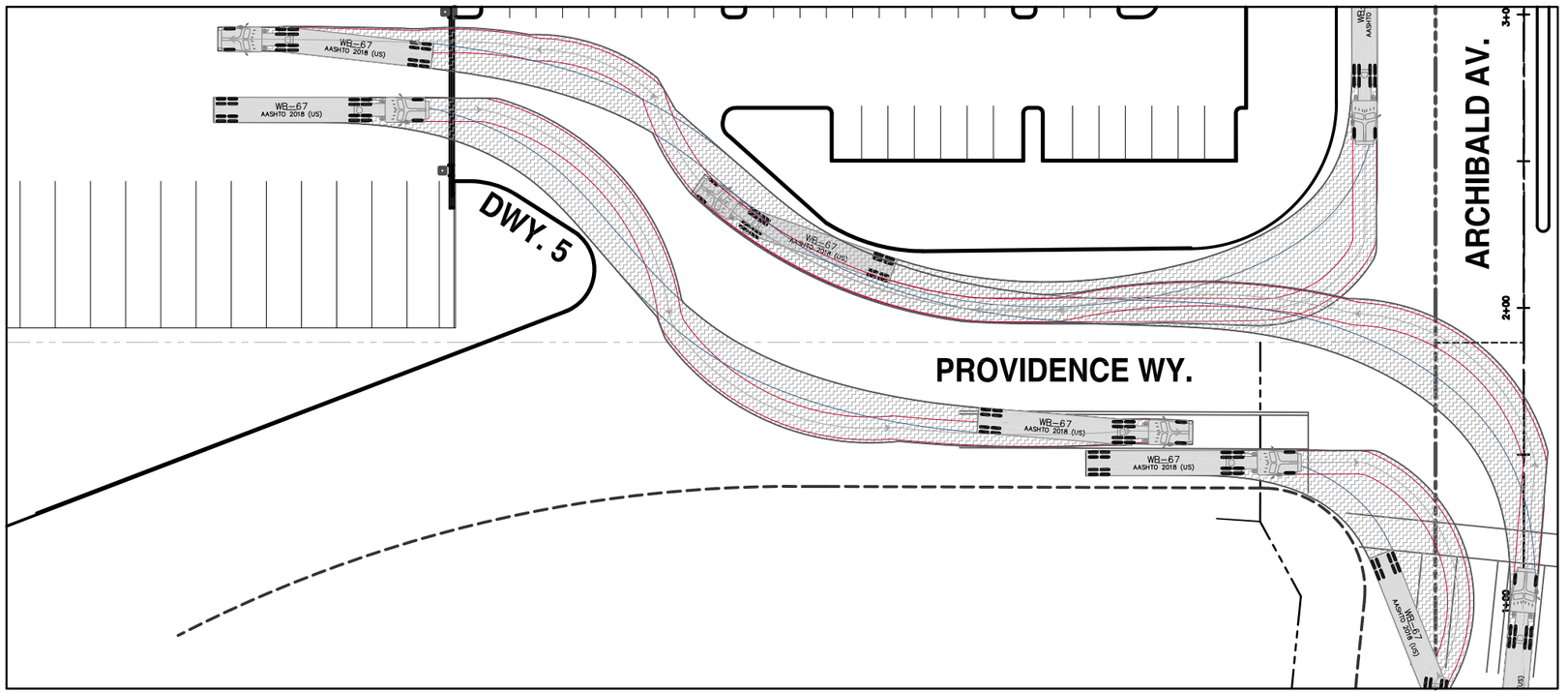
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		



DRIVEWAY 3 & LIMONITE AV.



DRIVEWAY 4 & ARCHIBALD AV.



DRIVEWAY 5 & PROVIDENCE WY.

N

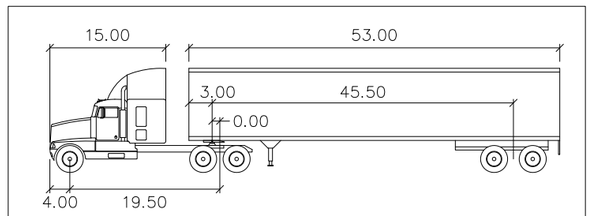
SCALE: 1" = 50' (ON 11" x 17" SHEET)

0 25 50 100 150

EXHIBIT 1-5 (2 OF 3): TRUCK ACCESS

URBAN CROSSROADS
260 E. BAKER STREET, SUITE 200
COSTA MESA, CA 92626
TELEPHONE # 949-660-1994

11963 – ACAD\HomesteadTrucks_A.dwg – 12/20/19 – DG



WB–67 (NOT TO SCALE)

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

SCALE: 1" = 160' (ON 11" x 17" SHEET)

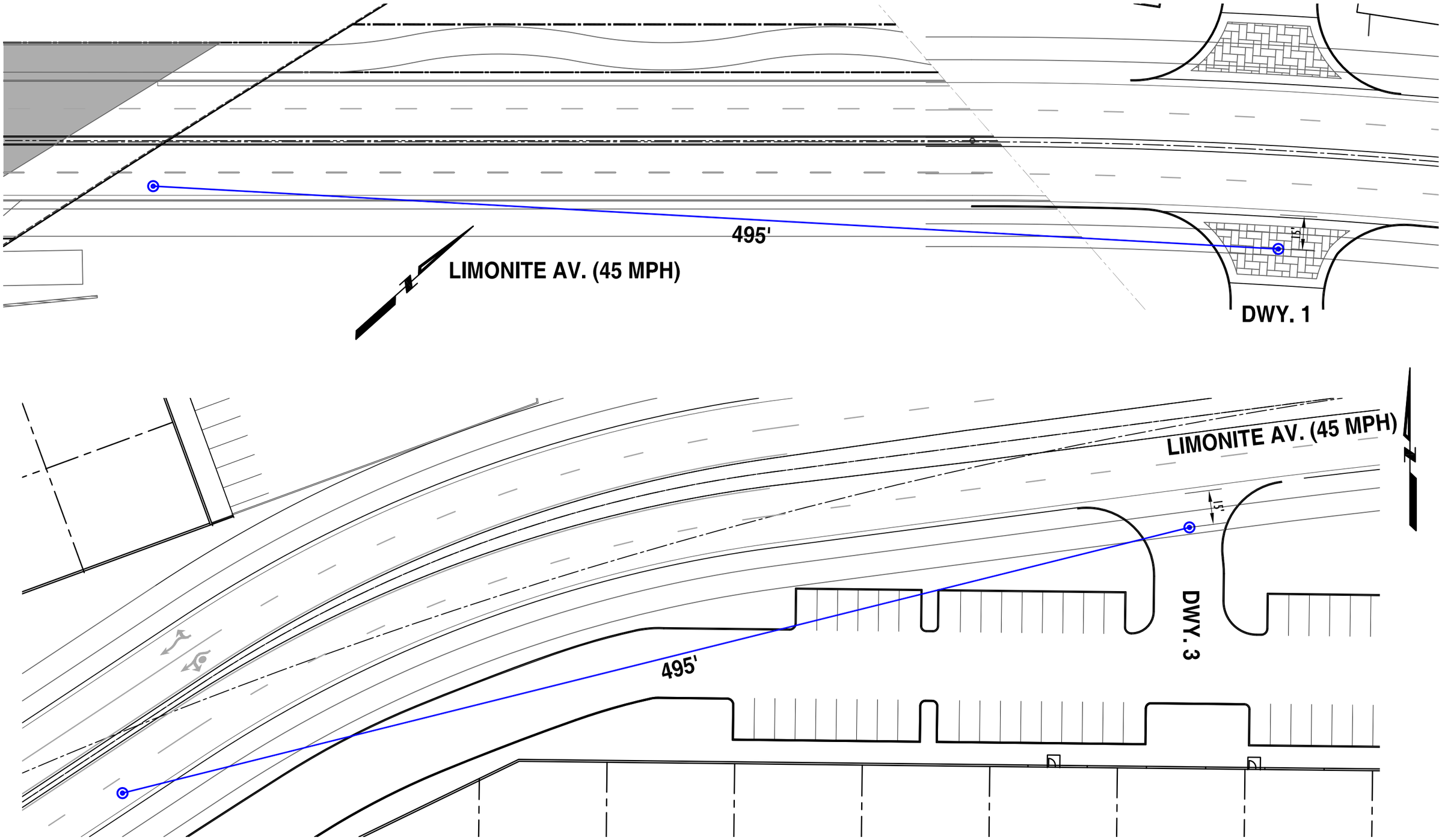
0 80 160 320 480

BLDG. 1
BLDG. 2
BLDG. 3
BLDG. 4
BLDG. 5
BLDG. 6
DWY. 1
DWY. 2
DWY. 3
DWY. 4
DWY. 5
LIMONITE AV.
ARCHIBALD AV.
PROVIDENCE WY.

EXHIBIT 1-5 (3 OF 3): TRUCK ACCESS

URBAN CROSSROADS
260 E. BAKER STREET, SUITE 200
COSTA MESA, CA 92626
TELEPHONE # 949-660-1994

11963 – ACAD\HomesteadTrucks_A.dwg – 12/20/19 – DG



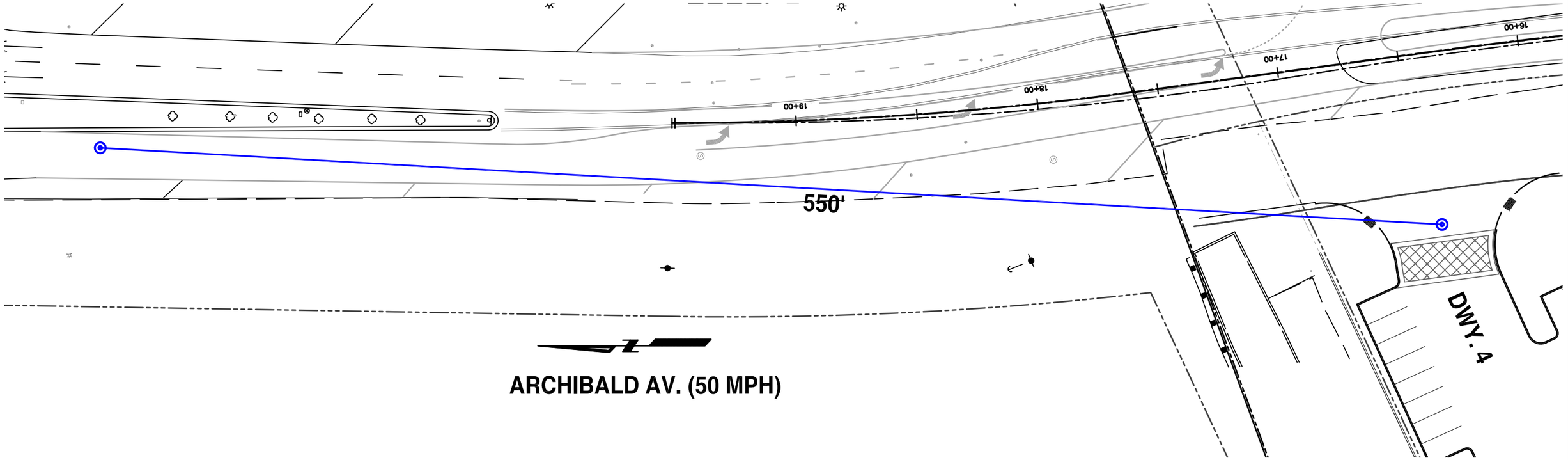
SCALE: 1" = 40' (ON 11" x 17" SHEET)

0 20 40 80 120

EXHIBIT 1-6 (1 OF 2): INTERSECTION SIGHT DISTANCE

URBAN CROSSROADS
260 E. BAKER STREET, SUITE 200
COSTA MESA, CA 92626
TELEPHONE # 949-660-1994

11963 - ACAD\HomesteadTrucks_A.dwg - 12/20/19 - DG



ARCHIBALD AV. (50 MPH)

SCALE: 1" = 40' (ON 11" x 17" SHEET)

0 20 40 80 120

EXHIBIT 1-6 (2 OF 2): INTERSECTION SIGHT DISTANCE

URBAN CROSSROADS
260 E. BAKER STREET, SUITE 200
COSTA MESA, CA 92626
TELEPHONE # 949-660-1994

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2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are generally consistent with City of Eastvale traffic study guidelines.

2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (8) The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

City of Eastvale, City of Ontario, City of Jurupa Valley, and City of Chino

The City of Eastvale, City of Ontario, City of Jurupa Valley, and City of Chino require signalized intersection operations analysis based on the methodology described in the HCM. (8) Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1.

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: HCM (6th Edition)

A saturation flow rate of 1900 has been utilized for all study area intersections located within the County of Riverside. Consistent with Appendix B of the San Bernardino County CMP, the following saturation flow rates, in vehicles per hour green per lane (vphgpl), will be utilized in the traffic analysis for signalized intersections in the County of San Bernardino:

Existing, Opening Year Cumulative, and Interim Year Traffic Conditions:

- Exclusive through: 1800 vphgpl
- Exclusive left: 1700 vphgpl
- Exclusive right: 1800 vphgpl
- Exclusive dual left: 1600 vphgpl
- Exclusive triple left: 1500 vphgpl

Horizon Year Traffic Conditions:

- Exclusive through: 1900 vphgpl
- Exclusive left: 1800 vphgpl
- Exclusive dual left: 1700 vphgpl
- Exclusive right: 1900 vphgpl
- Exclusive dual right: 1800 vphgpl
- Exclusive triple left: 1600 vphgpl or less

The traffic modeling and signal timing optimization software package Synchro (Version 10) has been utilized to analyze signalized intersections within the City of Eastvale, City of Ontario, City of Jurupa Valley, and City of Chino.

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g. PHF = [Hourly Volume] / [4 x Peak 15-minute Flow Rate]). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. New intersections utilize a PHF of 0.92. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. (8)

California Department of Transportation (Caltrans)

Per the Caltrans Guide for the Preparation of Traffic Impact Studies, the traffic modeling and signal timing optimization software package Synchro (Version 10) has also been utilized to analyze signalized intersections under Caltrans' jurisdiction, which consists of the I-15 Freeway & Limonite Avenue freeway-to-arterial ramp intersections. (2) Signal timing for these study area intersections have been obtained from Caltrans District 8 and were utilized for the purposes of this analysis.

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Eastvale, City of Ontario, City of Jurupa Valley, and City of Chino require the operations of unsignalized intersections be evaluated using the methodology described in the HCM. (8) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM (6th Edition)

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. The worst delay and associated LOS for a controlled movement is utilized for the overall intersection delay and LOS for two-way stop-controlled intersections. For

all-way stop controlled intersections, LOS is computed for the intersection as a whole (average delay).

2.3 ROADWAY SEGMENT CAPACITY ANALYSIS

Roadway segment operations have been evaluated using the daily roadway segment capacities for each type of roadway as summarized in Table 2-3.

TABLE 2-3: ROADWAY SEGMENT CAPACITIES

Roadway Lanes	City of Eastvale[1]
2-Lane	17,950
4-Lane	35,900
6-Lane	53,900

[1] Based on LOS E maximum two-way traffic volume (ADT) thresholds from the City of Eastvale General Plan (Table C-1) for an Urban Arterial.

These roadway capacities are "rule of thumb" estimates for planning purposes and are affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian bicycle traffic. As such, where the average daily volume (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis and progression analysis are undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. Therefore, for the purposes of this analysis, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes.

2.4 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TIA update uses the signal warrant criteria presented in the latest edition of the Caltrans' California Manual on Uniform Traffic Control Devices (CA MUTCD), for all applicable study area intersections. (9)

As shown in Table 2-4, traffic signal warrant analyses were performed for the following unsignalized study area intersection based on the planning level ADT volume-based traffic signal warrants (Figure 4C-103 (CA) of the CA MUTCD): (9)

TABLE 2-4: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction
5	Driveway 5 & Providence Wy. – Future Intersection	Eastvale

Since there are currently no unsignalized study area intersections, traffic signal warrant analysis has not been evaluated for "Without Project" conditions, including Existing (2019) traffic conditions. The traffic signal warrant analyses for future conditions are presented in Section 5 *E+P Traffic Conditions,* Section 6 *Opening Year Cumulative (2021) Traffic Conditions,* Section 7 *Interim Year (2023) Traffic Conditions*, and Section 8 *Horizon Year (2040) Traffic Conditions* of this report.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

2.5 FREEWAY OFF-RAMP QUEUING ANALYSIS

Consistent with Caltrans requirements, the 95th percentile queuing of vehicles has been assessed at the off-ramps to determine potential queuing deficiencies at the freeway ramp intersections at the I-15 Freeway and Limonite Avenue interchange. Specifically, the queuing analysis is utilized to identify any potential queuing and "spill back" onto the I-15 Freeway mainline from the off-ramps.

The traffic progression analysis tool and HCM intersection analysis program, Synchro, has been used to assess the potential deficiencies/needs of the intersections with traffic added from the proposed Project. Storage (turn-pocket) length recommendations at the ramps have been based upon the 95th percentile queue resulting from the Synchro progression analysis. The footnote from the Synchro output sheets indicates if the 95th percentile cycle exceeds capacity. Traffic is simulated for two complete cycles of the 95th percentile traffic in Synchro in order to account for the effects of spillover between cycles. In practice, the 95th percentile queue shown will rarely be exceeded and the queues shown with the footnote are acceptable for the design of storage bays.

A vehicle is considered queued whenever it is traveling at less than 10 feet/second. A vehicle will only become queued when it is either at the stop bar or behind another queued vehicle. Although only the 95th percentile queue has been reported in the tables, the 50th percentile queue can be found in the appendix alongside the 95th percentile queue for each ramp location. The 50th percentile maximum queue is the maximum back of queue on a typical cycle during the peak hour, while the 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes during the peak hour. The queue length reported is for the lane with the highest queue in the lane group. The 50th percentile or average queue represents the typical queue length for peak hour traffic conditions, while the 95th percentile queue is derived from the average queue plus 1.65 standard deviations. The 95th percentile queue is not necessarily ever observed it is simply based on statistical calculations.

2.6 FREEWAY MAINLINE SEGMENT ANALYSIS METHODOLOGY

Consistent with recent Caltrans guidance, the traffic study has evaluated all freeway segments where the Project is anticipated to contribute 50 or more peak hour one-way trips, in an effort to conduct a conservative analysis and overstate as opposed to understate potential deficiencies.

The freeway system in the study area has been broken into segments defined by the freeway-to-arterial interchange locations. The freeway segments have been evaluated in this TIA based upon peak hour directional volumes. The freeway segment analysis is based on the methodology described in the HCM and performed using HCS7 software. The performance measure preferred by Caltrans to calculate LOS is density. Density is expressed in terms of passenger cars per mile per lane. Table 2-5 illustrates the freeway segment LOS descriptions for each density range utilized for this analysis.

TABLE 2-5: DESCRIPTION OF FREEWAY MAINLINE LOS

Level of Service	Description	Density Range (pc/mi/ln)[1]
A	Free-flow operations in which vehicles are relatively unimpeded in their ability to maneuver within the traffic stream. Effects of incidents are easily absorbed.	0.0 – 11.0
B	Relative free-flow operations in which vehicle maneuvers within the traffic stream are slightly restricted. Effects of minor incidents are easily absorbed.	11.1 – 18.0
C	Travel is still at relative free-flow speeds, but freedom to maneuver within the traffic stream is noticeably restricted. Minor incidents may be absorbed, but local deterioration in service will be substantial. Queues begin to form behind significant blockages.	18.1 – 26.0
D	Speeds begin to decline slightly and flows, and densities begin to increase more quickly. Freedom to maneuver is noticeably limited. Minor incidents can be expected to create queuing as the traffic stream has little space to absorb disruptions.	26.1 – 35.0
E	Operation at capacity. Vehicles are closely spaced with little room to maneuver. Any disruption in the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. Any incident can be expected to produce a serious disruption in traffic flow and extensive queuing.	35.1 – 45.0
F	Breakdown in vehicle flow.	>45.0

[1] pc/mi/ln = passenger cars per mile per lane. Source: HCM (6th Edition)

The number of lanes for existing baseline conditions has been obtained from field observations conducted by Urban Crossroads in May 2019. These existing freeway geometrics have been utilized for Existing, E+P, Opening Year Cumulative (2021), Interim Year (2023), and Horizon Year traffic conditions.

The I-15 Freeway mainline volume data was obtained from the Caltrans Performance Measurement System (PeMS) website for the segments of the I-15 Freeway north of Limonite Avenue. The data was obtained from May 2019. In an effort to conduct a conservative analysis, the maximum value observed within the 3-day period was utilized for the weekday morning (AM) and weekday evening (PM) peak hours. In addition, truck traffic, represented as a percentage of

total traffic and actual vehicles (as opposed to PCE volumes) have been utilized for the purposes of the basic freeway segment analysis. (10)

2.7 FREEWAY MERGE/DIVERGE RAMP JUNCTION ANALYSIS

The freeway system in the study area has been broken into segments defined by freeway-to-arterial interchange locations where the Project is anticipated to contribute 50 or more peak hour trips (see Table 1-3). Although the HCM indicates the influence area for a merge/diverge junction is 1,500 feet, the analysis presented in this traffic study has been performed at all ramp locations with respect to the nearest on or off-ramp at each interchange in an effort to be consistent with Caltrans guidance/comments on other projects Urban Crossroads has worked on in the region.

The freeway facility analysis is performed using the HCS7 software and analyzes the freeway facility as a whole, including both freeway segments and ramp junctions. The measure of effectiveness (reported in passenger car/mile/lane) are calculated based on the existing number of travel lanes, number of lanes at the on and off-ramps both at the analysis junction and at upstream and downstream locations (if applicable) and acceleration/deceleration lengths at each merge/diverge point. Table 2-6 presents the merge/diverge area level of service descriptions for each density range utilized for this analysis.

TABLE 2-6: DESCRIPTION OF FREEWAY MERGE AND DIVERGE LOS

Level of Service	Density Range (pc/mi/ln)[1]
A	≤10.0
B	10.0 – 20.0
C	20.0 – 28.0
D	28.0 – 35.0
E	>35.0
F	Demand Exceeds Capacity

[1] pc/mi/ln = passenger cars per mile per lane. Source: HCM (6th Edition)

Similar to the basic freeway segment analysis, the I-15 Freeway volume data was obtained from the Caltrans maintained PeMS website for the segments of the I-15 Freeway north of Limonite Avenue. The ramp data (per the count data presented in Appendix 3.1) was then utilized to flow conserve the mainline volumes to determine the remaining I-15 Freeway mainline segment volumes. Flow conservation checks ensure that traffic flows from north to south (and vice versa) of the interchange area with no unexplained loss of vehicles. The data was obtained from May 2019. In an effort to conduct a conservative analysis, the maximum value observed within the 3-day period was utilized for the weekday morning (AM) and weekday evening (PM) peak hours. In addition, truck traffic, represented as a percentage of total traffic and actual vehicles (as opposed to PCE volumes) have been utilized for the purposes of the freeway ramp junction (merge/diverge) analysis. (10)

2.8 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS) AND INTERSECTION DEFICIENCY CRITERIA

Minimum Acceptable LOS and associated definitions of intersection deficiencies has been obtained from each of the applicable surrounding jurisdictions.

2.8.1 CITY OF EASTVALE

The City of Eastvale General Plan Policy C-10 sets a standard of LOS C with LOS D as acceptable in commercial and employment areas and at intersections of any combination of major highways, urban arterials, secondary highways, or freeway ramps. Based on this criterion, where feasible, LOS D is the minimum acceptable LOS at each of the study intersections within the City of Eastvale. LOS D has been utilized as the minimum LOS for all roadway segments.

2.8.2 CITY OF ONTARIO

According to the City of Ontario General Plan, LOS E is the minimum acceptable condition that should be maintained during the peak commute hours. Therefore, any intersection or roadway segment operating at LOS F is considered deficient.

2.8.3 CITY OF JURUPA VALLEY

The City of Jurupa Valley utilizes a minimum acceptable LOS of LOS D.

2.8.4 CITY OF CHINO

According to the City of Chino's General Plan Objective TRA-1.2/Policy P1, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours, where feasible. (10)

2.8.5 CMP

The CMP definition of deficiency is based on maintaining a level of service standard of LOS E or better, except where an existing LOS F condition is identified in the CMP document. However, in an effort to overstate as opposed to understate potential impacts, LOS D has been utilized for the CMP intersections for the purposes of this analysis.

2.8.6 CALTRANS

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on SHS facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing LOS should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadway segments, and intersections is LOS D. As such, LOS D will be used as the target LOS for freeway ramps, freeway segments, and freeway merge/diverge ramp junctions.

2.9 THRESHOLDS OF SIGNIFICANCE

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies.

2.9.1 INTERSECTIONS

For the study area intersections that lie within the City of Eastvale, Project related significant impacts will be identified by comparing the "Without Project" condition to the "With Project" condition based on the following criteria:

- If the LOS deteriorates from acceptable LOS (LOS D or better) to unacceptable LOS (LOS E or F); or
- If the intersection is already operating at an unacceptable LOS (LOS E or F) in "Without Project" conditions and the addition of Project traffic increases the delay by more than 2.5 seconds.

To determine whether the addition of project traffic at a study intersection that lies outside of the City of Eastvale would result in a direct project-specific traffic impact, the following will be utilized:

- When the pre-Project condition is at or better than LOS D (or LOS E for intersections located in the City of Ontario) (i.e., acceptable LOS), and project-generated traffic, as measured by 50 or more peak hour trips, causes deterioration below LOS D/LOS E (i.e., unacceptable LOS), a deficiency is deemed to occur.

Based on discussions with City staff, when the pre-Project condition is already below LOS D (i.e., unacceptable LOS), the Project will be responsible for mitigating its impact to a level of service equal to or better than it was under pre-project traffic conditions for intersections that receive 50 or more project-related peak hour trips. This is a standard protocol in many urban jurisdictions since requiring a Project to mitigate to LOS D or better would in effect force the Project to mitigate beyond its proportional share, which is prohibited under the current California Environmental Quality Act (CEQA). Thus, for intersections currently operating at unacceptable LOS during either the AM and/or PM peak hour under Without Project traffic conditions, improvements have been identified to mitigate the project's impact to an intersection LOS that is equal to or better than pre-Project conditions.

Cumulative traffic impacts are created as a result of a combination of the proposed Project together with other future developments contributing to the overall traffic impacts requiring additional improvements to maintain acceptable level of service operations with or without the Project. A project's contribution to a significant cumulative impact can be reduced to less than significant if the project is required to implement or fund its fair share of improvements designed to alleviate its contribution to the impact. An impact has been deemed cumulatively considerable if the project contributes 50 or more peak hour trips.

In the event that an intersection is operating at or is forecast to operate at a deficient LOS, the CMP guidelines have defined a series of steps to be completed to determine the Project's contribution to the deficiency of intersections, which has been applied to both CMP and non-CMP study area intersections. The steps are as follows:

- Determine the mitigation measures necessary to achieve an acceptable service level,
- Calculate the Project's share in the future traffic volume projections for the peak hours,
- Estimate the cost to implement recommended mitigation measures, and
- Calculate the Project's fair-share contribution to mitigate the Project's traffic impacts

2.9.2 ROADWAY SEGMENTS

Project related significant impacts will be identified by comparing the "Without Project" condition to the "With Project" condition based on the following criteria:

- If the LOS deteriorates from acceptable LOS (LOS D or better) to unacceptable LOS (LOS E or F); or
- If the roadway segment is already operating at an unacceptable LOS (LOS E or F) in "Without Project" conditions and the addition of Project traffic increases the volume-to-capacity ratio by 0.01 or greater.

2.9.3 CALTRANS FACILITIES

To determine whether the addition of project traffic to the SHS freeway segments would result in a deficiency, the following will be utilized:

- The traffic study finds that the LOS of a segment will degrade from D or better to E or F.
- The traffic study finds that the project will exacerbate an already deficient condition by contributing 50 or more one-way peak hour trips. A segment that is operating at or near capacity is deemed to be deficient.

2.10 PROJECT FAIR SHARE CALCULATION METHODOLOGY

In cases where this TIA identifies that the Project would contribute additional traffic volumes to cumulative traffic deficiencies, Project fair share costs of improvements necessary to address deficiencies have been identified. The Project's fair share cost of improvements is determined based on the following equation, which is the ratio of Project traffic to new traffic, and new traffic is total future (Horizon Year) traffic less existing baseline traffic:

Project Fair Share % = Project Traffic / (Horizon Year With Project Total Traffic – Existing Traffic)

The Project fair share contribution calculations are presented in Section 9 *Local and Regional Funding Mechanisms* of this TIA. These cost estimates have been utilized in conjunction with the Project fair share percentages to determine the Project's fair share cost of the recommended cumulative improvements (see Table 9-1). These estimates are a rough order of magnitude only as they are intended only for discussion purposes and do not imply any legal responsibility or formula for contributions or mitigation.

3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Eastvale General Plan Circulation Network, and a review of existing peak hour intersection operations, traffic signal warrant, roadway segment capacity, and freeway facility operations analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the agreement with City of Eastvale staff (Appendix 1.1), the study area includes a total of 20 existing and future intersections as shown previously on Exhibit 1-2. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 CITY OF EASTVALE GENERAL PLAN CIRCULATION ELEMENT

As noted previously, the Project site is located within the City of Eastvale. The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area, as identified on the City of Eastvale General Plan Circulation Element, are described subsequently. Exhibit 3-2 shows the City of Eastvale General Plan Circulation Element, and Exhibit 3-3 illustrates the City of Eastvale General Plan roadway cross-sections.

The study area roadways that are classified as 6-lane Urban Arterials are identified as having three lanes of travel in each direction. The following study area roadways within the City of Eastvale are classified as 6-lane Urban Arterials:

- Limonite Avenue
- Archibald Avenue
- Hamner Avenue

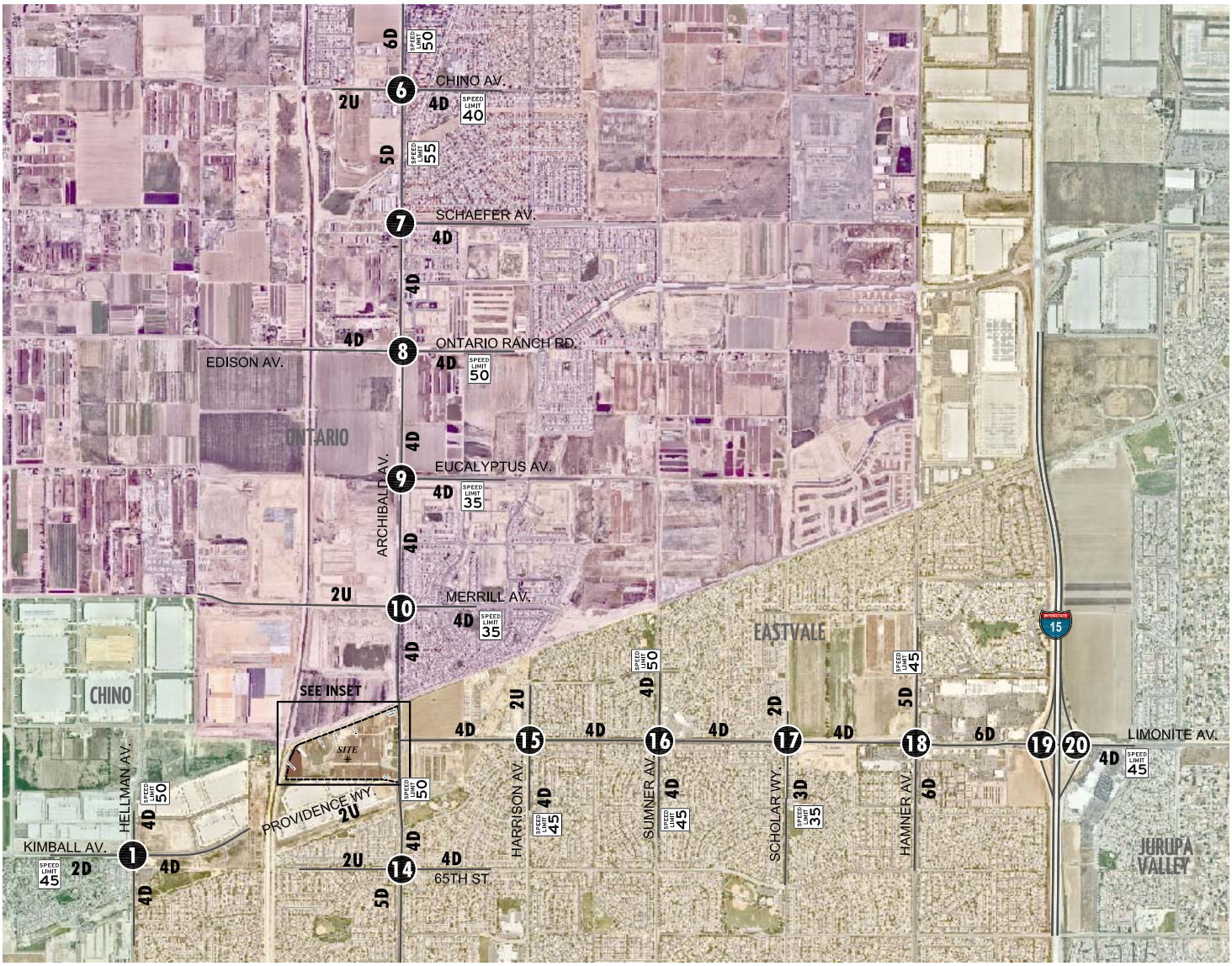
The study area roadway that is classified as a 2-lane Major Collector is identified as having one lane of travel in each direction. The following study area roadway within the City of Eastvale is classified as a 2-lane Major Collector:

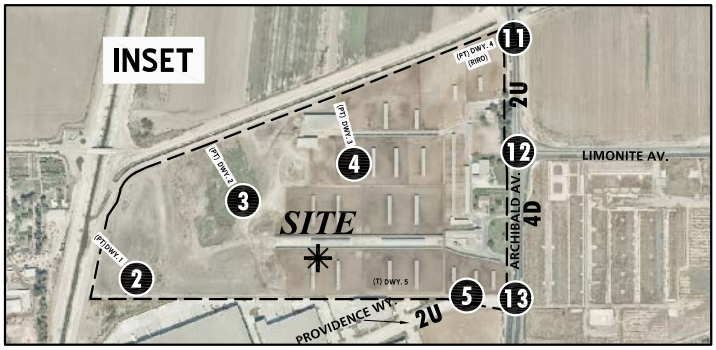
- Sumner Avenue

The study area roadways that are classified as 2-lane Secondary Collectors are identified as having one lane of travel in each direction. The following study area roadways within the City of Eastvale are classified as Secondary Collectors:

- 65th Street
- Harrison Avenue
- Scholar Way

EXHIBIT 3-1 (1OF2): EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS





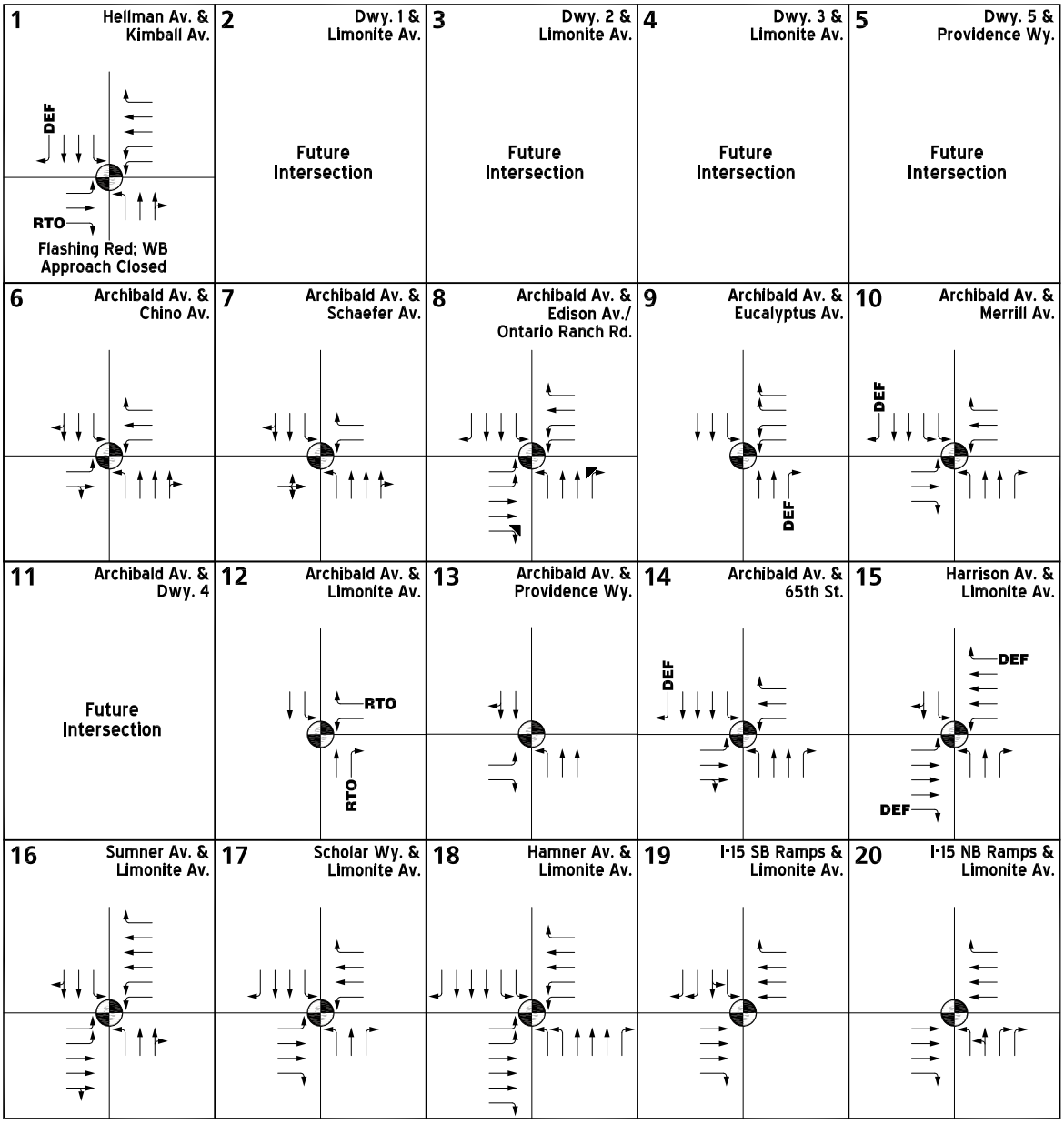
LEGEND:

- 4 = NUMBER OF LANES
- D = DIVIDED
- U = UNDIVIDED
- SPEED LIMIT 25 = SPEED LIMIT (MPH)

N

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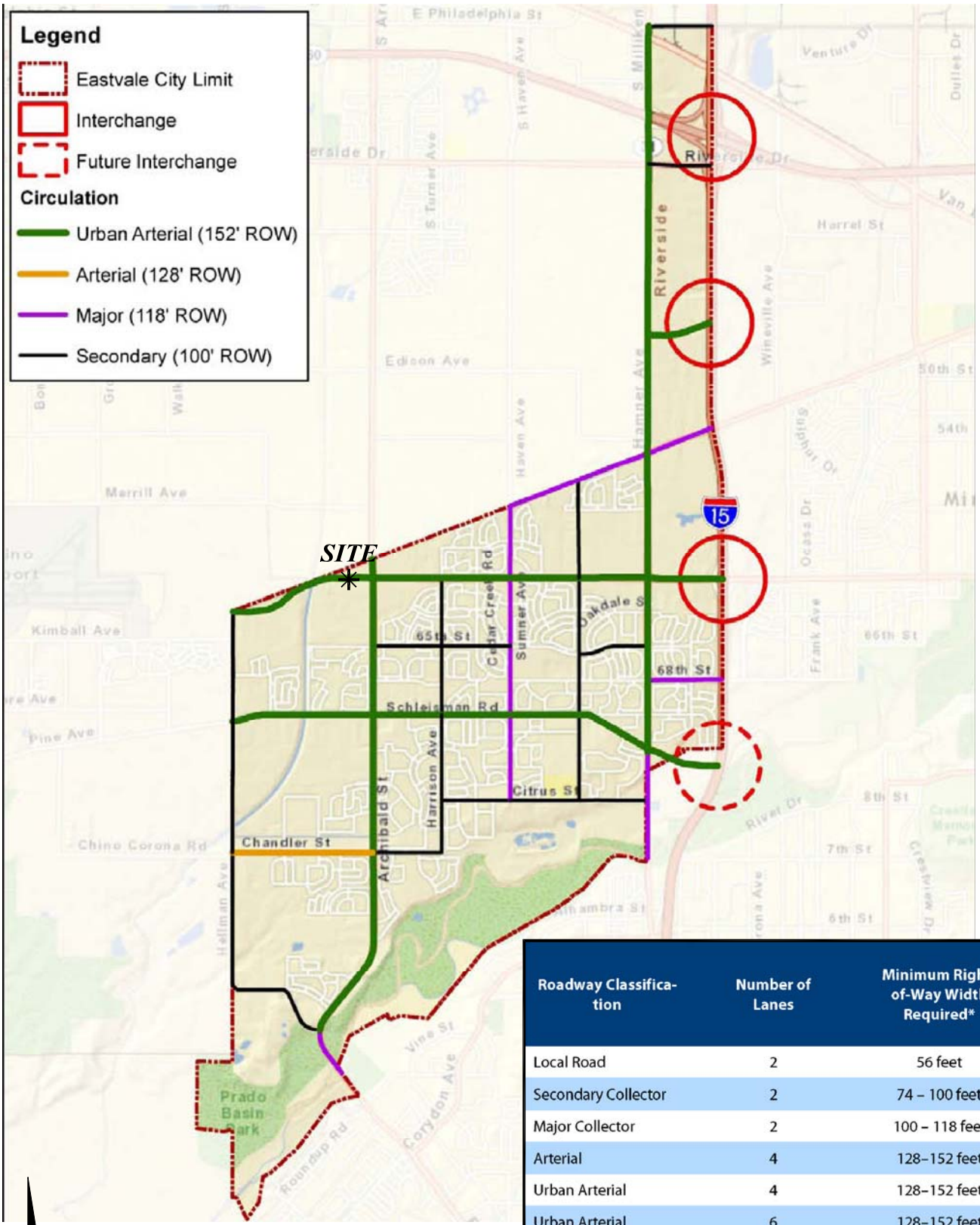
EXHIBIT 3-1 (2OF2): EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



LEGEND:

- = TRAFFIC SIGNAL
- = FREE RIGHT TURN
- RTO = RIGHT TURN OVERLAP
- DEF = DEFACTO RIGHT TURN

EXHIBIT 3-2: CITY OF EASTVALE GENERAL PLAN CIRCULATION ELEMENT



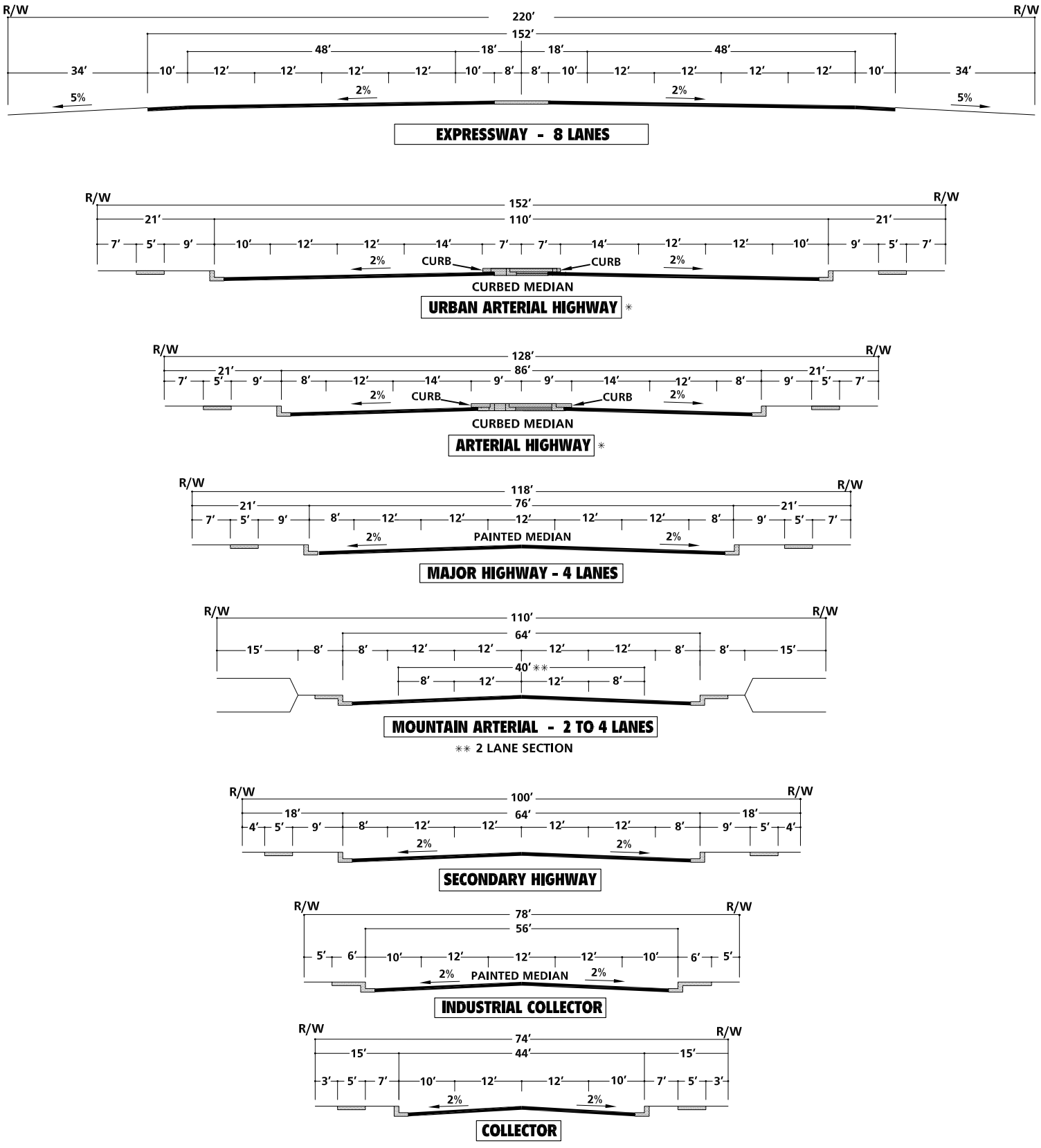
Roadway Classification	Number of Lanes	Minimum Right-of-Way Width Required*
Local Road	2	56 feet
Secondary Collector	2	74 – 100 feet
Major Collector	2	100 – 118 feet
Arterial	4	128–152 feet
Urban Arterial	4	128–152 feet
Urban Arterial	6	128–152 feet

SOURCE: CITY OF EASTVALE GENERAL PLAN
ADOPTED: JUNE 13, 2012

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URBAN CROSSROADS

EXHIBIT 3-3: CITY OF EASTVALE GENERAL PLAN ROADWAY CROSS-SECTIONS



* *IMPROVEMENTS MAY BE RECONFIGURED TO ACCOMMODATE EXCLUSIVE TRANSIT LANES OR ALTERNATIVE LANE ARRANGEMENTS ADDITIONAL RIGHT OF WAY MAY BE REQUIRED AT INTERSECTIONS TO ACCOMMODATE ULTIMATE IMPROVEMENTS FOR STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS.*

NOT TO SCALE

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URBAN CROSSROADS

3.3 CITY OF ONTARIO, CITY OF JURUPA VALLEY, AND CITY OF CHINO GENERAL PLAN CIRCULATION ELEMENT

Exhibits 3-4 and 3-5 show the City of Ontario's General Plan Circulation Element and roadway cross-sections, respectively. Exhibits 3-6 and 3-7 show the City of Jurupa Valley's General Plan Circulation Element and roadway cross-sections, respectively. Exhibits 3-8 and 3-9 show the City of Chino's General Plan Circulation Element and roadway cross-sections, respectively.

3.4 BICYCLE, EQUESTRIAN, & PEDESTRIAN FACILITIES

Exhibit 3-10 illustrates the City of Eastvale current and future trails and bikeway systems which proposes off-street Class I multi-use trails along Cucamonga Creek Trail and the Southern California Edison easement to Remington Avenue/Bellegrave Avenue. On-street Class II bike lanes are also proposed along Limonite Avenue and Archibald Avenue near the vicinity of the site. Exhibit 3-11 illustrates the City of Ontario future planned bicycle facilities, while Exhibit 3-12 shows the City of Chino future bicycle facilities. Existing pedestrian facilities within the study area are shown on Exhibit 3-13. Field observations conducted in May 2019 indicate nominal pedestrian and bicycle activity within the study area.

3.5 TRANSIT SERVICE

The Riverside Transit Authority (RTA) serves the City of Eastvale. Transit service is reviewed and updated by RTA periodically to address ridership, budget and community demand needs. The study area within the City of Ontario is currently served by Omnitrans, a public transit agency serving various jurisdictions within San Bernardino County. The City of Jurupa Valley Transit Routes is shown on Exhibit 3-14. Based on a review of the existing transit routes within the vicinity of the proposed Project, RTA Routes 3 and 29 currently operate on Limonite Avenue and Hamner Avenue. However, there are no existing bus routes serving the study area in the vicinity of the Project. Existing transit routes in the vicinity of the study area are illustrated on Exhibit 3-15. It is anticipated that RTA will add bus services (via Route 4 starting in Spring of 2020). Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate. As such, it is recommended that the applicant work in conjunction with RTA to potentially provide additional bus service to the site.

3.6 TRUCK ROUTES

The City of Eastvale adopted a city-wide truck route ordinance in 2018. Exhibit 3-16 shows the City of Eastvale's truck routes, which include Archibald Avenue, Hamner Avenue, and Limonite Avenue within the study area. The City of Ontario designated truck route map is shown on Exhibit 3-17. Edison Avenue/Ontario Ranch Road, Merrill Avenue, Archibald Avenue, and Hamner Avenue/Milliken Avenue are designated as Truck Routes in the City of Ontario. Exhibit 3-18 shows the City of Chino designated truck routes. The designated truck route map has been utilized to route truck traffic from both the proposed Project and future cumulative development projects throughout the study area.

EXHIBIT 3-4: CITY OF ONTARIO GENERAL PLAN CIRCULATION ELEMENT

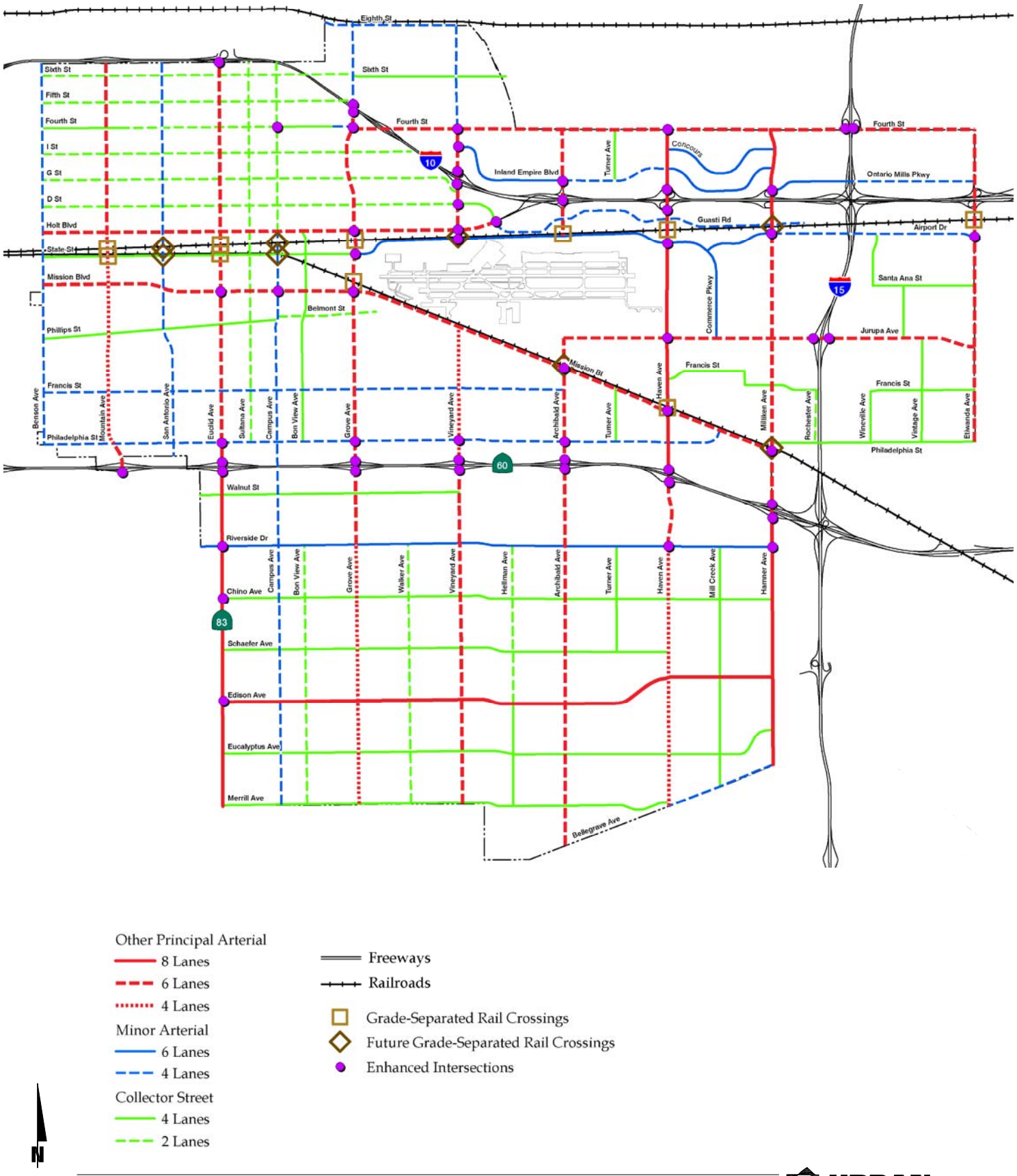
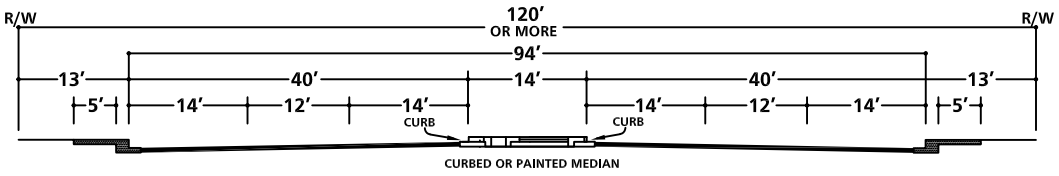
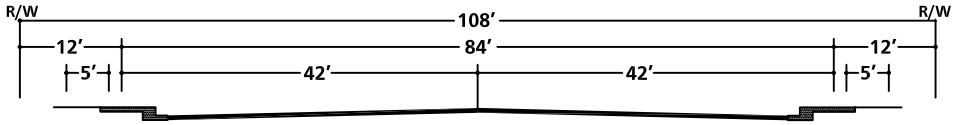


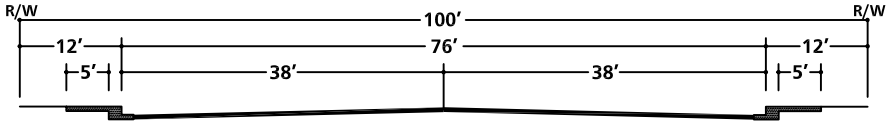
EXHIBIT 3-5: CITY OF ONTARIO GENERAL PLAN ROADWAY CROSS-SECTIONS



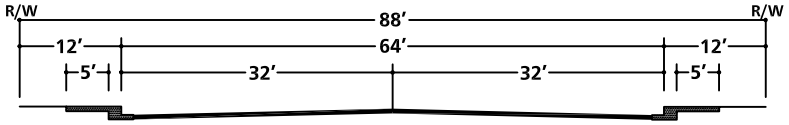
PRINCIPAL ARTERIAL



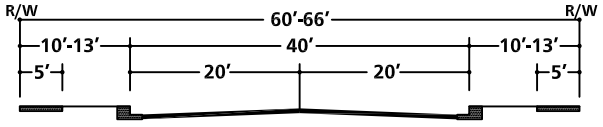
MINOR ARTERIAL



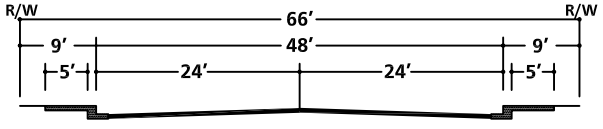
OTHER PRINCIPAL ARTERIAL



COLLECTOR STREET



LOCAL STREET



LOCAL INDUSTRIAL STREET

SOURCE: CITY OF ONTARIO

EXHIBIT 3-6: CITY OF JURUPA VALLEY CIRCULATION ELEMENT

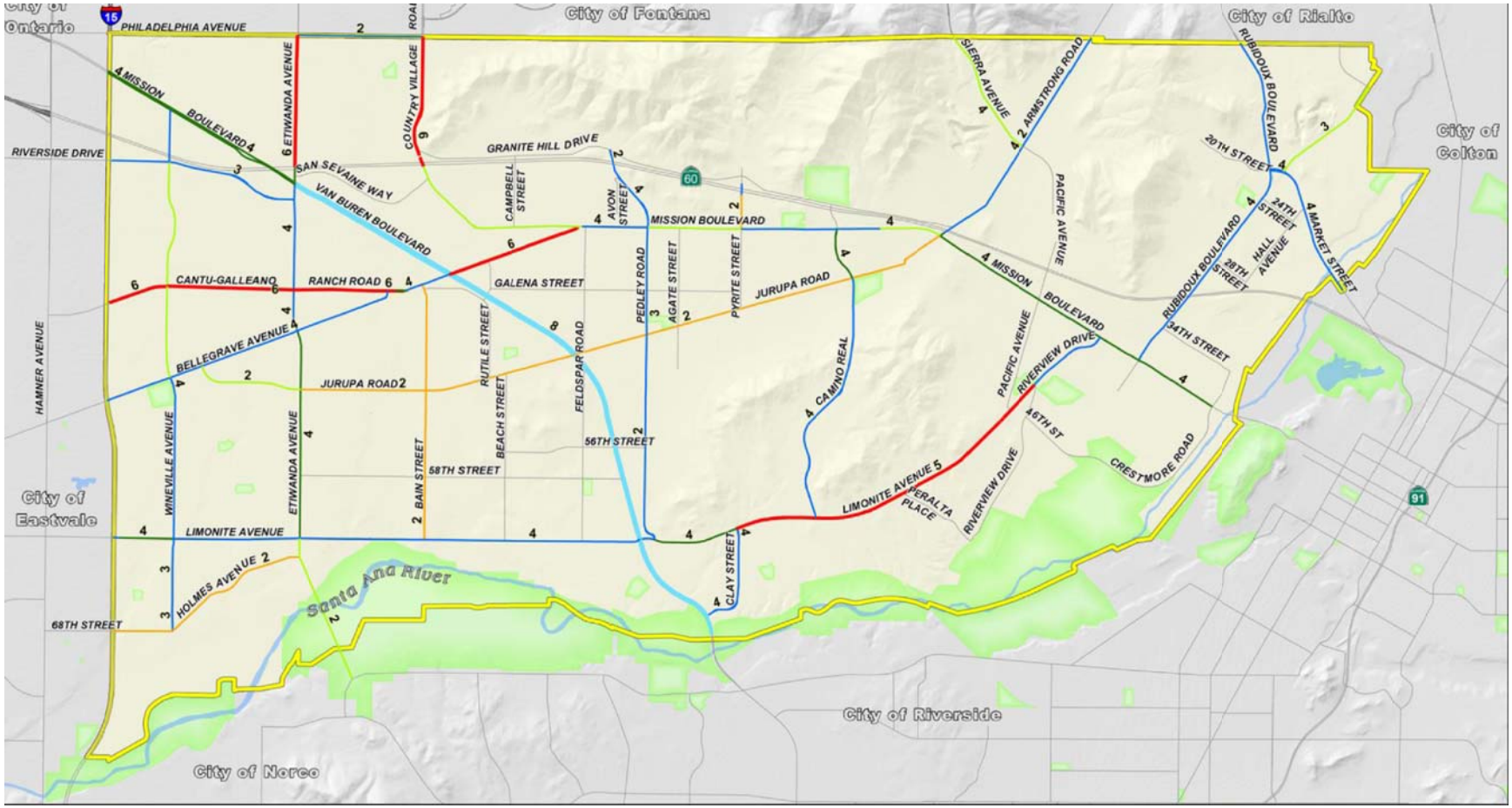


EXHIBIT 3-7: CITY OF JURUPA VALLEY GENERAL PLAN ROADWAY CROSS-SECTIONS

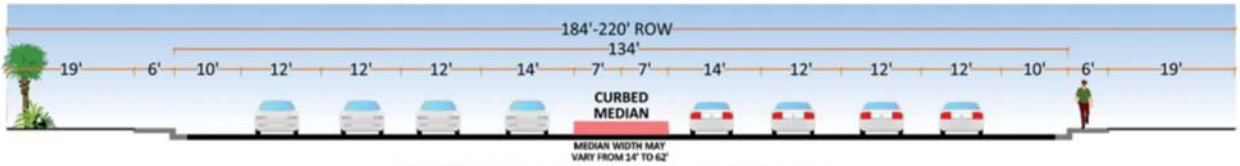


EXHIBIT 1: EXPRESSWAY- 6 TO 8 LANES

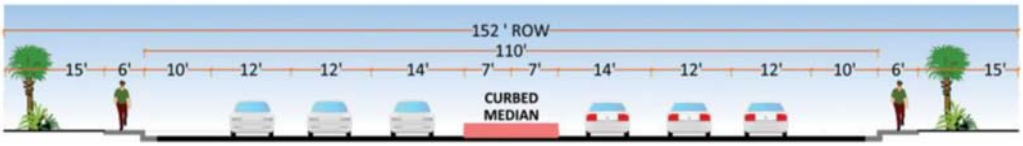


EXHIBIT 2: URBAN ARTERIAL

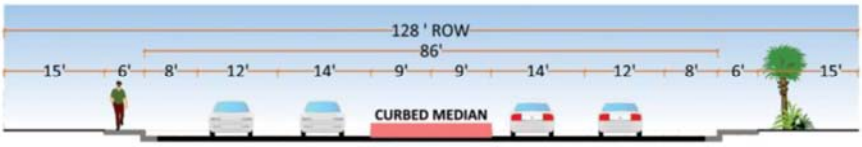


EXHIBIT 3: ARTERIAL

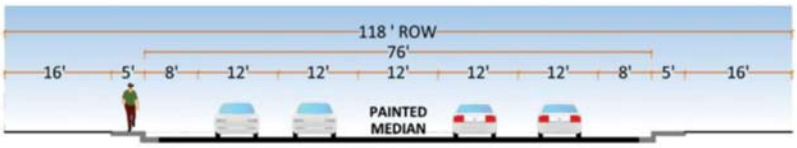


EXHIBIT 4: MAJOR - 4 LANES

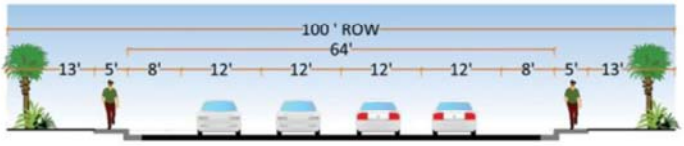


EXHIBIT 5: SECONDARY

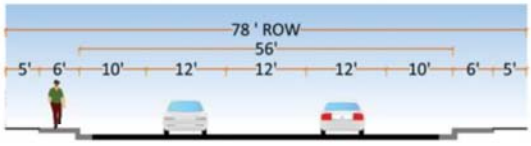


EXHIBIT 6: INDUSTRIAL COLLECTOR

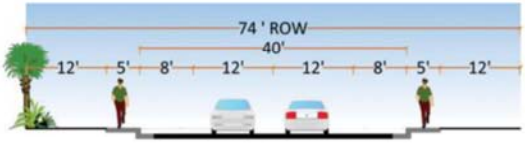


EXHIBIT 7: COLLECTOR

EXHIBIT 3-8: CITY OF CHINO GENERAL PLAN CIRCULATION ELEMENT

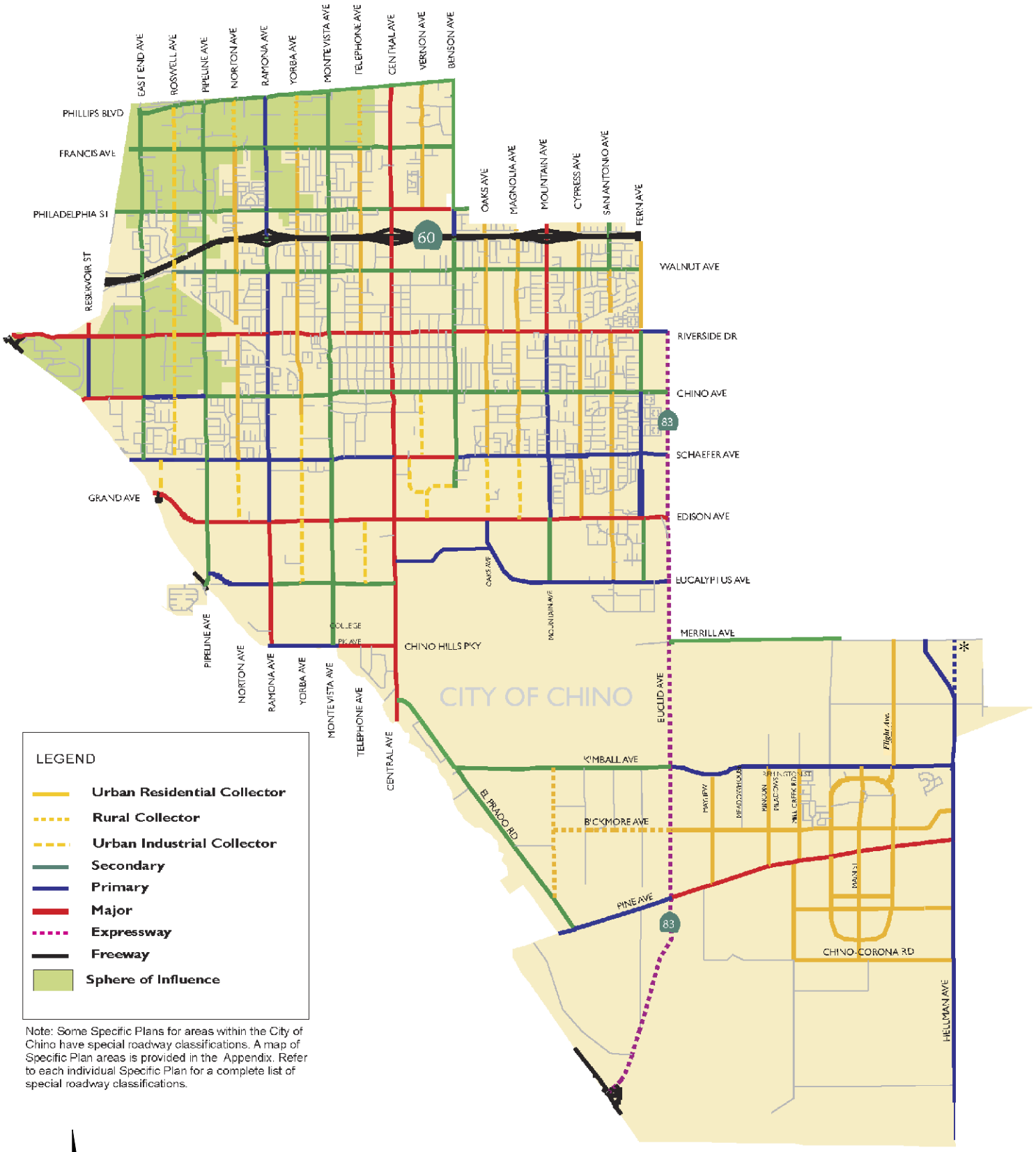
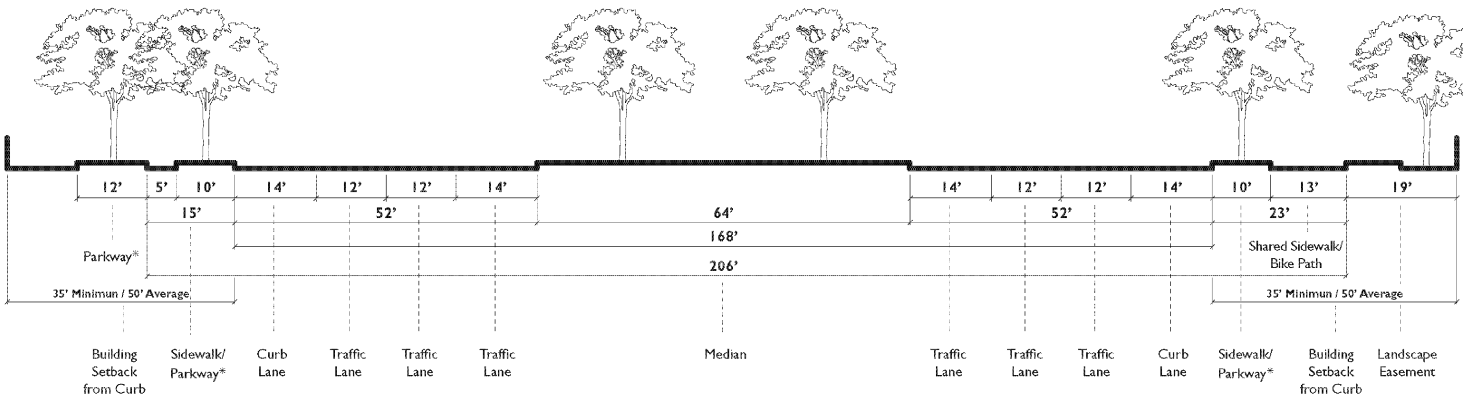
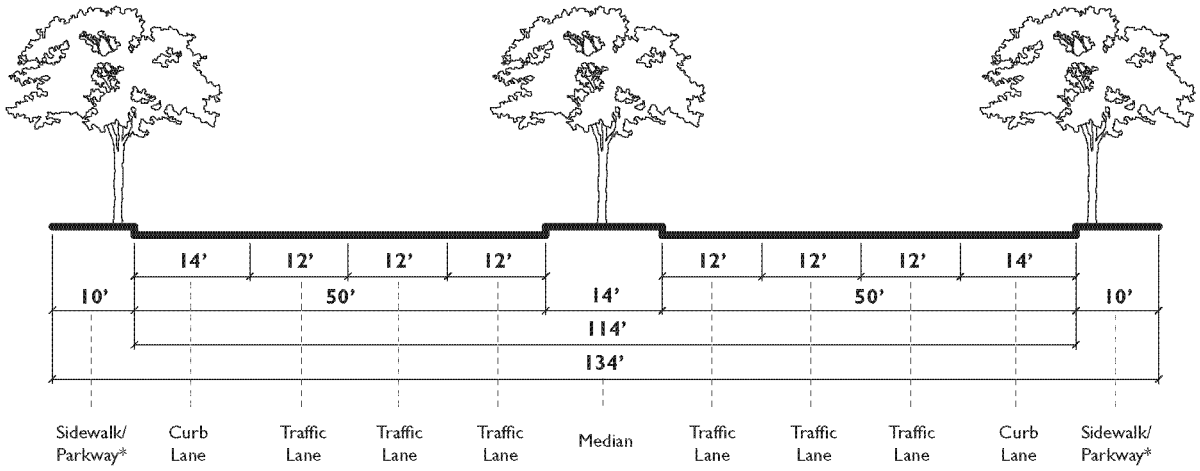


EXHIBIT 3-9 (1 of 2): CITY OF CHINO GENERAL PLAN ROADWAY CROSS-SECTIONS

Major Arterial (Expressway): Typical 8 Lane
Provides 8 traffic lanes and a wide median without parking



Major Arterial: Minimum 8 Lane
Provides 8 traffic lanes and 2 bicycle lanes separated by a median without parking



Major Arterial: Minimum 6 Lane
Provides 6 traffic lanes and 2 bicycle lanes separated by a median without parking

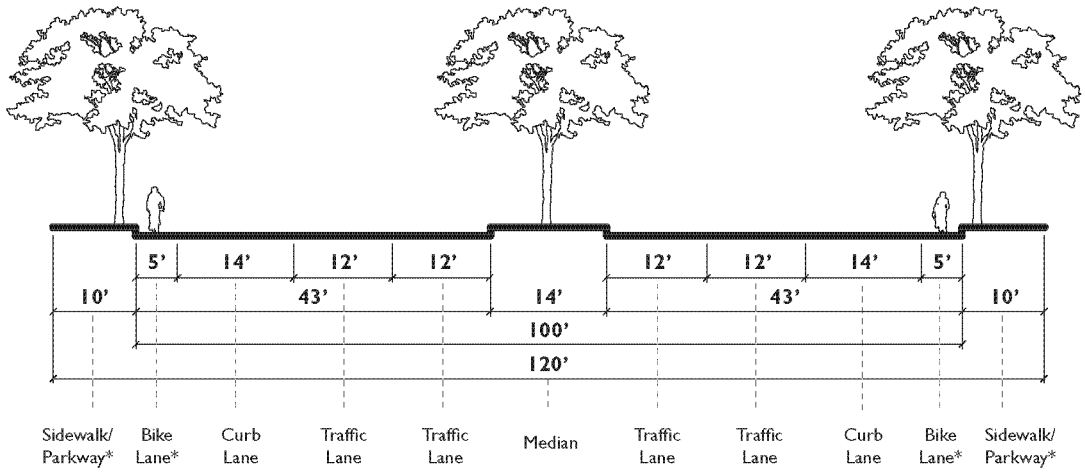
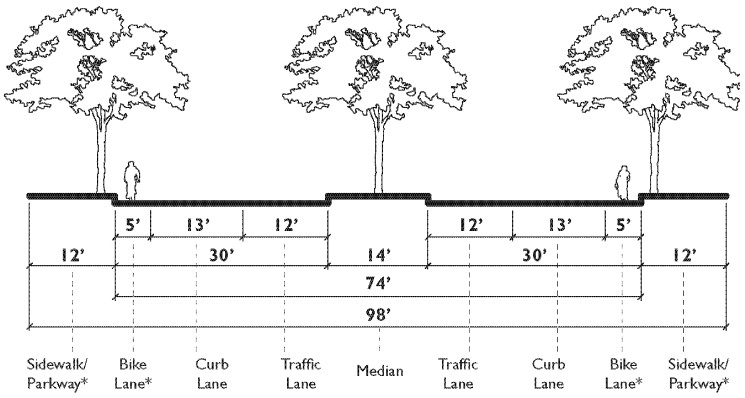
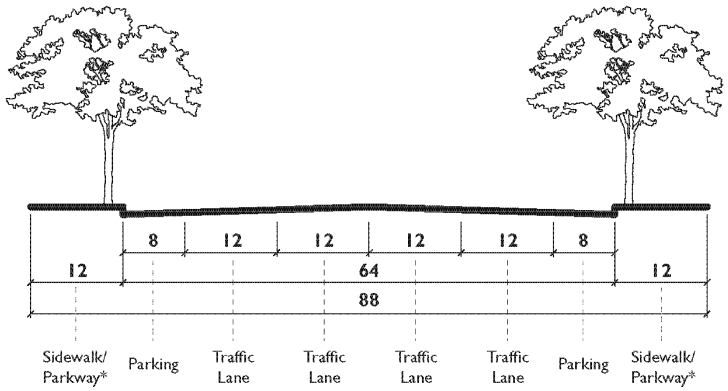


EXHIBIT 3-9 (2 of 2): CITY OF CHINO GENERAL PLAN ROADWAY CROSS-SECTIONS

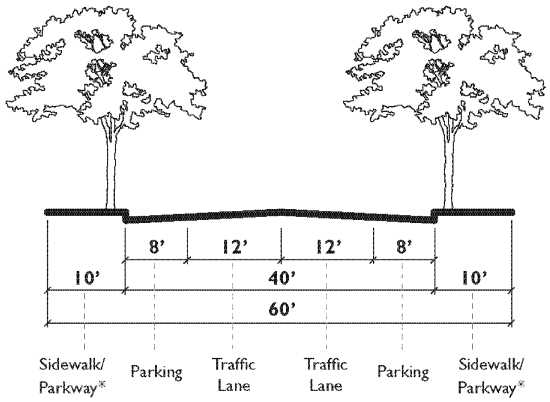
Primary Arterial: Typical 4 Lane
Provides 4 traffic lanes and 2 bicycle lanes separated by a median without parking



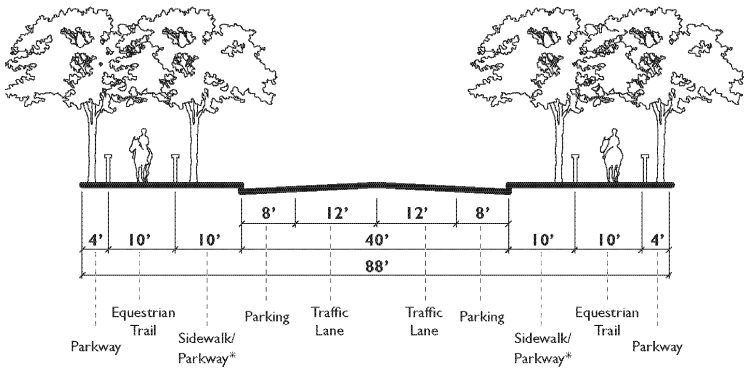
Secondary Arterial
Provides 4 traffic lanes with parking



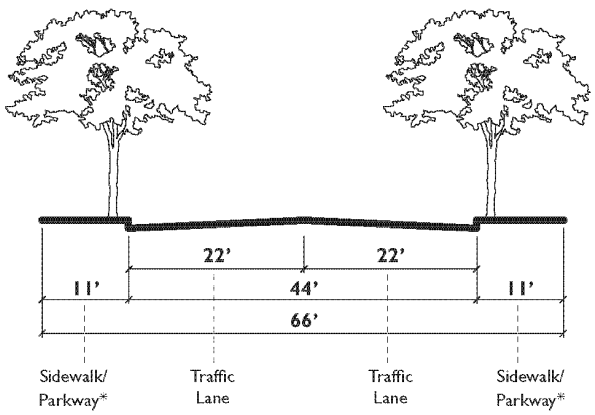
Urban Residential/Rural Collector
Provides 2 traffic lanes with parking and shared bicycle access



Urban Residential/Rural Collector with Equestrian Trails
Provides 2 traffic lanes and 2 equestrian trails with parking and shared bicycle access



Urban Industrial Collector
Provides 2 traffic lanes



Local Street
Provides 2 traffic lanes

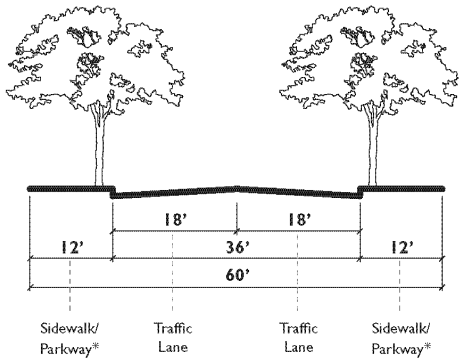


EXHIBIT 3-10: EASTVALE AREA TRAILS AND BIKEWAYS SYSTEM

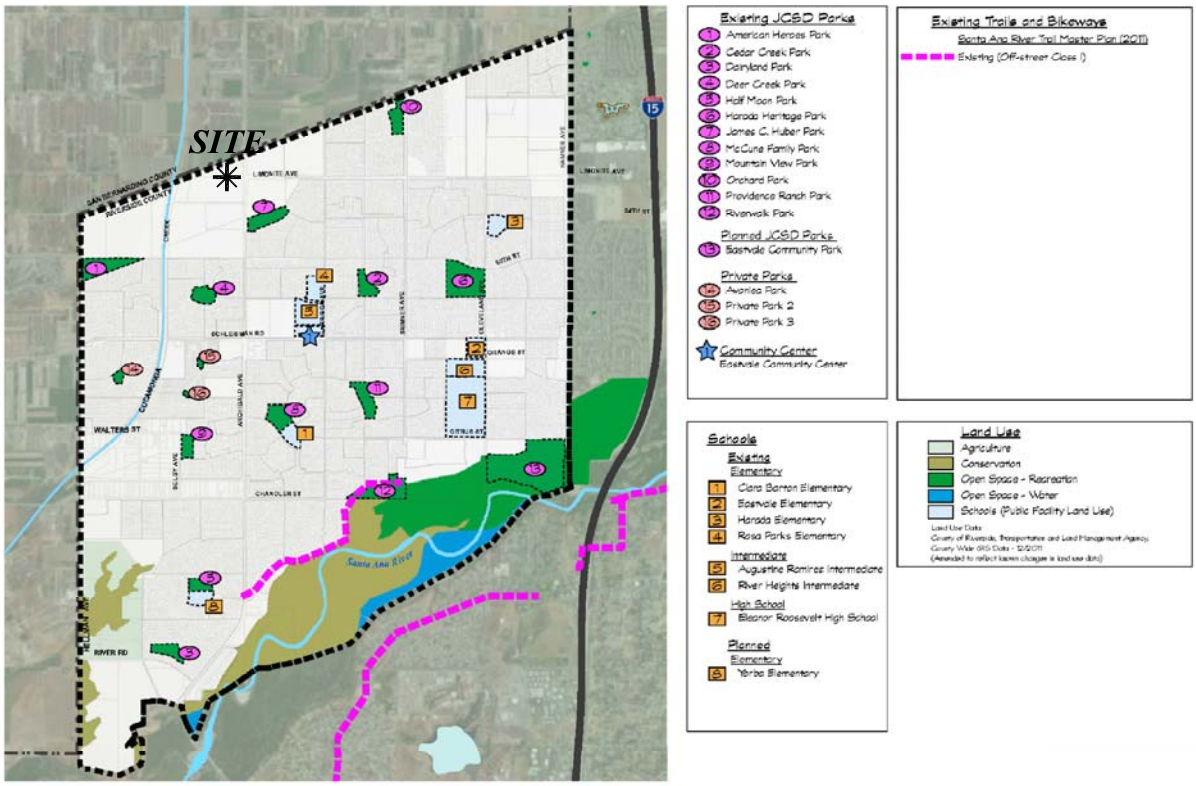


Exhibit 2.8-1 Existing Trails

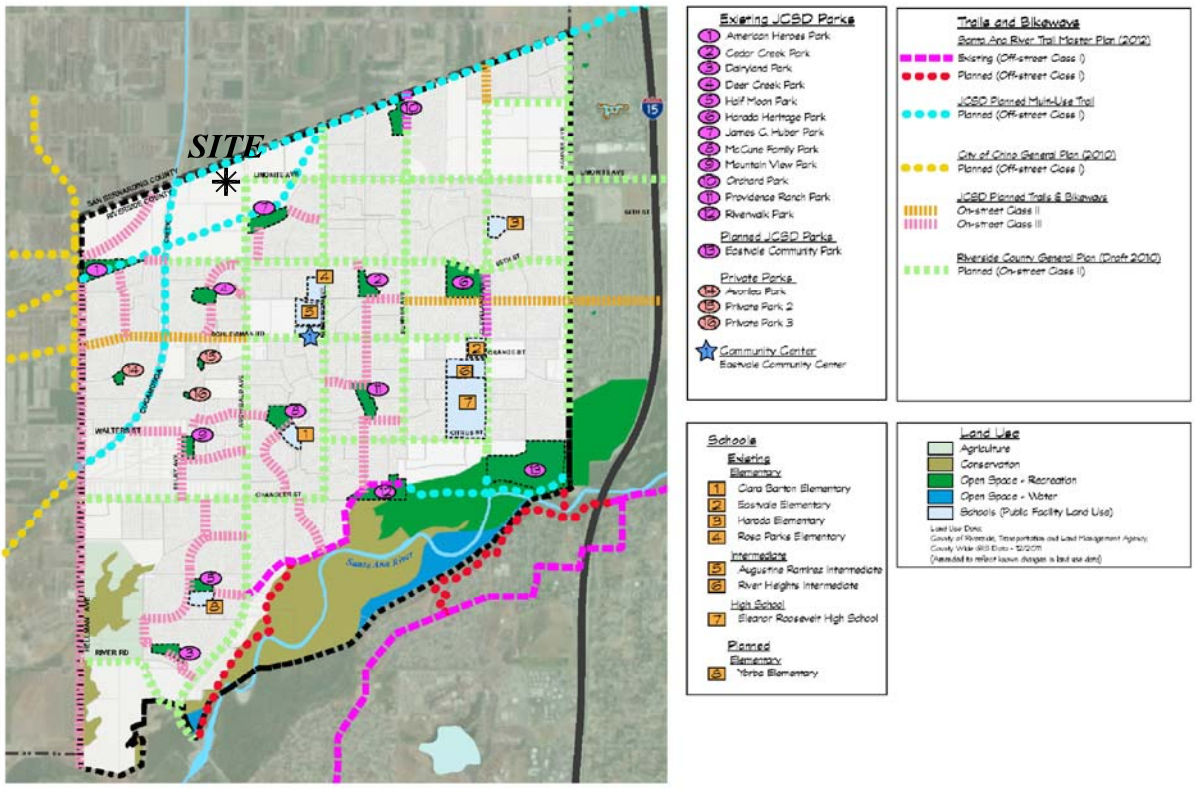
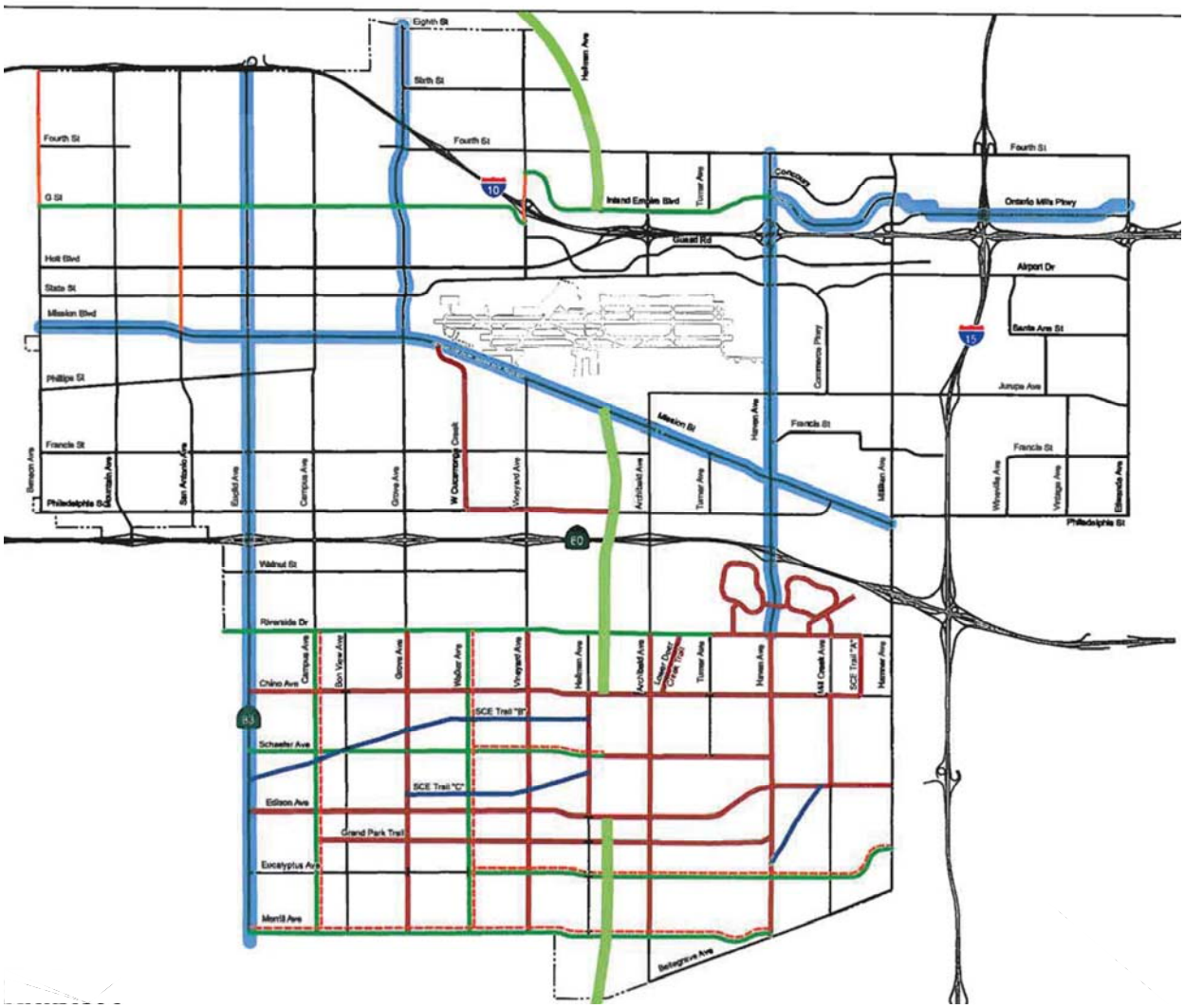


Exhibit 2.8-2 Planned Trails

EXHIBIT 3-11: CITY OF ONTARIO GENERAL PLAN TRAILS AND BIKEWAY SYSTEMS

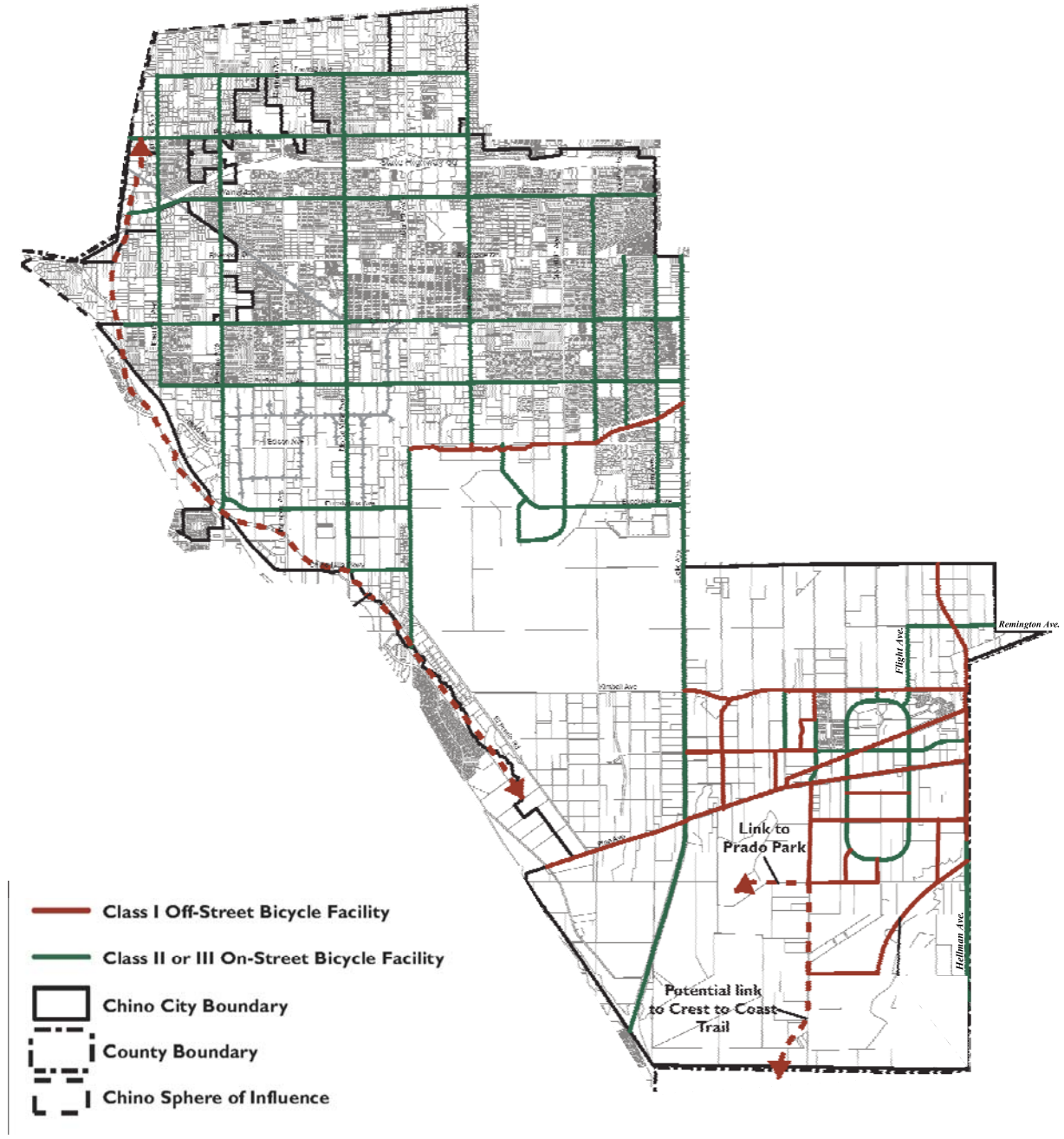


LEGEND:

- Freeways
- Backbone Street System
- Multipurpose Trail
- Class II & Multipurpose Trail
- Class II
- Class III
- SCE Trails
- Cucamonga Creek Multipurpose Trail
- Bicycle Corridors

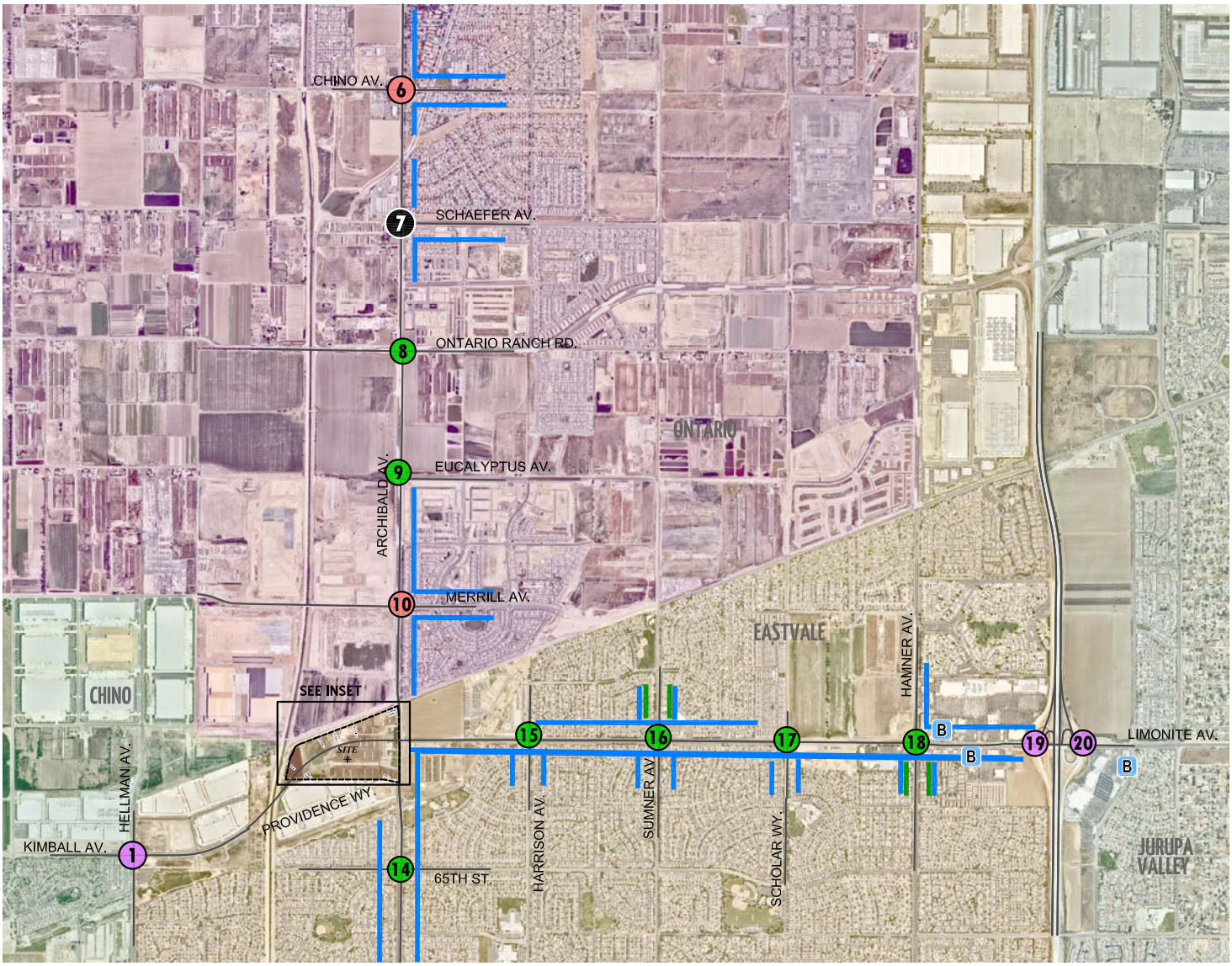
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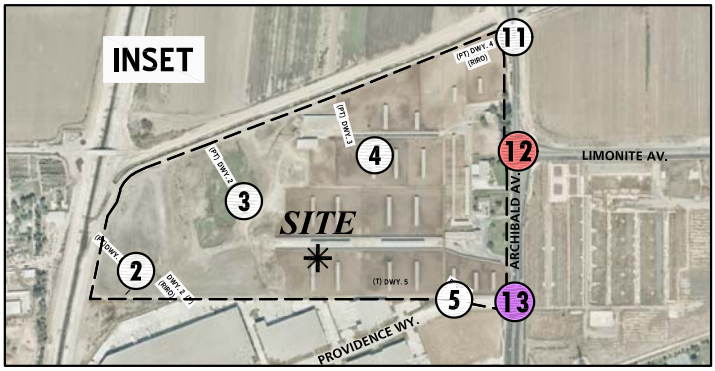
EXHIBIT 3-12: CITY OF CHINO FUTURE BICYCLE FACILITIES



11963 - chino-future-bike.dwg

EXHIBIT 3-13: EXISTING PEDESTRIAN FACILITIES





LEGEND:

- = SIDEWALK
- B = BUS STOP
- 0 = NO CROSSWALK
- 0 = FUTURE INTERSECTION
- 0 = CROSSWALK ON ALL APPROACHES
- 0 = CROSSWALK ON TWO APPROACHES
- 0 = CROSSWALK ON ONE APPROACH

N

EXHIBIT 3-14: CITY OF JURUPA VALLEY TRANSIT ROUTES

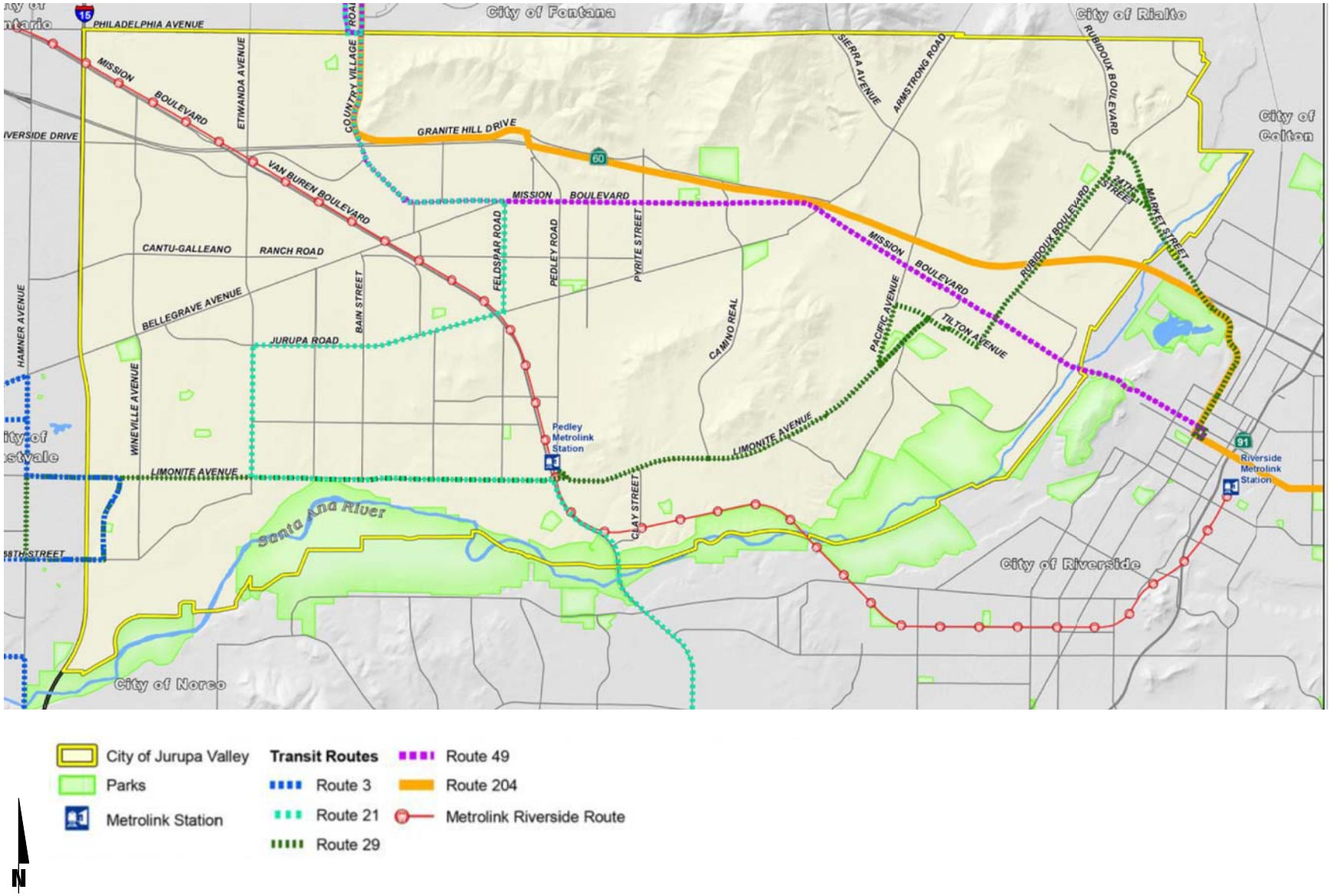
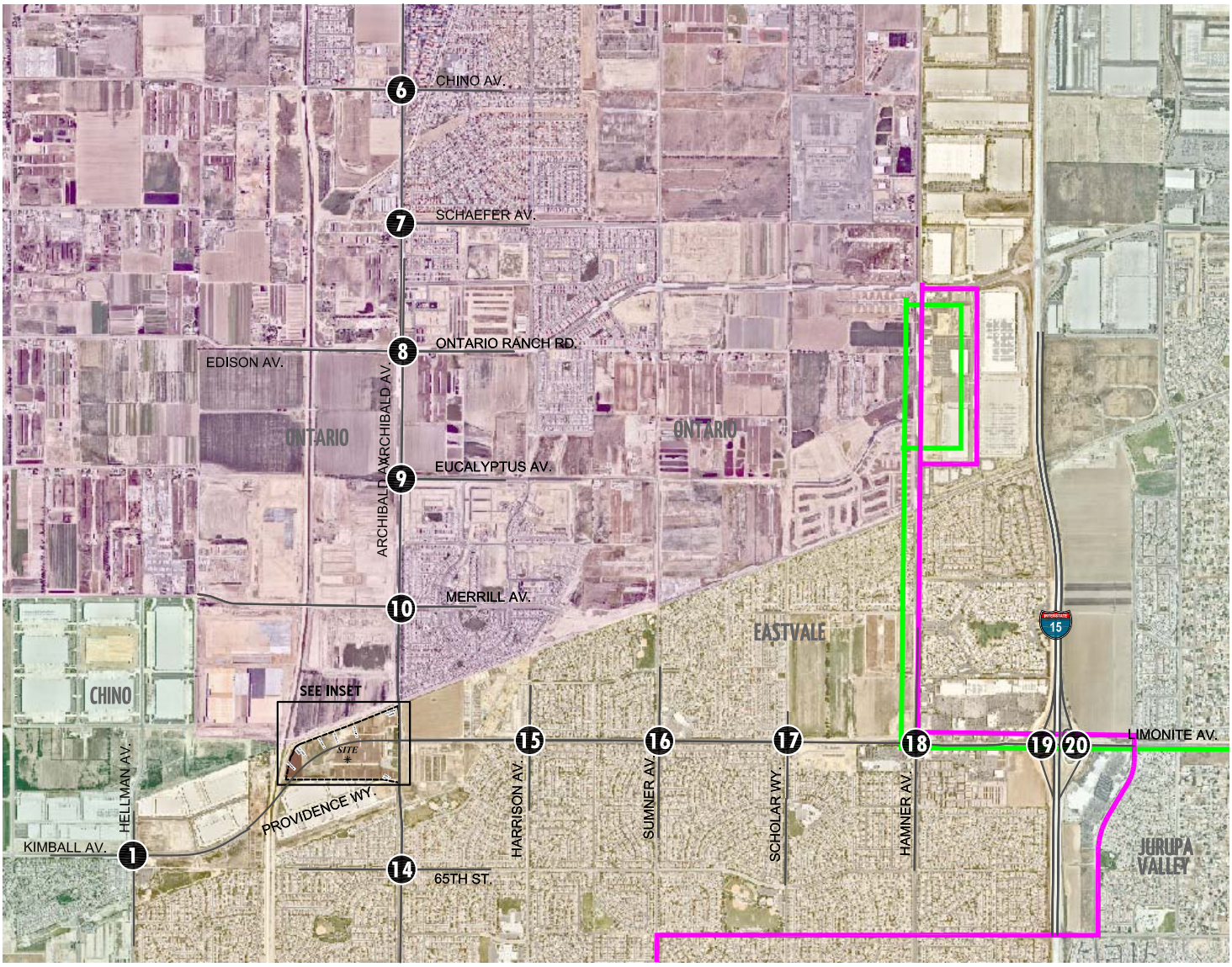
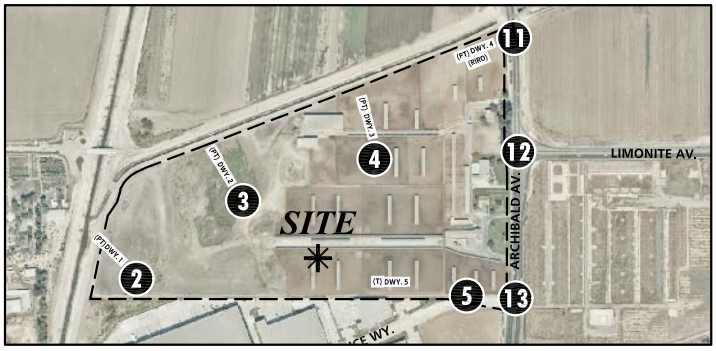


EXHIBIT 3-15: EXISTING TRANSIT ROUTES





LEGEND:

- RTA ROUTE 3
- RTA ROUTE 29

N

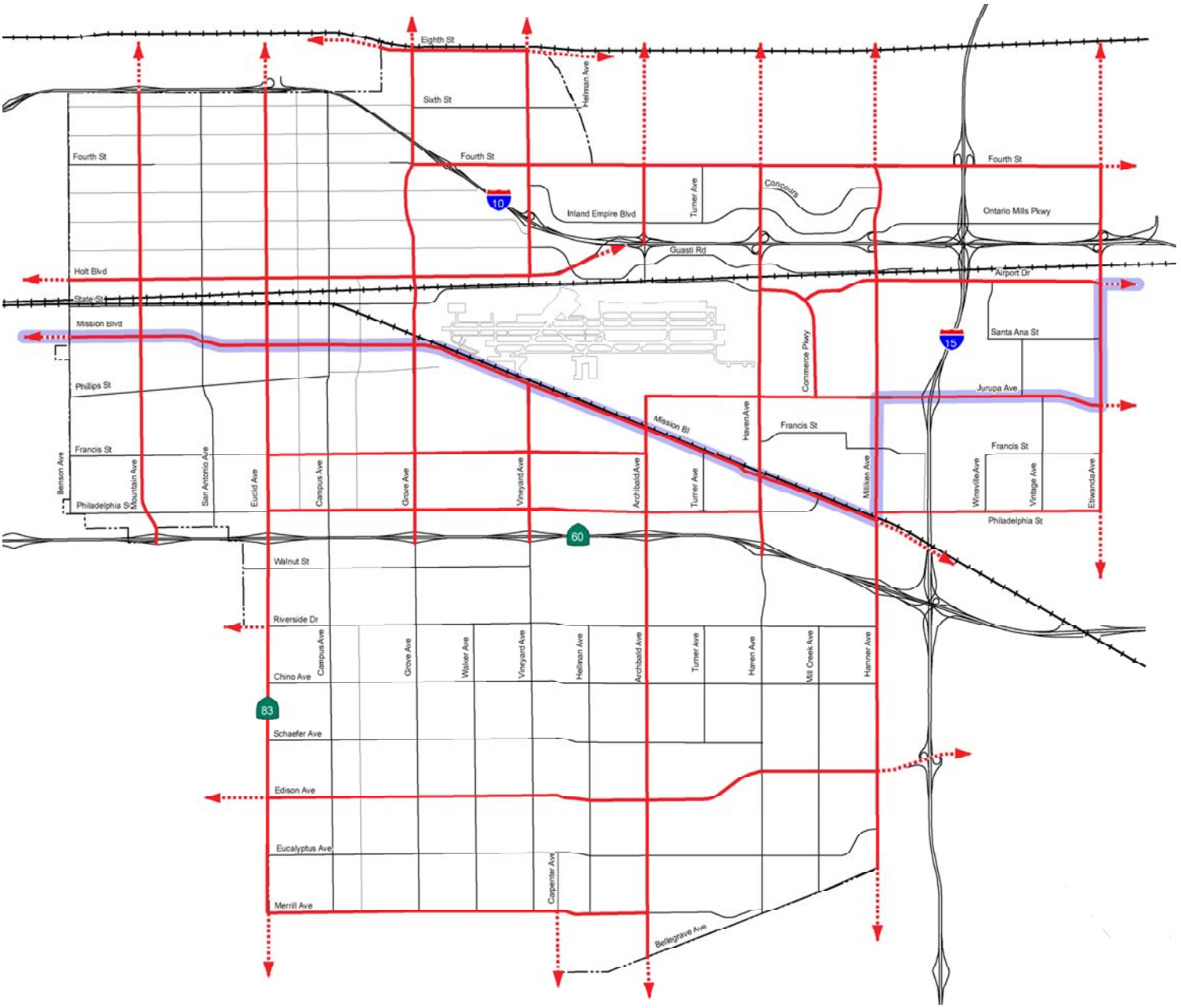
11963 - transit.dwg

EXHIBIT 3-16: CITY OF EASTVALE TRUCK ROUTES



SOURCE: CITY OF EASTVALE GENERAL PLAN
ADOPTED: JUNE 2, 2017

EXHIBIT 3-17: CITY OF ONTARIO TRUCK ROUTES



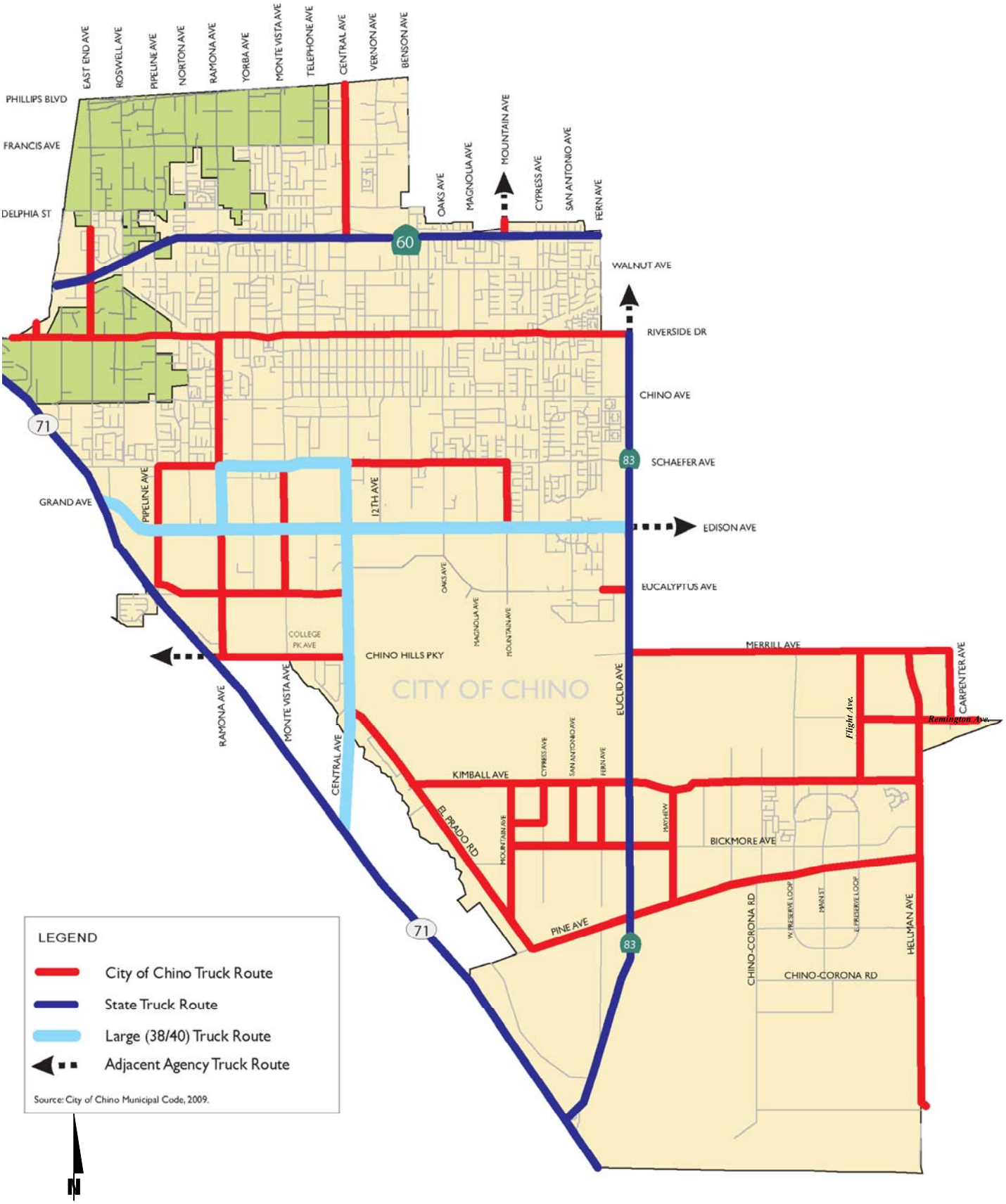
LEGEND:

- Truck Routes
- State of California DOT Extralegal Load Network
- Railroad
- Adjacent Agency Truck Route
- Exisitng Streets

N

11963 - ontario truck routes.dwg

EXHIBIT 3-18: CITY OF CHINO TRUCK ROUTES



11963 - chino-trucks.dwg

3.7 EXISTING (2019) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in May 2019. The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 3:00 PM and 6:00 PM)

The weekday AM and weekday PM peak hour count data are representative of typical weekday peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity or detour routes and near-by schools were in session and operating on normal schedules. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. The PM peak hour traffic counts were collected from 3:00 PM to 6:00 PM at the request of City of Eastvale staff, in an effort to capture the PM peak hour for this area which begins before 4:00 PM (typical start of the peak hour of the adjacent street traffic).

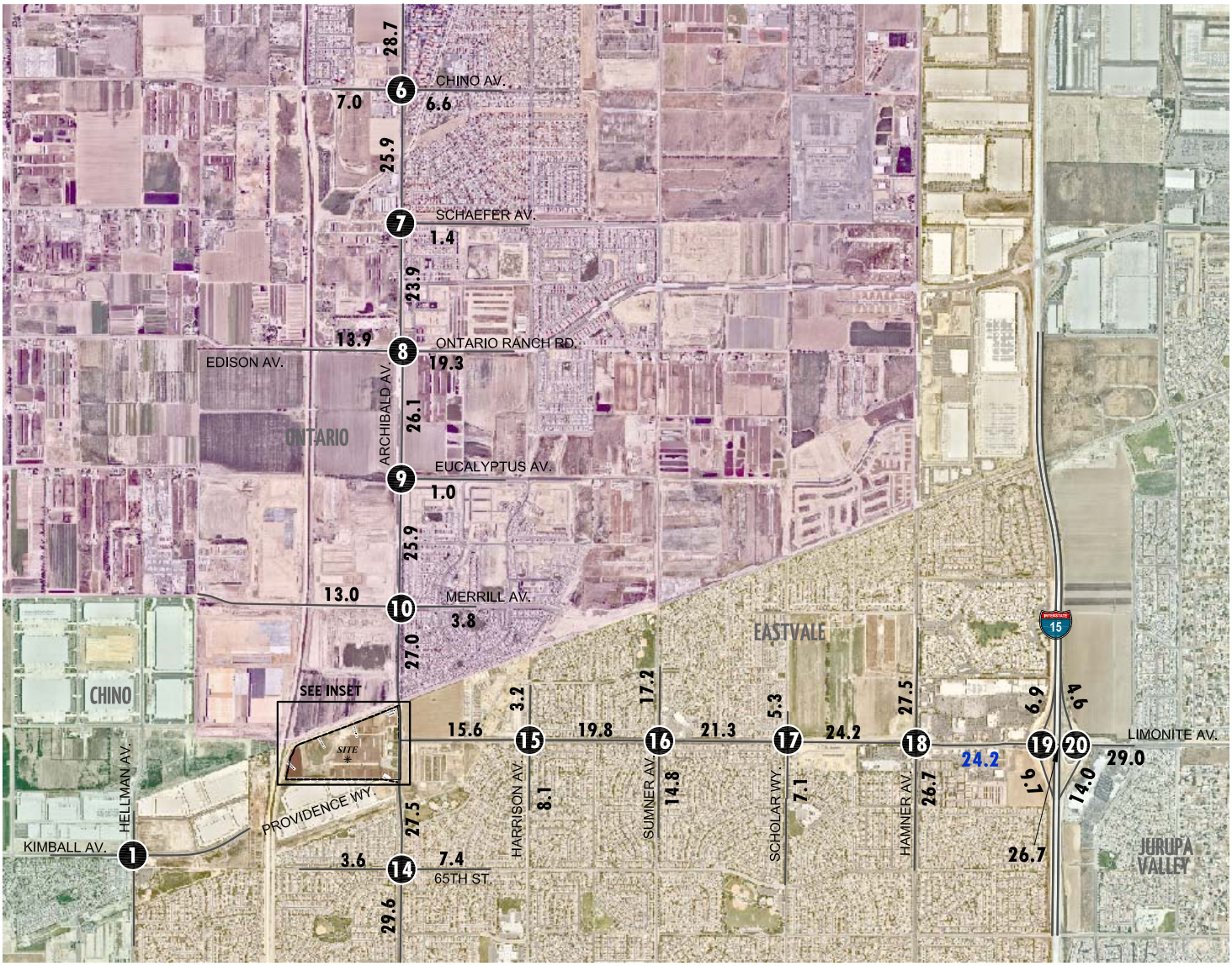
The traffic counts collected in May 2019 include the following vehicle classifications: Passenger Cars, 2-Axle Trucks, 2-Axle Trucks, and 4 or more Axle Trucks. To represent the impact large trucks, buses and recreational vehicles have on traffic flow, all trucks were converted into PCE. By their size alone, these vehicles occupy the same space as two or more passenger cars. In addition, the time it takes for them to accelerate and slow-down is much longer than for passenger cars and varies depending on the type of vehicle and number of axles. For the purpose of this analysis, a PCE factor of 1.5 has been applied to 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for 4+-axle trucks to estimate each turning movement.

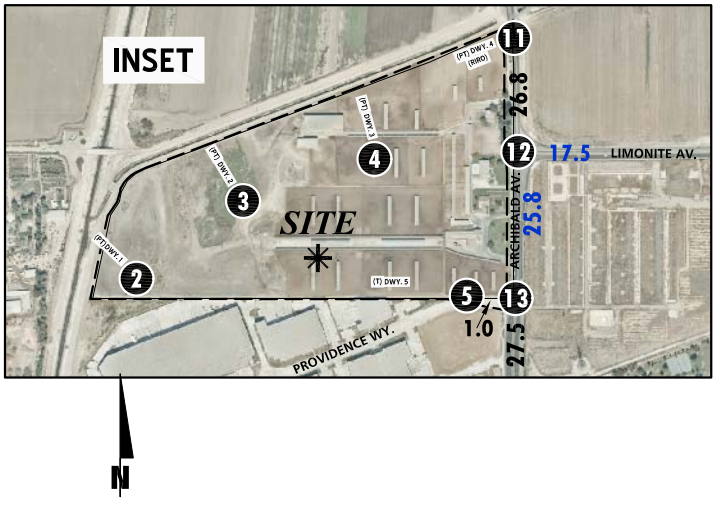
Existing weekday ADT volumes are shown on Exhibit 3-19. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

Weekday PM Peak Hour (Approach Volume + Exit Volume) x 13.23 = Leg Volume

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 7.56 percent. As such, the above equation utilizing a factor of 13.23 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 7.56 percent (i.e., 1/0.0756 = 13.23) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes (in PCE) are shown on Exhibit 3-20.

EXHIBIT 3-19: EXISTING (2019) AVERAGE DAILY TRAFFIC (ADT) (IN PCE)



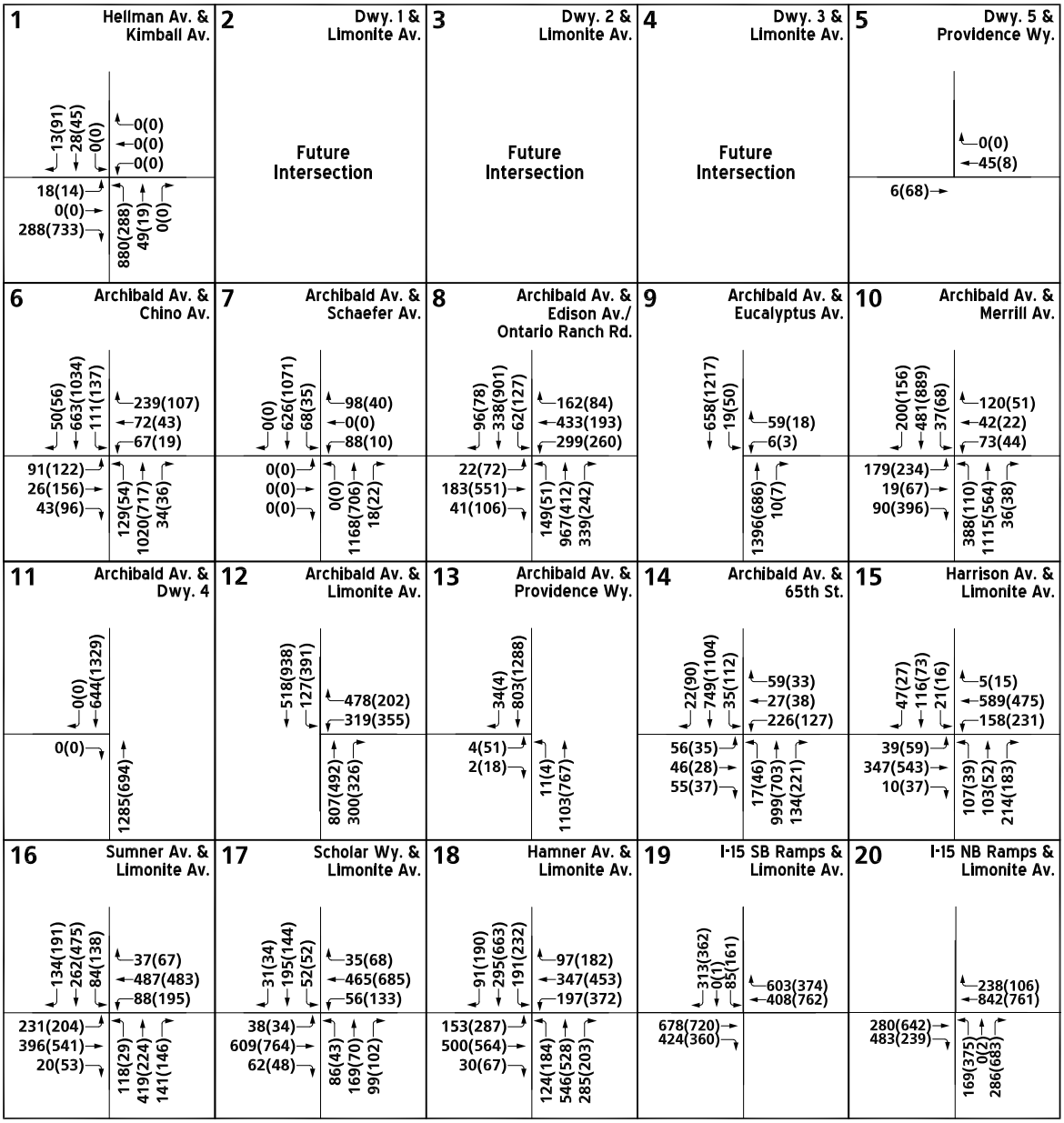


LEGEND:

10.0 = ACTUAL (COUNT-BASED) VEHICLES PER DAY (1000'S)

10.0 = ESTIMATED VEHICLES PER DAY (1000'S)

EXHIBIT 3-20: EXISTING (2019) TRAFFIC VOLUMES (IN PCE)



LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

3.8 EXISTING (2019) CONDITIONS INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-1, which indicates that all existing study area intersections are currently operating at acceptable LOS during the peak hours.

It should be noted, the I-15 Freeway and Limonite Avenue interchange project has recently been completed and is open to traffic. As such, the two ramp intersections along Limonite Avenue at the I-15 Freeway have been evaluated based on the improved lane geometries. The improved lane geometries are shown in Exhibit 3-21.

Consistent with Table 3-1, a summary of the peak hour intersection LOS for Existing conditions are shown on Exhibit 3-22. The intersection operations analysis worksheets are included in Appendix 3.2 of this TIA.

3.9 EXISTING (2019) CONDITIONS ROADWAY SEGMENT CAPACITY ANALYSIS

The City of Eastvale General Plan provides roadway volume capacity values presented previously in Table 2-3. The roadway segment capacities are approximate figures only and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Table 3-2 provides a summary of the Existing (2019) conditions roadway segment capacity analysis based on the City of Eastvale General Plan Roadway Segment Capacity Thresholds identified previously in Table 2-3. As shown in Table 3-2, the study area roadway segments are currently operating at an acceptable LOS based on the City's planning level daily roadway capacity thresholds.

3.10 EXISTING (2019) TRAFFIC SIGNAL WARRANTS ANALYSIS

There are currently no existing study area intersections that are unsignalized. As such, no traffic signal warrants have been evaluated for Existing (2019) traffic conditions.

EXHIBIT 3-21: I-15 / LIMONITE AVENUE INTERCHANGE PROJECT

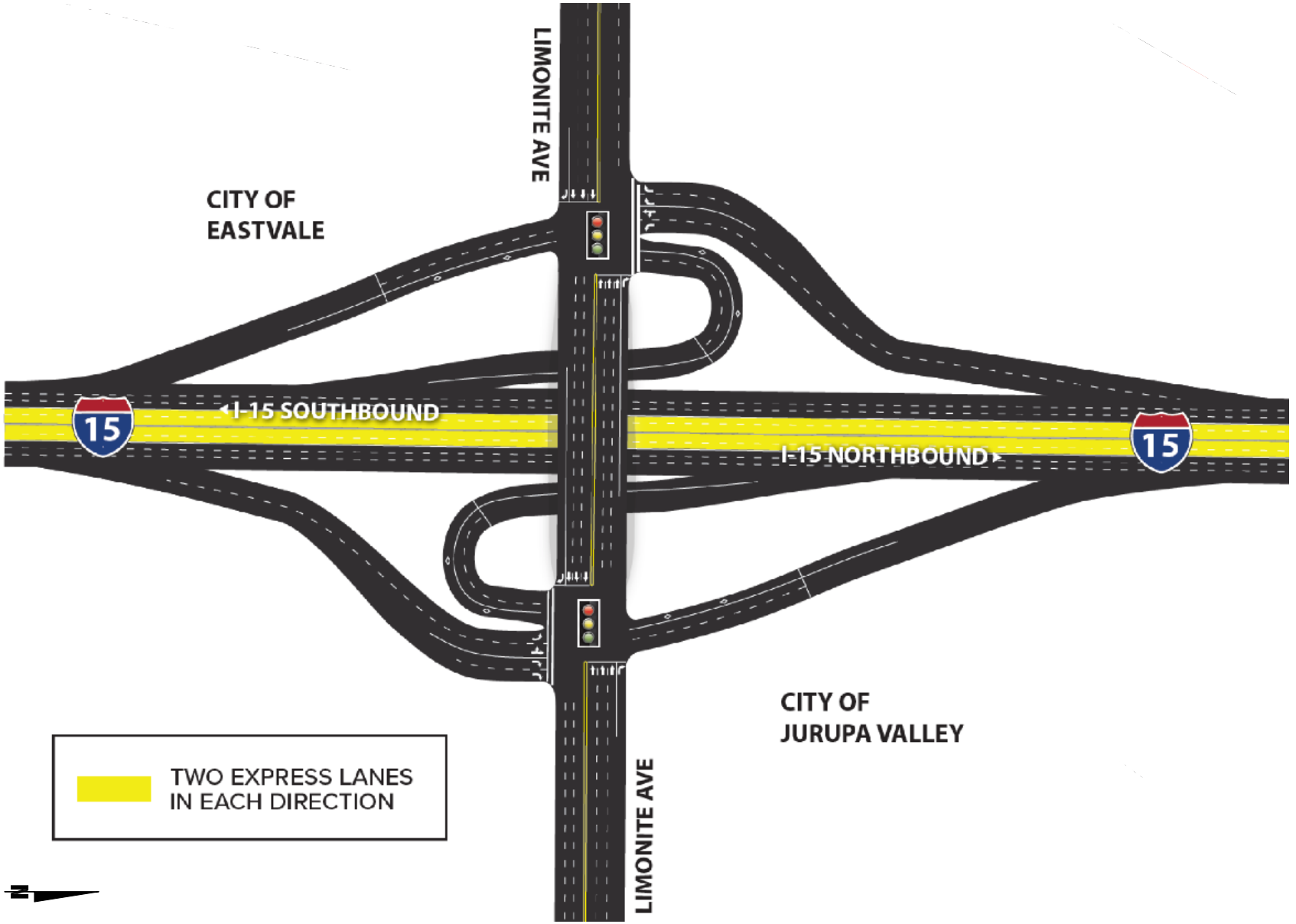
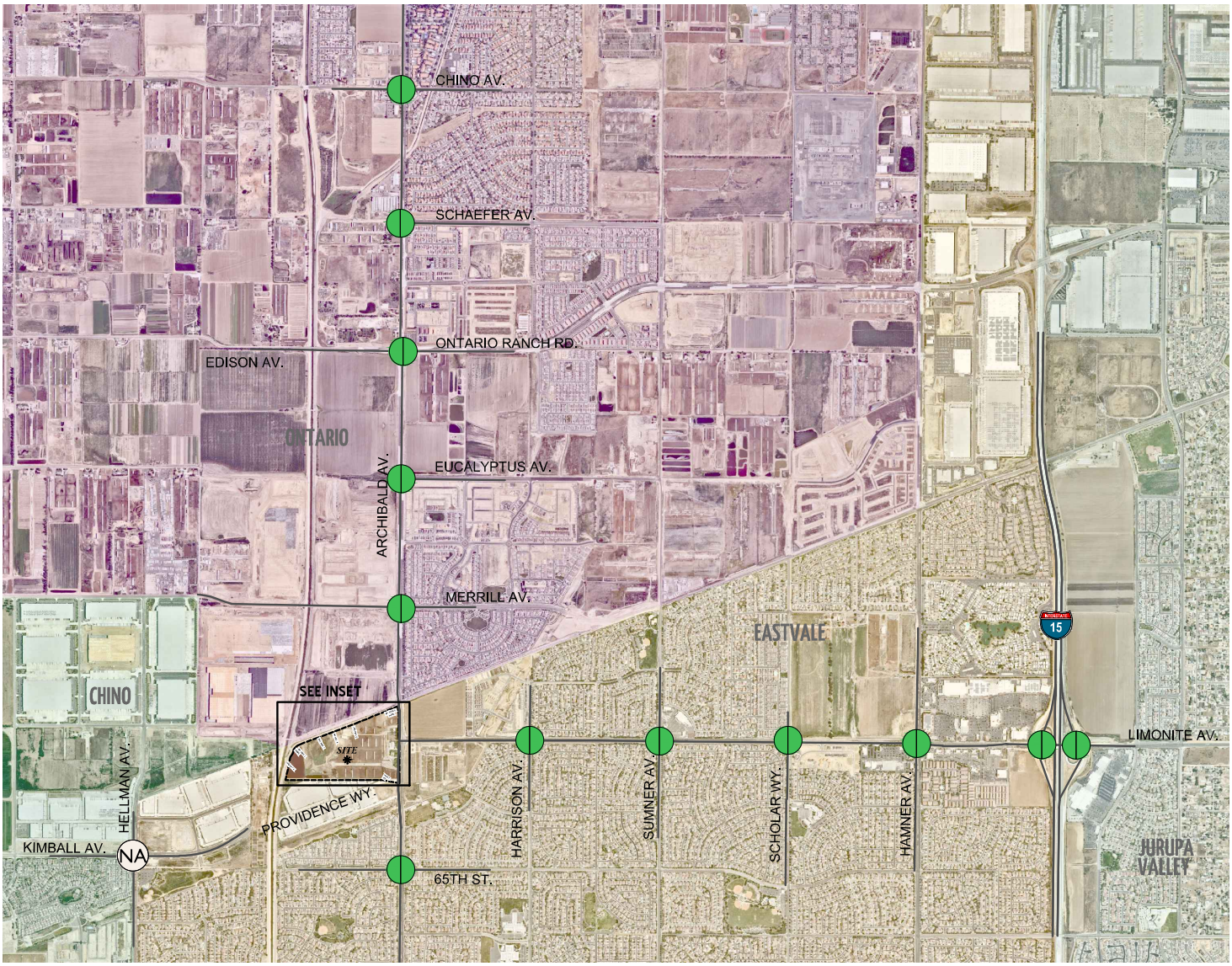
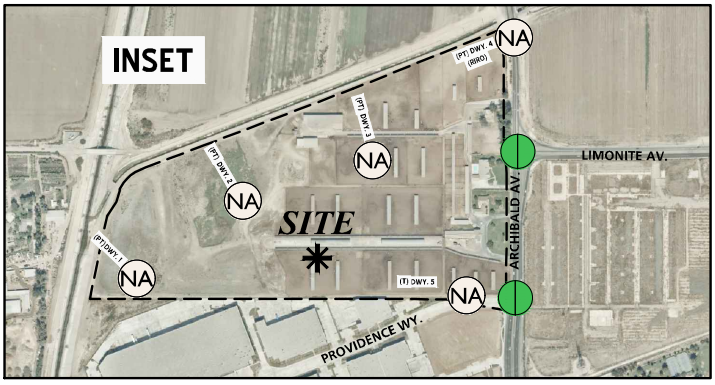


EXHIBIT 3-22: EXISTING (2019) SUMMARY OF LOS





LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS E
- = LOS F
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

N

11963 - los_a.dwg

URBAN CROSSROADS

Table 3-1

Intersection Analysis for Existing (2019) Conditions

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service		Acceptable LOS[4]
			Northbound			Southbound			Eastbound			Westbound							
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	
1	Hellman Av. & Kimball Av.		2023 and 2040 Analysis Location																
2	Driveway 1 & Limonite Av.		Intersection Does Not Exist																
3	Driveway 2 & Limonite Av.		Intersection Does Not Exist																
4	Driveway 3 & Limonite Av.		Intersection Does Not Exist																
5	Driveway 5 & Providence Wy.		Intersection Does Not Exist																
6	Archibald Av. & Chino Av.	TS	1	3	0	1	2	0	1	1	0	1	1	1	19.4	20.8	B	C	E
7	Archibald Av. & Schaefer Av.	TS	1	3	0	1	2	0	0	1	0	1	1	0	11.1	7.0	B	A	E
8	Archibald Av. & Ontario Ranch Rd.	TS	1	2	1>>	1	2	1	2	2	1>>	2	1	1	28.7	29.4	C	C	E
9	Archibald Av. & Eucalyptus Av.	TS	0	2	d	1	2	0	0	0	0	2	0	2	5.2	3.8	A	A	E
10	Archibald Av. & Merrill Av.	TS	1	2	1	2	2	d	1	1	1	1	1	1	31.8	31.9	C	C	E
11	Archibald Av. & Driveway 4		Intersection Does Not Exist																
12	Archibald Av. & Limonite Av.	TS	0	1	1>	1	1	0	0	0	0	1	0	1>	23.4	23.8	C	C	D
13	Archibald Av. & Providence Wy.	TS	1	2	0	0	2	0	1	0	1	0	0	0	5.5	8.1	A	A	D
14	Archibald Av. & 65th St.	TS	1	2	1	1	3	0	1	2	0	1	1	1	23.2	23.7	C	C	D
15	Harrison Av. & Limonite Av.	TS	1	1	1	1	1	0	1	3	d	1	3	d	17.8	17.5	B	B	D
16	Sumner Av. & Limonite Av.	TS	1	2	0	1	2	0	2	3	0	2	3	1	18.6	18.6	B	B	D
17	Scholar Way & Limonite Av.	TS	1	1	1	1	2	1	1	2	1	1	2	1	15.9	15.5	B	B	D
18	Hamner Av. & Limonite Av.	TS	2	3	1	2	3	1	2	3	1	2	2	1	24.6	30.3	C	C	D
19	I-15 SB Ramps & Limonite Av.[5]	TS	0	0	0	1	1	2	0	3	1	0	3	1	5.9	6.5	A	A	D
20	I-15 NB Ramps & Limonite Av.[5]	TS	1	1	2	0	0	0	0	3	1	0	3	1	6.3	11.9	A	B	D

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

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane

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

[3] TS = Traffic Signal

[4] Minimum acceptable LOS for each applicable jurisdiction.

[5] Interchange project has been completed. As such, lane geometries at this location reflect the completed interchange project.

Table 3-2

Roadway Segment Capacity Analysis for Existing (2019) Conditions

#	Roadway	Segment Limits	Roadway Section	LOS Capacity[1]	Existing 2019	V/C[2]	LOS[3]	Acceptable LOS
1	Archibald Av.	Limonite Av. to 65th St.	4D	35,900	27,904	0.78	C	D
2	Limonite Av.	Archibald Av. to Sumner Av.	4D	35,900	20,570	0.57	A	D
3		Sumner Av. to Hamner Av.	4D	35,900	24,178	0.67	B	D
4		Hamner Av. to I-15 Freeway	6D	53,900	30,228	0.56	A	D

[1] These maximum roadway capacities have been obtained from the City of Eastvale's General Plan.

[2] V/C = Volume to Capacity Ratio

[3] LOS = Level of Service

3.11 EXISTING (2019) OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Limonite Avenue interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-15 Freeway mainline. As previously discussed in Section 3.8 *Existing (2019) Conditions Intersection Operations Analysis*, the I-15 Freeway and Limonite Avenue interchange project has recently been completed and is open to traffic. As such, the two ramp intersections along Limonite Avenue at the I-15 Freeway have been evaluated based on the improved lane geometries for this analysis (see Exhibit 3-21). Queuing analysis findings are presented in Table 3-3. It is important to note that off-ramp lengths are consistent with the distance between the intersection and the freeway mainline. As shown in Table 3-3, there are no movements that are currently experiencing queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows. Worksheets for Existing traffic conditions off-ramp queuing analysis are provided in Appendix 3.3.

3.12 EXISTING (2019) FREEWAY FACILITY ANALYSIS

Existing (2019) mainline directional volumes for the AM and PM peak hours are provided on Exhibit 3-23. As shown in Table 3-4, the study area freeway segments and merge/diverge ramp junctions analyzed for this study are currently operating at an acceptable LOS (i.e., LOS D or better) during the peak hours for Existing (2019) traffic conditions. Existing (2019) freeway facility analysis worksheets are provided in Appendix 3.4.

Table 3-3

Peak Hour Freeway Off-Ramp Queuing Summary for Existing (2019) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM
I-15 SB Ramps & Limonite Av.	SBL	1,765	61	96	Yes	Yes
	SBL/T/R	1,765	61	97	Yes	Yes
	SBR	425	43	47	Yes	Yes
I-15 NB Ramps & Limonite Av.	NBL	1,765	74	140	Yes	Yes
	NBL/T/R	1,765	74	142	Yes	Yes
	NBR	475	32	189	Yes	Yes

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

Table 3-4

Freeway Facility Analysis for Existing (2019) Conditions

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	AM Peak Hour		PM Peak Hour	
				Density[2]	LOS[3]	Density[2]	LOS[3]
I-15	Southbound	North of Limonite Avenue	3	21.8	C	18.6	C
		Off-Ramp at Limonite Avenue	3	25.3	C	22.6	C
		Loop On-Ramp at Limonite	3	23.2	C	17.5	B
		On-Ramp at Limonite Avenue	3	24.5	C	19.0	B
		South of Limonite Avenue	3	26.1	C	19.7	C
	Northbound	North of Limonite Avenue	3	21.7	C	21.1	C
		On-Ramp at Limonite Avenue	3	19.0	B	18.2	B
		Loop On-Ramp at Limonite	3	20.4	C	19.8	B
		Off-Ramp at Limonite Avenue	3	24.6	C	30.2	D
		South of Limonite Avenue	3	20.4	C	26.0	C

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] LOS = Level of Service

EXHIBIT 3-23: EXISTING (2019) FREEWAY MAINLINE VOLUMES



LEGEND:

⟵ 100/200 = AM/PM PEAK HOUR VOLUMES

NOTE: VOLUMES IN ACTUAL VEHICLES (NOT PCE)

N

11963 - freeway.dwg

4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project's trip assignment onto the study area roadway network. The Project is proposed to consist of the following uses:

- 560,291 square feet of warehousing use
- 520,317 square feet of high-cube fulfillment center use

Since the time this TIA was prepared, the site plan has been updated. The current site plan shows 541,756 square feet of warehousing use and 507,631 square feet of high-cube fulfillment center warehouse use. These updated site plan building square footages are less intensive, and as such the number of trips would decrease. However, for the purposes of this TIA, the higher square footage (and therefore higher trip generation) has been evaluated in an effort to conduct a conservative analysis.

Regional access to the Project site is available from the I-15 Freeway at Limonite Avenue and SR-60 Freeway at Archibald Avenue interchanges. The Project is located west of Archibald Avenue and on either side of Limonite Avenue in the City of Eastvale. Vehicular and truck traffic access will be provided via the following driveways:

- Driveway 1 via Limonite Avenue – Right-in/right-out access for both passenger cars and trucks at the northern driveway; Right-in/right-out access for trucks only at the southern driveway
- Driveway 2 via Limonite Avenue – Full access for both passenger cars and trucks
- Driveway 3 via Limonite Avenue – Right-in/right-out access for both passenger cars and trucks at the northern driveway; Right-in/right-out access for passenger cars only at the southern driveway
- Driveway 4 via Archibald Avenue – Right-in/right-out access for both passenger cars and trucks
- Driveway 5 via Providence Way – Ingress for trucks only, full access for passenger cars

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

Trip generation rates used to estimate Project traffic are shown in Table 4-1. A summary of the Project's trip generation based on actual vehicles is shown in Table 4-2 while the trip generation based on PCE is shown in Table 4-3. The trip generation rates used for this analysis are based upon information collected by the Institute of Transportation Engineers (ITE) as provided in their Trip Generation Manual, 10th Edition, 2017 and the TUMF High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019). (4) (5)

Table 4-1

Project Trip Generation Rates

Land Use[1,3]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
High-Cube Fulfillment Center Warehouse[3]	TSF	--	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2-4 Axle Trucks			0.006	0.002	0.008	0.003	0.008	0.011	0.162
5+-Axle Trucks			0.008	0.003	0.011	0.003	0.007	0.010	0.217
Warehousing[4]	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars (80.0%)			0.105	0.031	0.136	0.041	0.111	0.152	1.392
2-Axle Trucks (3.34%)			0.004	0.002	0.006	0.002	0.004	0.006	0.058
3-Axle Trucks (4.14%)			0.005	0.002	0.007	0.002	0.006	0.008	0.072
4+-Axle Trucks (12.52%)			0.016	0.005	0.021	0.006	0.018	0.024	0.218
Passenger Car Equivalent (PCE) Trip Generation Rates[5]									
High-Cube Fulfillment Center Warehouse[3]	TSF	--	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2-4 Axle Trucks (PCE = 2.0)			0.012	0.004	0.016	0.006	0.016	0.022	0.324
5+-Axle Trucks (PCE = 3.0)			0.025	0.008	0.033	0.008	0.022	0.030	0.651
Warehousing[4]	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars (80.0%)			0.105	0.031	0.136	0.041	0.111	0.152	1.392
2-Axle Trucks (3.34%) (PCE = 1.5)			0.007	0.002	0.009	0.003	0.007	0.010	0.087
3-Axle Trucks (4.14%) (PCE = 2.0)			0.011	0.003	0.014	0.004	0.012	0.016	0.144
4+-Axle Trucks (12.52%) (PCE = 3.0)			0.049	0.015	0.064	0.019	0.052	0.071	0.654

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

[2] TSF = thousand square feet

[3] Vehicle Mix Source: TUMF High Cube Warehouse Trip Generation Study, WSP, November January 29, 2019.
Inbound and outbound split source: High Cube Warehouse Vehicle Trip Generation Analysis, October 2016, ITE.

[4] Vehicle Mix Source is ITE Trip Generation Handbook (3rd Edition, 2017).
Truck Mix Source: South Coast Air Quality Management District (SCAQMD) Warehouse Truck Trip Study Data Results and Usage (2014).
Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks. PCE rates are per SBCTA.
Truck mix (by axle type) source from City of Fontana Truck Trip Generation Study (August 2003). PCE rates are per SBCTA.

Table 4-2

Project Trip Generation Summary (Actual)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Building 1: Warehouse	182.156	TSF							
Passenger Cars:			19	6	25	7	21	28	254
Truck Trips:									
2-axle:			1	0	1	0	1	1	12
3-axle:			1	0	1	0	1	1	14
4+-axle:			*3*	*1*	*4*	*1*	*4*	*5*	*40*
- Total Truck Trips			*5*	*1*	*6*	*1*	*7*	*8*	*66*
BUILDING 1 TOTAL TRIPS (Actual Vehicles) [2]			**24**	**7**	**31**	**8**	**27**	**35**	**320**
Building 2: Warehouse	77.704	TSF							
Passenger Cars:			8	3	11	3	9	12	108
Truck Trips:									
2-axle:			0	0	0	0	0	0	6
3-axle:			0	1	1	0	1	1	6
4+-axle:			1	1	2	0	2	2	18
- Total Truck Trips			*1*	*2*	*3*	*0*	*3*	*3*	*30*
BUILDING 2 TOTAL TRIPS (Actual Vehicles) [2]			**9**	**5**	**14**	**3**	**12**	**15**	**138**
Building 3: Warehouse	49.540	TSF							
Passenger Cars:			5	2	7	2	6	8	70
Truck Trips:									
2-axle:			0	0	0	0	0	0	4
3-axle:			0	0	0	0	0	0	4
4+-axle:			1	0	1	0	1	1	12
- Total Truck Trips			*1*	*0*	*1*	*0*	*1*	*1*	*20*
BUILDING 3 TOTAL TRIPS (Actual Vehicles) [2]			**6**	**2**	**8**	**2**	**7**	**9**	**90**
Building 4: Warehouse	86.384	TSF							
Passenger Cars:			9	2	11	4	9	13	120
Truck Trips:									
2-axle:			0	0	0	0	1	1	6
3-axle:			0	0	0	0	1	1	6
4+-axle:			1	1	2	1	1	2	20
- Total Truck Trips			*1*	*1*	*2*	*1*	*3*	*4*	*32*
BUILDING 4 TOTAL TRIPS (Actual Vehicles) [2]			**10**	**4**	**14**	**5**	**11**	**16**	**152**
Building 5: Warehouse	69.310	TSF							
Passenger Cars:			7	2	9	3	8	11	96
Truck Trips:									
2-axle:			1	0	1	1	0	1	4
3-axle:			0	0	0	0	1	1	6
4+-axle:			1	0	1	0	2	2	16
- Total Truck Trips			*2*	*0*	*2*	*1*	*3*	*4*	*26*
BUILDING 5 TOTAL TRIPS (Actual Vehicles) [2]			**9**	**2**	**11**	**4**	**11**	**15**	**122**

Table 4-2

Project Trip Generation Summary (Actual)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Building 6: Warehouse	95.197	TSF							
Passenger Cars:			10	3	13	4	10	14	134
Truck Trips:									
2-axle:			0	1	1	0	0	0	6
3-axle:			1	0	1	0	1	1	8
4+-axle:			2	0	2	1	1	2	22
- Total Truck Trips			*3*	*1*	*4*	*1*	*2*	*3*	*36*
BUILDING 6 TOTAL TRIPS (Actual Vehicles) [2]			**13**	**4**	**17**	**5**	**12**	**18**	**170**
Building 7: High-Cube Fulfillment Center Warehouse	520.317	TSF							
Passenger Cars:			41	13	54	21	54	75	912
Truck Trips:									
2-4 axle:			3	1	4	2	4	6	84
5+-axle:			4	2	6	1	4	5	114
- Total Truck Trips			*7*	*3*	*10*	*3*	*8*	*11*	*198*
BUILDING 7 TOTAL TRIPS (Actual Vehicles) [2]			**48**	**16**	**64**	**24**	**62**	**86**	**1,110**
PROJECT TOTAL (Actual Vehicles)			**119**	**40**	**159**	**51**	**143**	**194**	**2,102**

[1] TSF = thousand square feet

[2] TOTAL TRIPS = Passenger Cars + Truck Trips.

Table 4-3

Project Trip Generation Summary (PCE)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Building 1: Warehouse	182.156	TSF							
Passenger Cars:			19	6	25	7	21	28	254
Truck Trips:									
2-axle:			1	1	2	0	2	2	16
3-axle:			2	1	3	1	2	3	26
4+-axle:			9	3	12	4	9	13	120
- Total Truck Trips			*12*	*5*	*17*	*5*	*13*	*18*	*162*
BUILDING 1 TOTAL TRIPS (PCE) [2]			**31**	**11**	**42**	**12**	**34**	**46**	**416**
Building 2: Warehouse	77.704	TSF							
Passenger Cars:			8	3	11	3	9	12	108
Truck Trips:									
2-axle:			1	0	1	0	1	1	8
3-axle:			1	0	1	0	1	1	12
4+-axle:			4	1	5	1	5	6	52
- Total Truck Trips			*6*	*1*	*7*	*1*	*7*	*8*	*72*
BUILDING 2 TOTAL TRIPS (PCE) [2]			**14**	**4**	**18**	**4**	**16**	**20**	**180**
Building 3: Warehouse	49.540	TSF							
Passenger Cars:			5	2	7	2	6	8	70
Truck Trips:									
2-axle:			0	0	0	0	0	0	4
3-axle:			1	0	1	0	1	1	8
4+-axle:			2	1	3	1	3	4	32
- Total Truck Trips			*3*	*1*	*4*	*1*	*4*	*5*	*44*
BUILDING 3 TOTAL TRIPS (PCE) [2]			**8**	**3**	**11**	**3**	**10**	**13**	**114**
Building 4: Warehouse	86.384	TSF							
Passenger Cars (03%)			9	3	12	4	9	13	120
Truck Trips:									
2-axle:			1	0	1	0	1	1	8
3-axle:			1	0	1	0	1	1	12
4+-axle:			4	2	6	2	4	6	56
- Total Truck Trips			*6*	*2*	*8*	*2*	*6*	*8*	*76*
BUILDING 4 TOTAL TRIPS (PCE) [2]			**15**	**5**	**20**	**6**	**15**	**21**	**196**
Building 5: Warehouse	69.310	TSF							
Passenger Cars:			7	2	9	3	8	11	96
Truck Trips:									
2-axle:			0	1	1	0	1	1	6
3-axle:			1	0	1	0	1	1	10
4+-axle:			3	1	4	1	4	5	46
- Total Truck Trips			*4*	*2*	*6*	*1*	*6*	*7*	*62*
BUILDING 5 TOTAL TRIPS (PCE) [2]			**11**	**4**	**15**	**4**	**14**	**18**	**158**

Table 4-3

Project Trip Generation Summary (PCE)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Building 6: Warehouse	95.197	TSF							
Passenger Cars:			10	3	13	4	10	14	134
Truck Trips:									
2-axle:			1	0	1	0	1	1	8
3-axle:			1	0	1	0	1	1	14
4+-axle:			5	1	6	2	5	7	62
- Total Truck Trips			*7*	*1*	*8*	*2*	*7*	*9*	*84*
BUILDING 6 TOTAL TRIPS (PCE) [2]			**17**	**4**	**21**	**6**	**17**	**23**	**218**
Building 7: High-Cube Fulfillment Center Warehouse	520.317	TSF							
Passenger Cars:			41	13	54	21	54	75	912
Truck Trips:									
2-4 axle:			6	2	8	3	8	11	170
5+-axle:			13	4	17	4	12	16	340
- Total Truck Trips			*19*	*6*	*25*	*7*	*20*	*27*	*510*
BUILDING 7 TOTAL TRIPS (PCE) [2]			**60**	**19**	**79**	**28**	**74**	**102**	**1,422**
TOTAL PROJECT (PCE)			**156**	**50**	**206**	**63**	**180**	**243**	**2,704**

[1] TSF = thousand square feet

[2] TOTAL TRIPS = Passenger Cars + Truck Trips.

For purposes of this analysis, the following ITE land use codes and vehicle mixes have been utilized:

- High-Cube Fulfillment Center Warehouse has been used to derive site specific trip generation estimates for up to 506,880 square feet of the proposed Project. The ITE Trip Generation Manual (2017) has trip generation rates for high-cube fulfillment center use (ITE land use code 155), however, these rates are unreliable because they are based on limited data (i.e., one to two surveyed sites) and the ITE Trip Generation Manual recommends the use of local data sources where available. As such, the trip-generation statistics published in the TUMF High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019) which was commissioned by the Western Riverside Council of Governments (WRCOG) in support of the Transportation Uniform Mitigation Fee (TUMF) update, has been utilized for the high-cube fulfillment center use. The WSP trip generation rates were published in January 2019 and are based on data collected at 11 local high-cube fulfillment center sites. However, the WSP study does not include a split for inbound and outbound vehicles, as such, the inbound and outbound splits per the ITE High-Cube Warehouse Vehicle Trip Generation Analysis (October 2016) have been utilized. (11)
- ITE land use code 150 (Warehousing) has been used to derive site specific trip generation estimates for up to 480,520 square feet of the proposed Project. The ITE Trip Generation Handbook (3rd Edition, 2017) identifies a 20% mix of heavy trucks, however, does not provide a breakdown of the 20% further by axle type. As such, the South Coast Air Quality Management District (SCAQMD) Warehouse Truck Trip Study Data Results and Usage (2014) for warehouse trucks has been utilized for the truck mix: 16.7% 2-axle trucks, 20.7% 3-axle trucks, and 62.6% 4+-axle trucks. (12)

Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. PCE factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in Appendix B of the San Bernardino County CMP 2016 Update, which are more conservative than the PCE of 2.0 recommended in the County of Riverside's traffic study guidelines.

As shown in Table 4-3, the proposed Project is anticipated to generate a total of 2,704 PCE trip-ends per day, 206 PCE AM peak hour trips and 243 PCE PM peak hour trips. In comparison, the proposed Project is anticipated to generate a total of 2,102 actual vehicle trip-ends per day with 159 AM peak hour trips and 194 PM peak hour trips (see Table 4-2).

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. The trip distribution pattern of passenger cars is heavily influenced by the geographical location of the site, the location of surrounding uses, and the proximity to the regional freeway system. The trip distribution pattern for truck traffic is also influenced by the local truck routes approved by the City of Eastvale, City of Ontario, City of Jurupa Valley, and City of Chino. Given these differences, separate trip distributions were generated for both passenger cars and truck trips.

Based on discussions with City staff, the Limonite Avenue extension over the Cucamonga Creek is assumed to be completed by Year 2023. The Limonite Avenue extension will connect Kimball Avenue and Limonite Avenue from Hellman Avenue to Archibald Avenue. As such, separate trip distribution patterns, for both passenger cars and trucks, are assumed for E+P and Opening Year Cumulative (2021) and for Interim Year (2023) and Horizon Year conditions.

The E+P and Opening Year Cumulative distribution patterns utilize the existing roadway system in comparison to the Interim Year and Horizon Year trip distribution patterns, which assumes the Limonite Avenue extension and other future roadway connections. The Project trip distribution patterns are also affected by near-term development patterns in the vicinity of the Project site. The extension of Schaefer Avenue at Archibald Avenue and the Merrill Avenue extension to Bellegrave Avenue will also be assumed for Horizon Year conditions only. While these changes don't affect the Project's trip distribution patterns, it will likely affect the traffic forecasts.

Exhibit 4-1 illustrates the E+P and Opening Year Cumulative passenger car trip distribution patterns. Exhibit 4-2 illustrates the truck trip distribution patterns for E+P and Opening Year Cumulative conditions. Exhibit 4-3 illustrates the passenger car trip distribution patterns for Interim Year and Horizon Year with Limonite Avenue Extension traffic conditions and Exhibit 4-4 illustrates the truck trip distribution patterns for Interim Year and Horizon Year with Limonite Avenue Extension traffic conditions

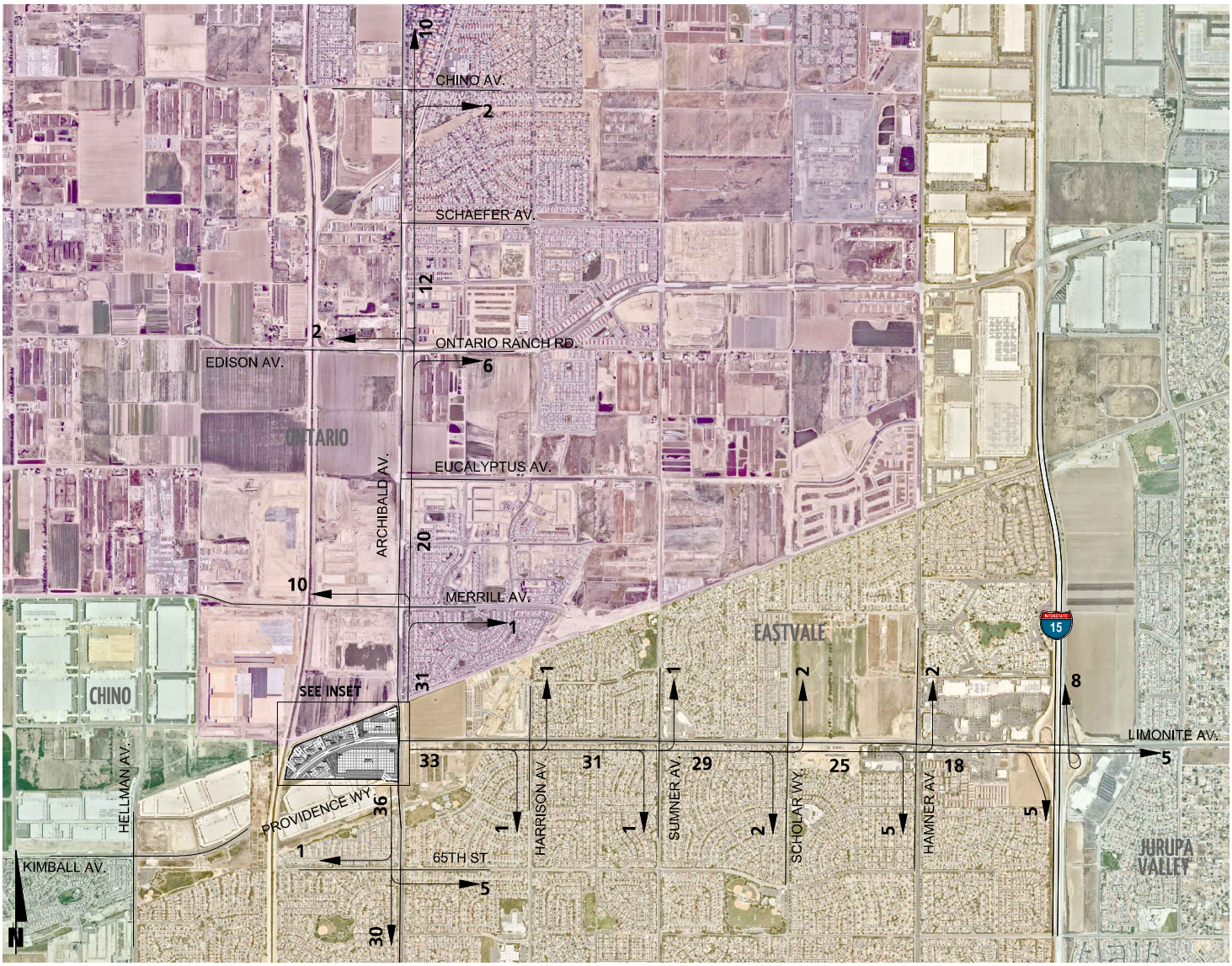
4.3 MODAL SPLIT

The potential for Project trips (non-truck) to be reduced by the use of public transit, walking or bicycling have not been included as part of the Project's estimated trip generation. Essentially, the Project's traffic projections are "conservative" in that these alternative travel modes would reduce the forecasted traffic volumes (non-truck trips only).

4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project only ADT and peak hour intersection turning movement volumes are shown on Exhibits 4-5 and 4-6, respectively, for E+P and Opening Year Cumulative traffic conditions and are shown on Exhibits 4-7 and 4-8, respectively, for Interim Year and Horizon Year traffic conditions.

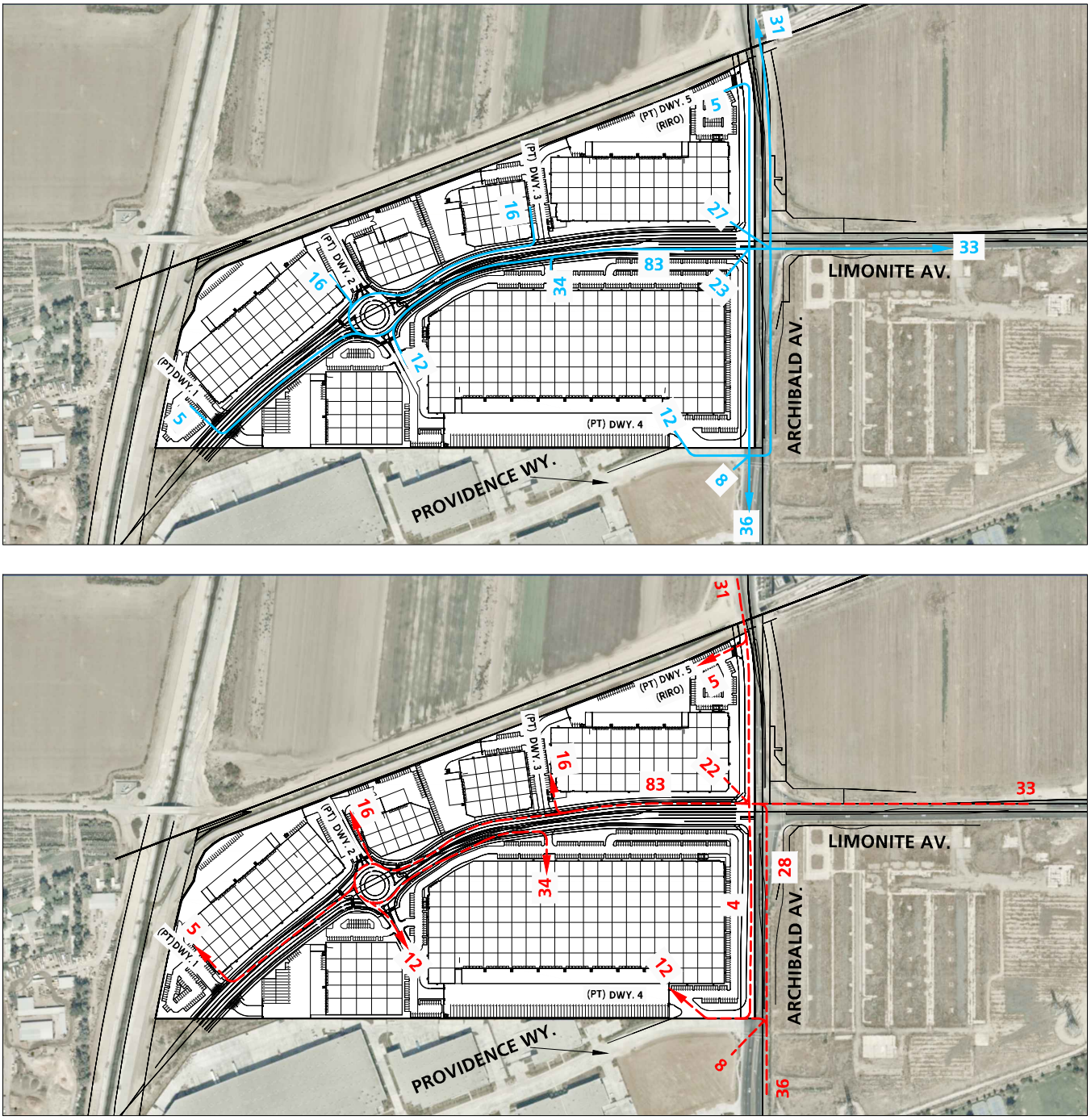
EXHIBIT 4-1 (1OF2): PROJECT (E+P AND OPENING YEAR CUMULATIVE PASSENGER CAR) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

EXHIBIT 4-1 (2OF2): PROJECT (E+P AND OPENING YEAR CUMULATIVE PASSENGER CAR) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

= OUTBOUND

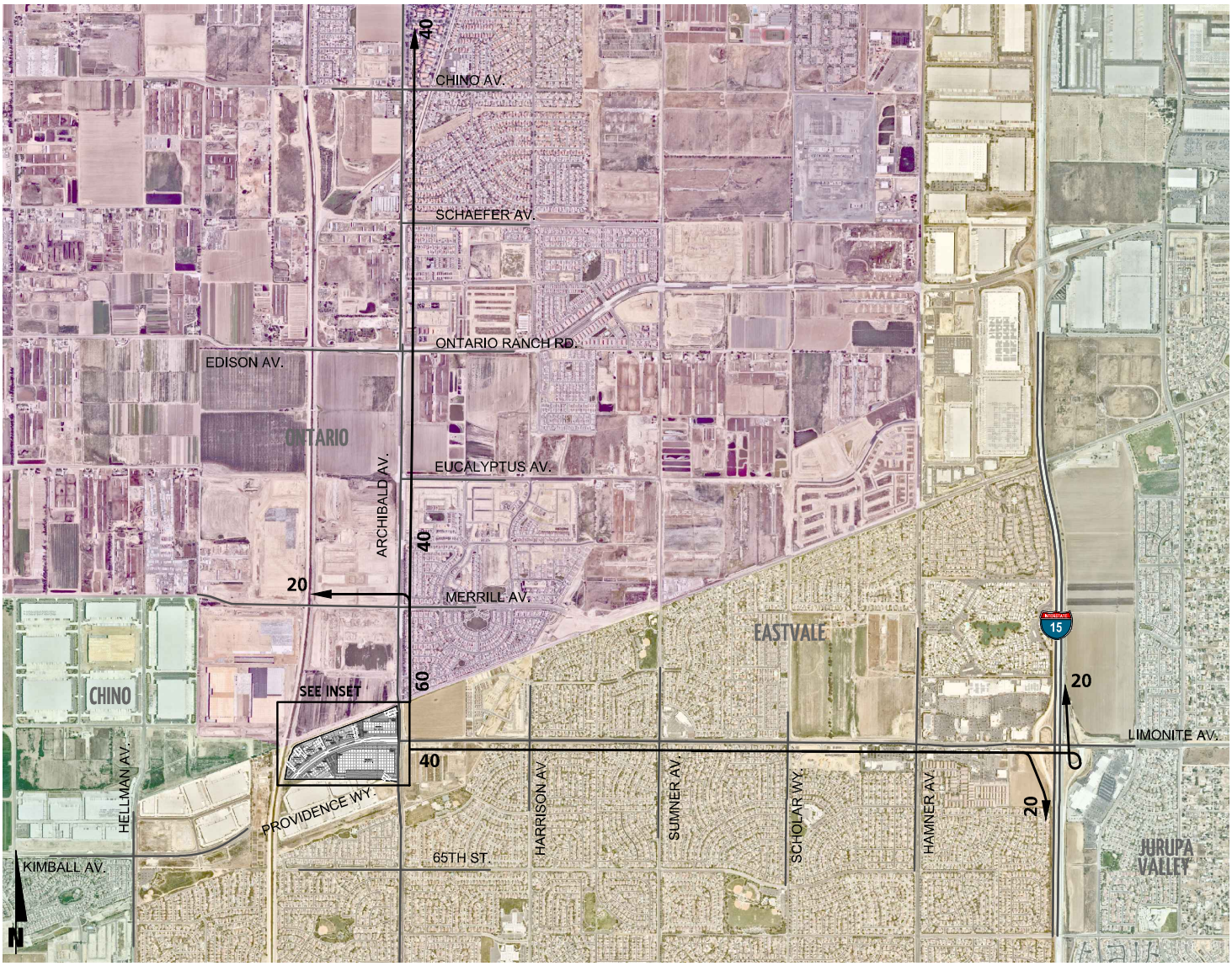
= INBOUND

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11963 - trip_a.dwg

URBAN CROSSROADS

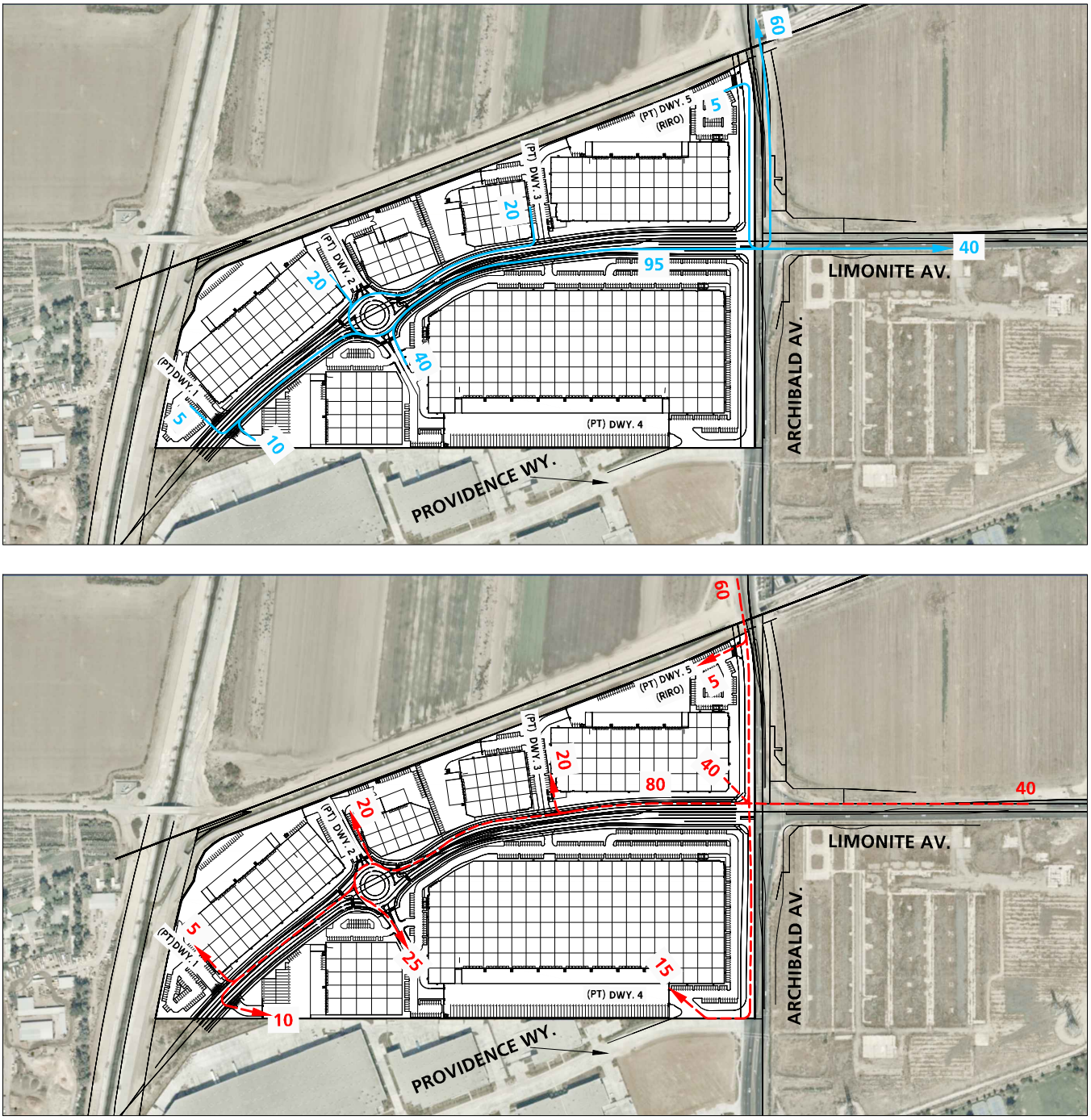
EXHIBIT 4-2 (1OF2): PROJECT (E+P AND OPENING YEAR CUMULATIVE TRUCK) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

EXHIBIT 4-2 (2OF2): PROJECT (E+P AND OPENING YEAR CUMULATIVE TRUCK) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

= OUTBOUND

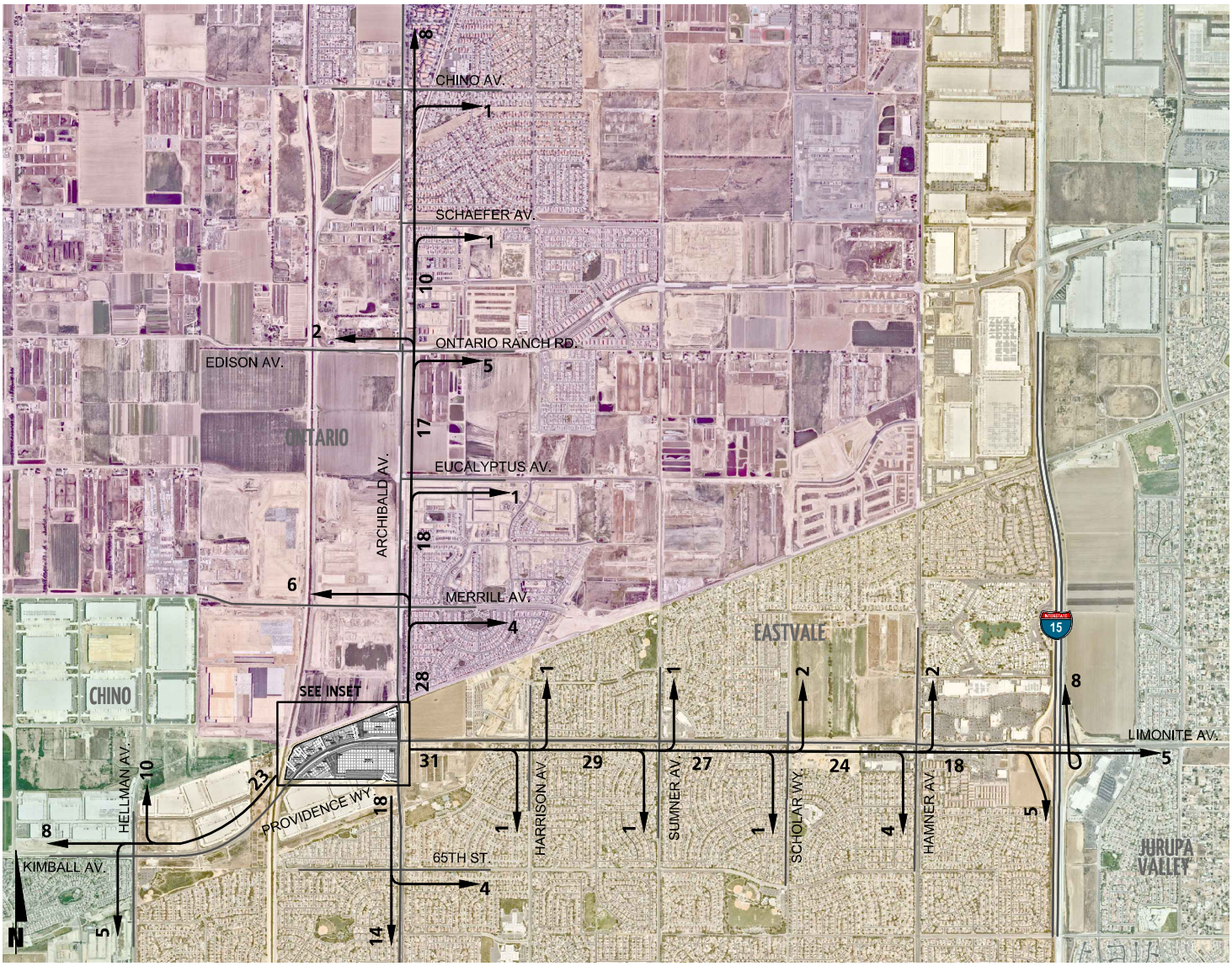
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URBAN CROSSROADS

EXHIBIT 4-3 (1OF2): PROJECT (INTERIM YEAR AND HORIZON YEAR WITH LIMONITE AVENUE EXTENSION PASSENGER CAR) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

EXHIBIT 4-3 (2OF2): PROJECT (INTERIM YEAR AND HORIZON YEAR WITH LIMONITE AVENUE EXTENSION PASSENGER CAR) TRIP DISTRIBUTION

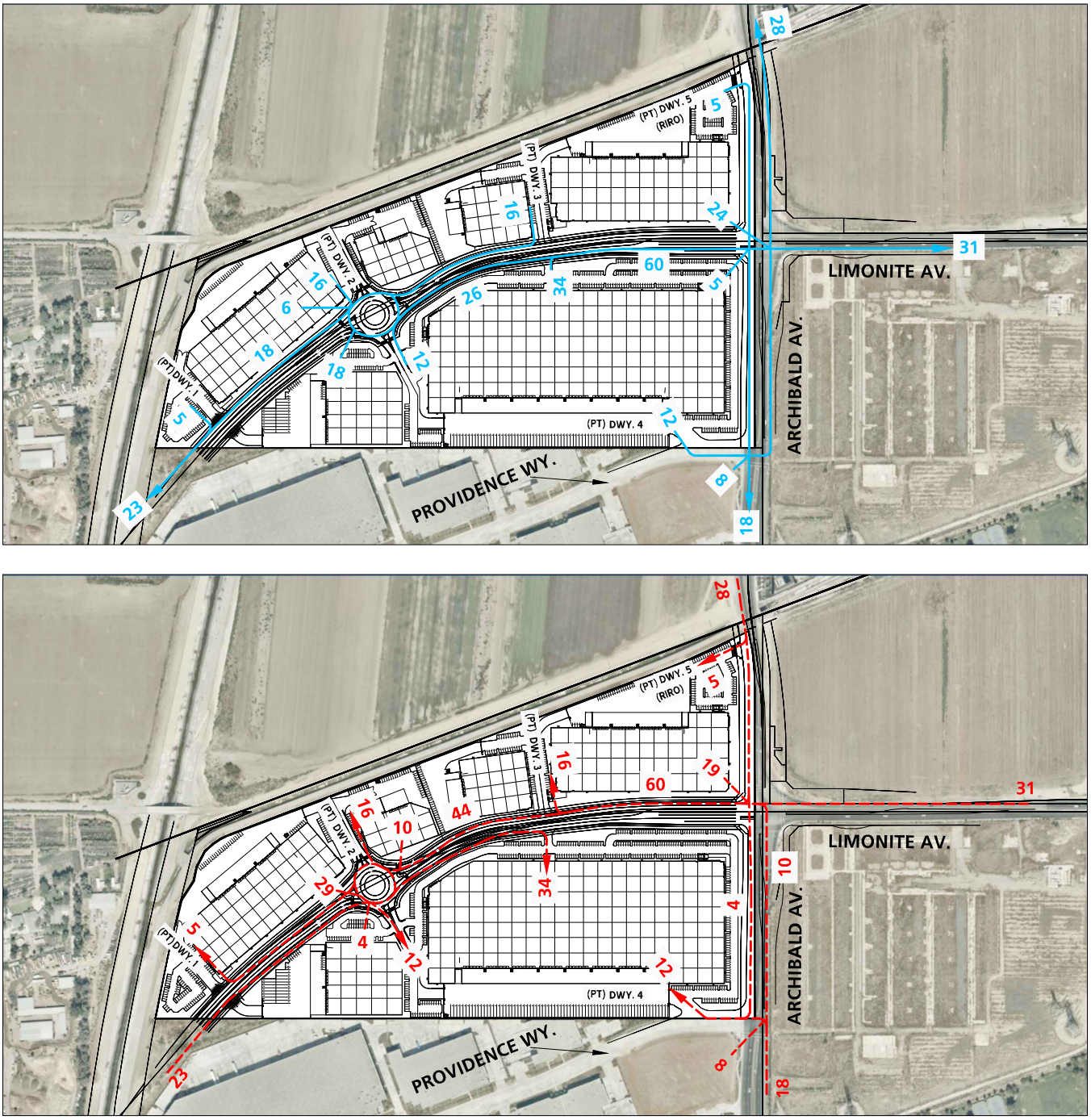
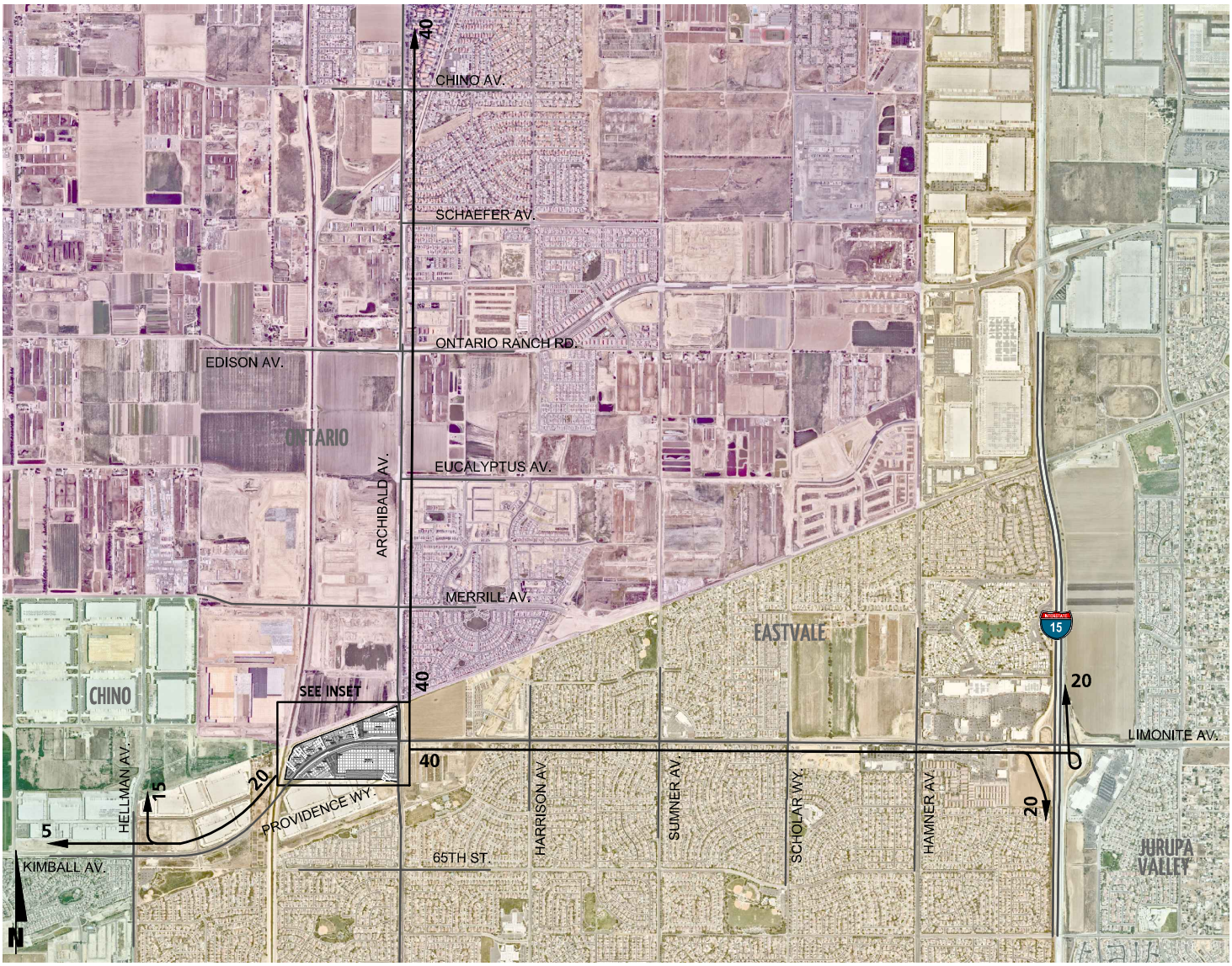


EXHIBIT 4-4 (1OF2): PROJECT (INTERIM YEAR AND HORIZON YEAR WITH LIMONITE AVENUE EXTENSION TRUCK) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

EXHIBIT 4-4 (2OF2): PROJECT (INTERIM YEAR AND HORIZON YEAR WITH LIMONITE AVENUE EXTENSION TRUCK) TRIP DISTRIBUTION

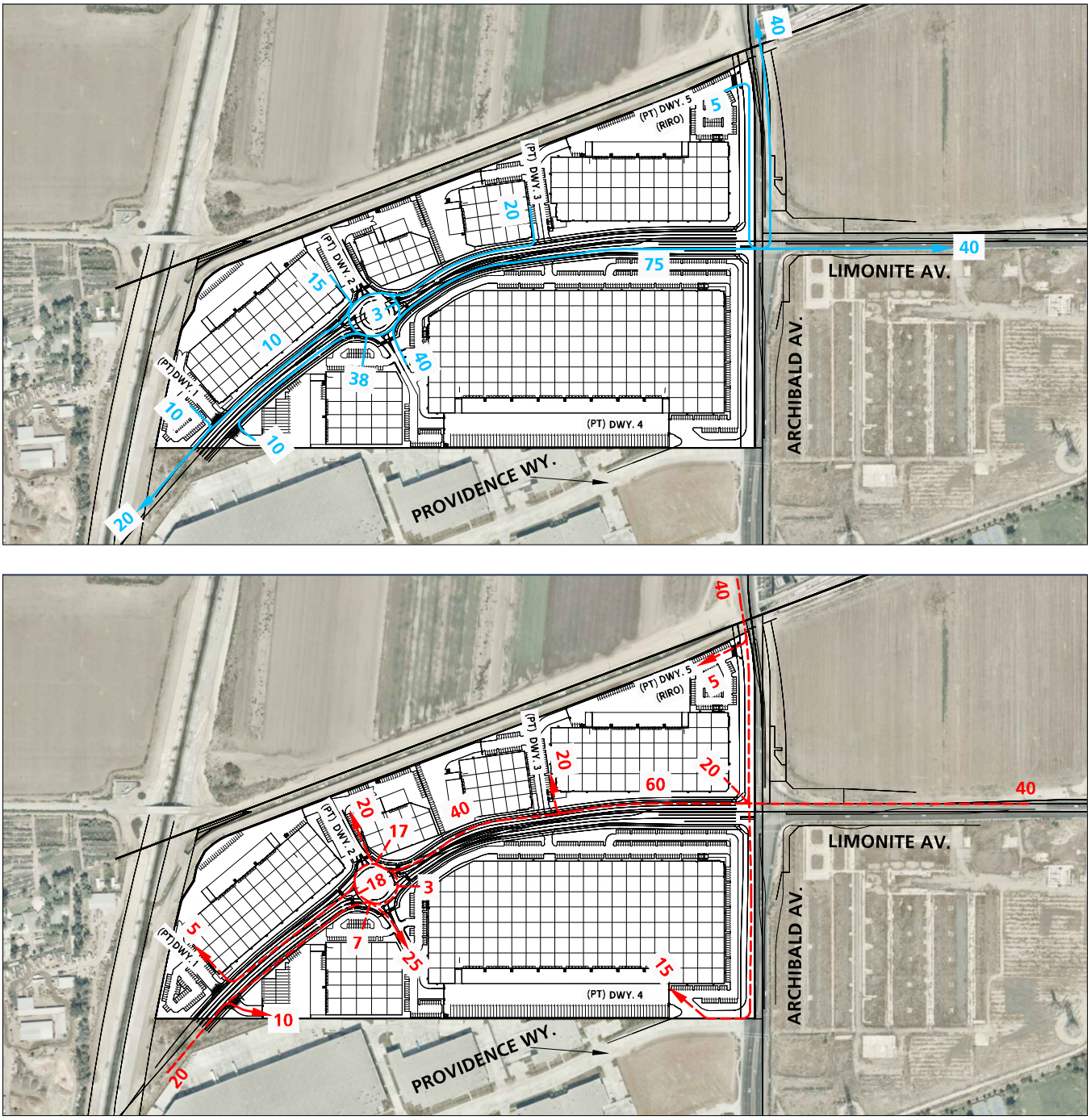
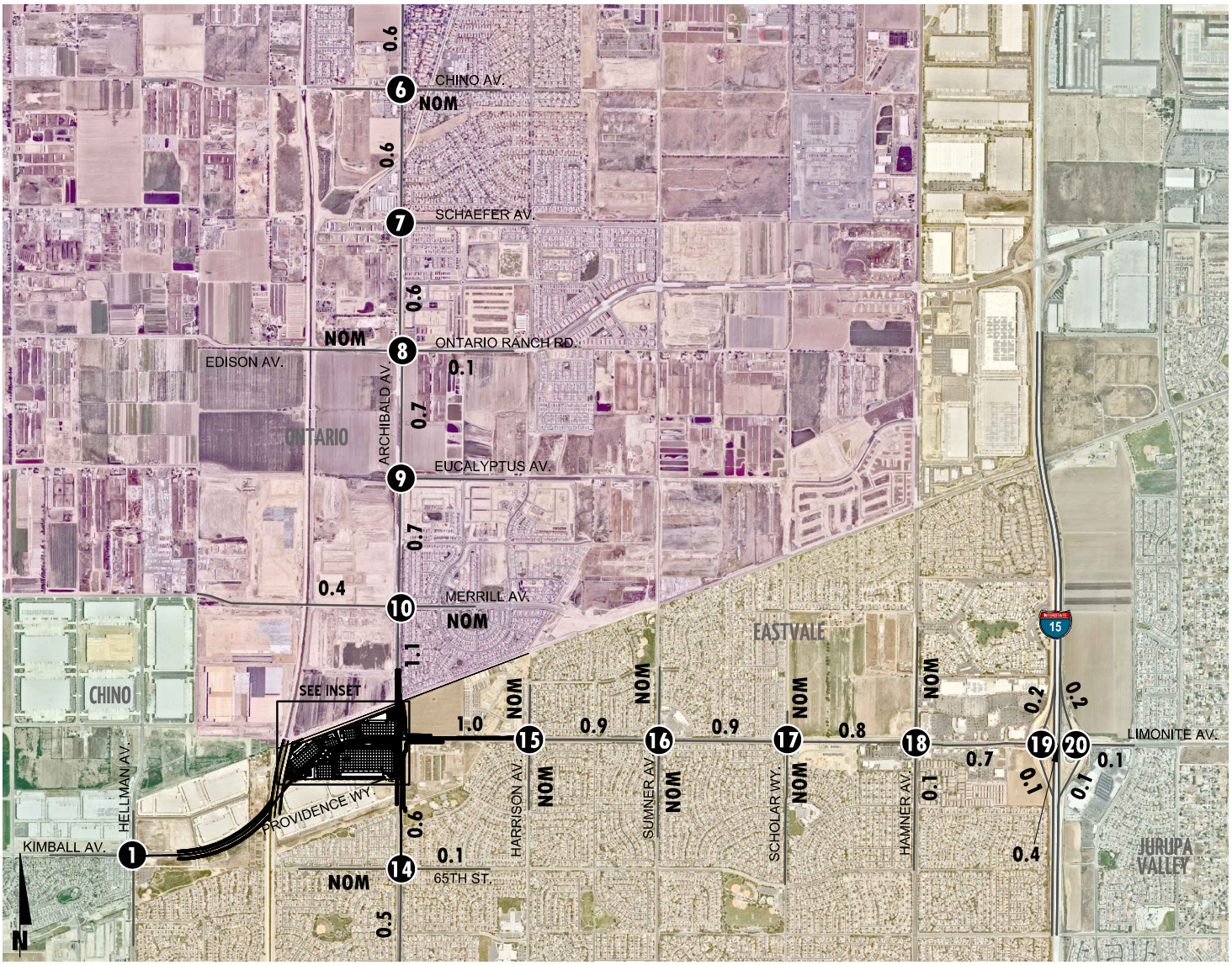
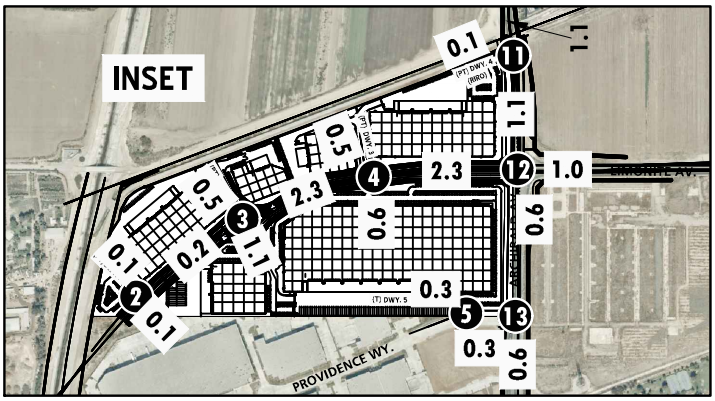


EXHIBIT 4-5: PROJECT ONLY (E+P AND OPENING YEAR CUMULATIVE) AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

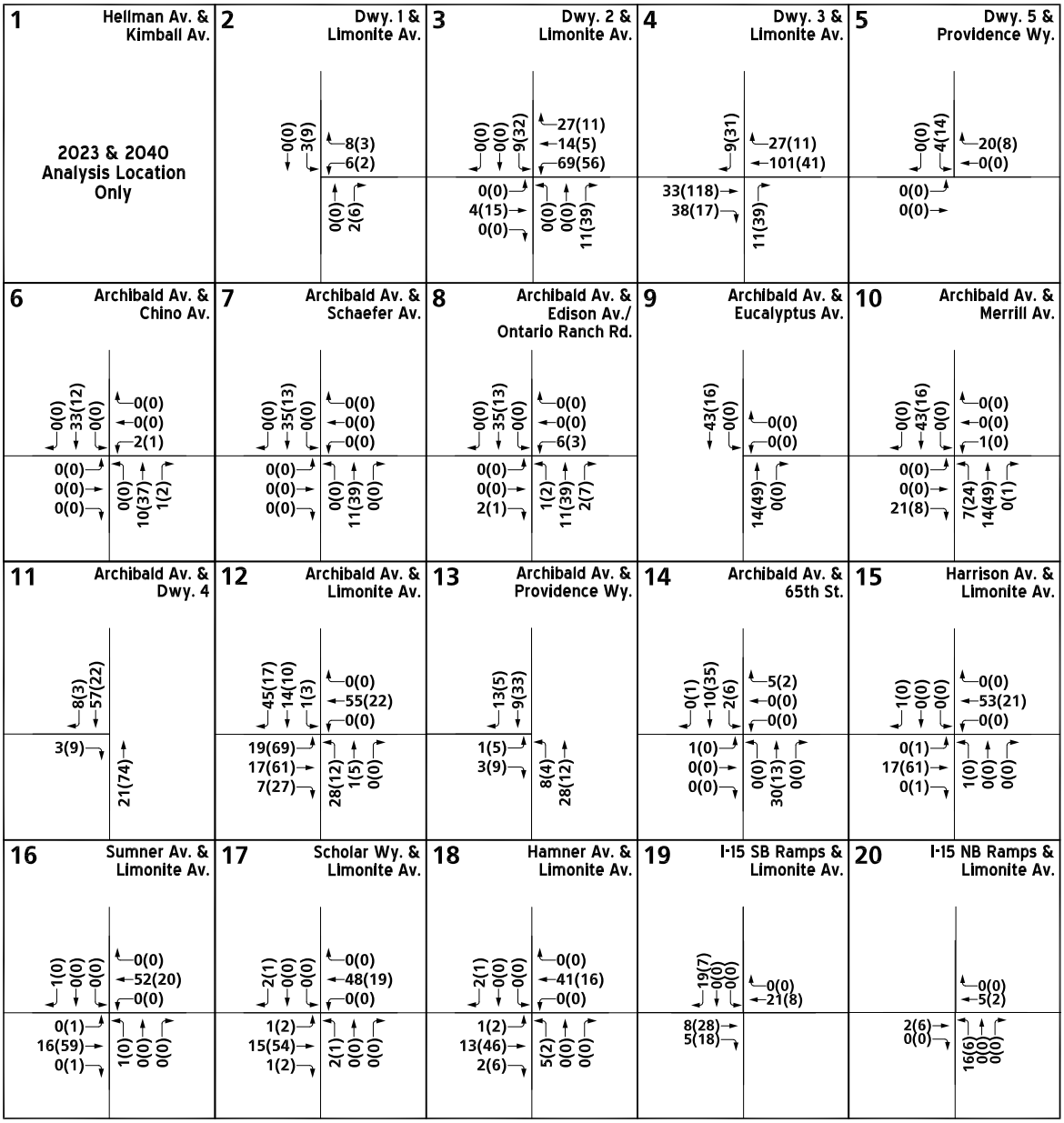




LEGEND:

10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

EXHIBIT 4-6: PROJECT ONLY (E+P AND OPENING YEAR CUMULATIVE) TRAFFIC VOLUMES (IN PCE)

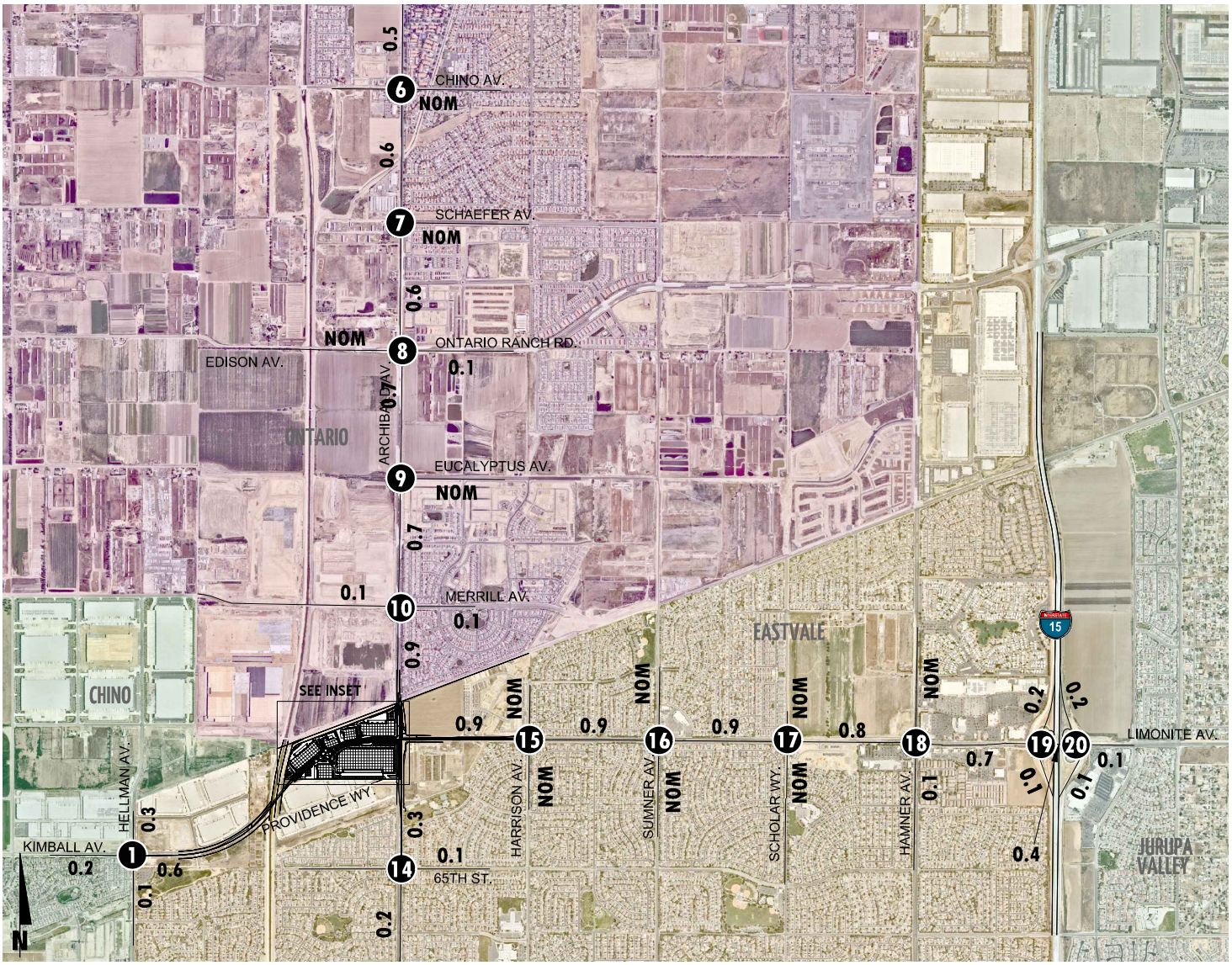


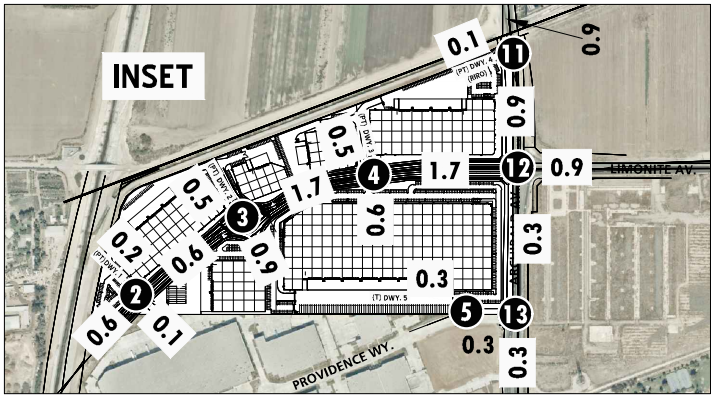
LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

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EXHIBIT 4-7: PROJECT ONLY (INTERIM YEAR AND HORIZON YEAR) AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

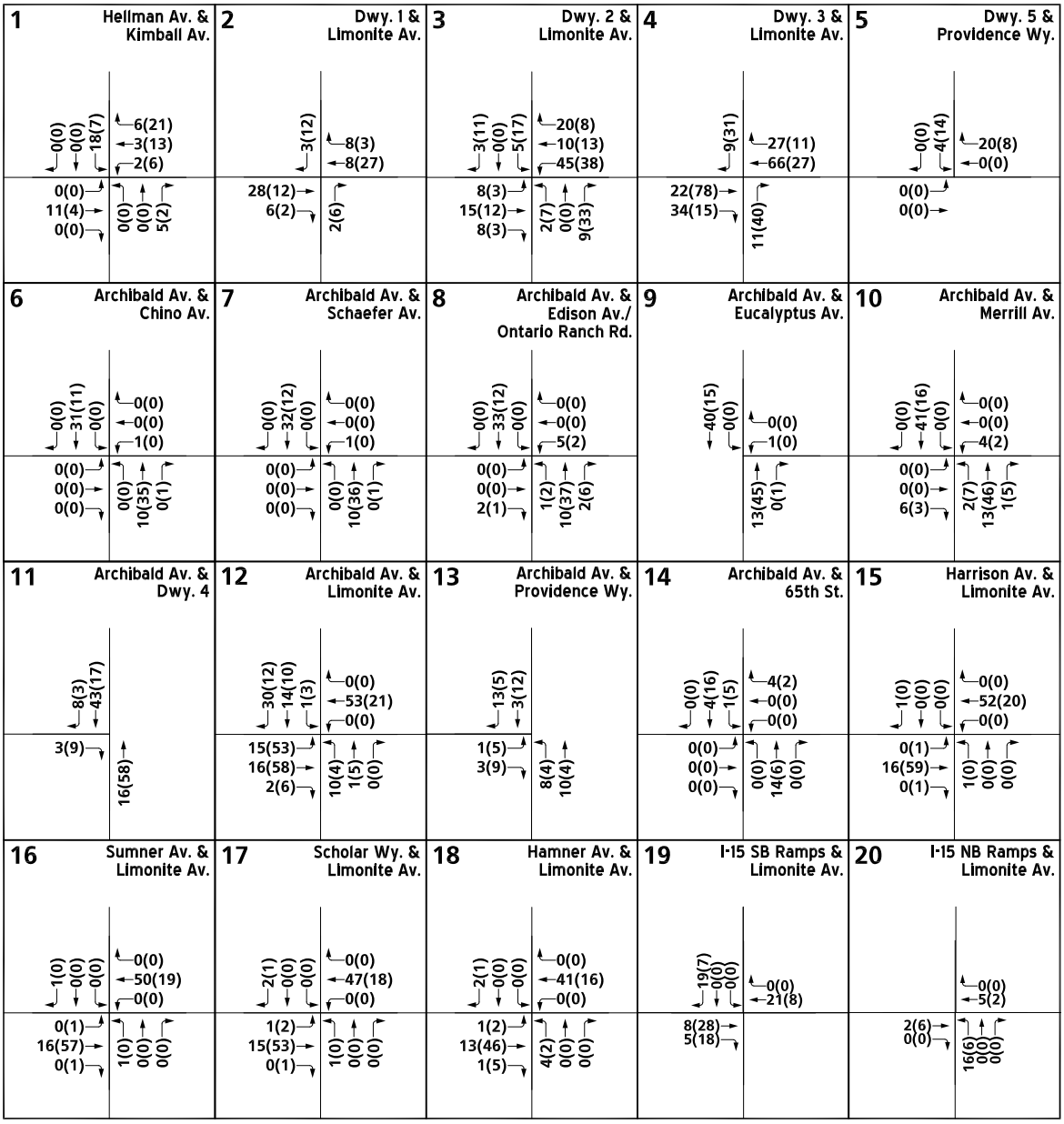




LEGEND:

10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

EXHIBIT 4-8: PROJECT ONLY (INTERIM YEAR AND HORIZON YEAR) TRAFFIC VOLUMES (IN PCE)



LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

4.5 BACKGROUND TRAFFIC

4.5.1 OPENING YEAR CUMULATIVE CONDITIONS

Future year traffic forecasts have been based upon background (ambient) growth at 1.6% per year for 2021 traffic conditions. The ambient growth factor is intended to approximate regional traffic growth. The total ambient growth is 3.23% for 2021 traffic conditions (growth of 1.6 percent per year over 2 years) and 6.56% for 2023 traffic conditions (growth of 1.6 percent per year over 4 years). This ambient growth rate is applied to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth traffic volumes has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

Opening Year Cumulative (2021) and Interim Year (2023) traffic volumes are provided in Section 6 and Section 7 of this report, respectively. The traffic generated by the proposed Project was then manually added to the base volume to determine Opening Year Cumulative "With Project" forecasts for 2021 and Interim Year "With Project" forecasts for 2023.

4.5.2 HORIZON YEAR CONDITIONS

Horizon Year conditions represents the General Plan Buildout of the City of Eastvale and is based on the Riverside County Transportation Analysis Model (RivTAM) (see Section 4.7 *Horizon Year Volume Development* for additional discussion). The adopted Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (April 2016) growth forecasts for the City of Eastvale identifies projected growth in population of 56,500 in 2012 to 65,400 in 2040, or a 15.75% increase over the 28-year period. (13) The change in population equates to roughly a 0.52% growth rate, compounded annually. Similarly, growth over the same 28-year period in households is projected to increase by 17.02%, or a 0.56% annual growth rate. Finally, growth in employment over the same 28-year period is projected to increase by 127.91%, or a 2.99% annual growth rate.

Based on a comparison of Existing (2019) traffic volumes to the Horizon Year forecasts, the average growth rate is estimated at approximately 1.36%, compounded annually between Existing (2019) and 2040 traffic conditions. The annual growth rate at each individual intersection is not lower than 0.70% compounded annually to as high as 6.32% compounded annually over the same time period.

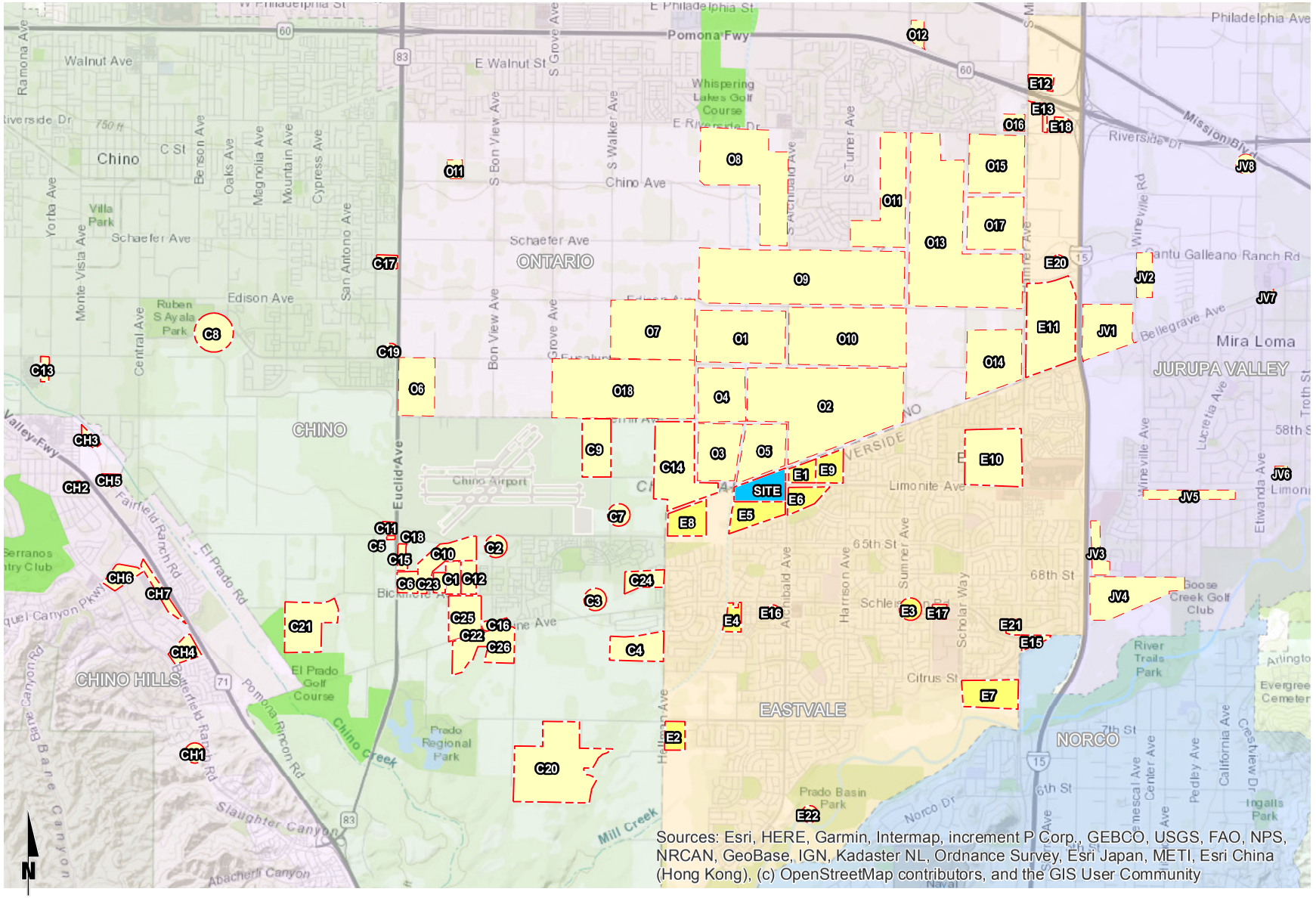
Therefore, the annual growth rate utilized for the purposes of this analysis would appear to conservatively approximate the anticipated regional growth in traffic volumes in the City of Eastvale for Opening Year Cumulative, Interim Year, and Horizon Year traffic conditions, especially when considered along with the addition of project-related traffic. As such, the growth in traffic volumes assumed in this traffic impact analysis would tend to overstate as opposed to understate the potential impacts to traffic and circulation.

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

California Environmental Quality Act (CEQA) guidelines require that other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of Eastvale. The neighboring jurisdictions of Chino, Ontario, and Jurupa Valley have also been contacted to include key projects in their respective cities.

Exhibit 4-9 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown in Table 4-4. If applicable, the traffic generated by individual cumulative projects was manually added to the Opening Year Cumulative and Interim Year forecasts to ensure that traffic generated by the listed cumulative development projects in Table 4-4 are reflected as part of the background traffic. Cumulative ADT and peak hour intersection turning movement volumes are shown on Exhibits 4-10 and 4-11, respectively.

EXHIBIT 4-9: CUMULATIVE DEVELOPMENT LOCATION MAP



URBAN CROSSROADS

Table 4-4

Cumulative Development Land Use Summary

#	Project/Location	Land Use[1]	Quantity	Units[2]
City of Ontario				
O1	Parkside	SFDR	437	DU
		Multi-Family Attached (Apartments)	1,510	DU
		Shopping Center	115.000	TSF
O2	Subarea 29 & Amendment (40% complete)	SFDR	2,149	DU
		Shopping Center	87.000	TSF
O3	Colony Commerce West	High-Cube Warehouse	2213.360	TSF
		Manufacturing	737.786	TSF
O4	West Ontario Commerce Center SP	High-Cube Warehouse	1976.535	TSF
		Manufacturing	658.845	TSF
		Business Park	548.856	TSF
O5	Colony Commerce East	High-Cube Warehouse	998.680	TSF
		Manufacturing	233.129	TSF
		Warehousing	699.387	TSF
O6	Ontario Ranch Commerce Center	High-Cube Cold Storage Warehouse	1159.200	TSF
		Warehousing	337.600	TSF
		Business Park	290.200	TSF
O7	Parente Home Ranch SP	SFDR	270	DU
		Condo/Townhouse	1,872	DU
		General Office	462.281	TSF
		Shopping Center	194.278	TSF
O8	Countryside	SFDR	819	DU
	Armstrong Ranch	SFDR	994	DU
O9	The Avenue	SFDR	2,020	DU
		Multi-Family Attached (Apartments)	586	DU
		Shopping Center	250.000	TSF
O10	Grand Park	SFDR	484	DU
		Multi-Family Attached (Apartments)	843	DU
O11	West Haven	SFDR	753	DU
		Shopping Center	87.000	TSF
O12	Haven Gateway	General Light Industrial	42.160	TSF
		High-Cube Warehouse	168.640	TSF
O13	Rich Haven	SFDR	2,732	DU
		Multi-Family Attached (Condo)	1,524	DU
		Shopping Center	317.400	TSF
O14	Esperanza	SFDR	914	DU
		Multi-Family Attached (Apartments)	496	DU
O15	Edenglen	SFDR	310	DU
		Multi-Family Attached (Condo)	274	DU
		Shopping Center	217.520	TSF
		Business Park	550.000	TSF
O16	PDEV10-008 - Dry Food Storage	Mini-Warehouse	17.000	TSF
O17	Tuscana Village	SFDR	176	DU
		Shopping Center	26.000	TSF
O18	Merrill Commerce Center	High-Cube Fulfillment Warehouse	7,014.000	TSF
		Business Park	1,441.000	TSF

Table 4-4

Cumulative Development Land Use Summary

#	Project/Location	Land Use[1]	Quantity	Units[2]
City of Chino				
C1	Bickmore Street Residential (TM 18858) (30% complete)	SFDR	185	DU
C2	TM17574 (80% complete)	Condo/Townhouse	108	DU
C3	Falloncrest at the Preserve	SFDR	210	DU
		Condo/Townhouse	786	DU
		Apartments	412	DU
		Shopping Center	77.597	TSF
		General Office	77.597	TSF
C4	Tract 19980 (Homecoming Phase 4)	Apartments	454	DU
	TTM No. 20166 & 20167	SFDR	148	DU
	Brio & TTM No. 21065 & 20168 (Orchards)	SFDR	239	DU
C5	Farmer Boys	Fast-food w/ Drive-Thru	3.218	TSF
		Shopping Center	2.300	TSF
C6	Euclid & Bickmore Warehouse	Warehousing	205.820	TSF
		General Light Industrial	51.030	TSF
		Business Park	110.620	TSF
C7	Kimball Business Park	Business Park	146.550	TSF
C8	Chaffey College Expansion	Junior/Community College	93.50	AC
	College Park Commercial	Shopping Center	7.50	AC
C9	Chino Parcel Delivery	Parcel Delivery Facility	765.274	TSF
C10	Altitude Business Centre	Warehousing	715.000	TSF
		Light Industrial	255.000	TSF
		Business Park	233.000	TSF
		Self-Storage	110.000	TSF
C11	Majestic Gateway	Specialty Retail	25.000	TSF
		Pharmacy/Drugstore with Drive-Thru	13.000	TSF
		Fast-Food with Drive-Thru	8.600	TSF
C12	Bouma Residential	SFDR	106	DU
		Condo/Townhouse	94	DU
C13	Fairfield Inn & Suites (PL 17-0060 & PL 17-0061)	Hotel	111	RM
C14	Watson Industrial Park (40% complete)	High-Cube Warehouse	3,889.900	TSF
C15	Chino Business Park	General Light Industrial	165.500	TSF
		Business Park	21.500	TSF
C16	Flores Site	Shopping Center	4.000	TSF
		Gas Station w/ convenience store	16	VFP
		Express Car Wash	5.000	TSF
C17	Brewart Residential (Stonebrook - TM 18923)	SFDR	127	DU
C18	Archibald's (PL 17-0037)	Fast-Food with Drive-Thru	3.147	TSF
C19	TM 18972 (80% complete)	SFDR	147	DU
C20	Rancho Miramonte	SFDR	691	DU
		Condo/Townhouse	132	DU
		Neighborhood Retail	21.780	TSF
		Church	400	SEAT
C21	Majestic Chino Heritage	High-Cube Fulfillment Warehouse	1982.700	TSF
		High-Cube Cold Storage Warehouse	100.000	TSF
C22	Church	Church	47.979	TSF
		Daycare	190	STU

Table 4-4

Cumulative Development Land Use Summary

#	Project/Location	Land Use[1]	Quantity	Units[2]
C23	Appesetche Residential	SFDR	60	DU
		Condo/Townhouse	160	DU
C24	Tract 19951, 19952, 19953, 19935 & 18479	SFDR	151	DU
		Condo/Townhouse	150	DU
C25	Ag. Buffer, Bungalow, Lic. Product, Liberty Deluxe, Lyon 2 & 3	SFDR	474	DU
C26	Pines Community	SFDR	552	DU
		Public Park	3.0	Acres
		Self Storage & RV Storage	120.000	TSF
		Sports Park	41.8	Acres
City of Eastvale				
E1	The Merge	Warehousing	336.501	TSF
		Shopping Center	4.750	TSF
		Supermarket	30.000	TSF
		Gas Station w/ convenience store	16	VFP
		Pharmacy/Drugstore with Drive-Thru	14.600	TSF
		Fast-Food with Drive-Thru	6.000	TSF
		Automated Car Wash	4.000	TSF
		Fast-Food Without Drive-Thru	7.750	TSF
		Coffee/Donut Shop With Drive-Thru	2.500	TSF
E2	TR29997	SFDR	122	DU
E3	13-0632 - Sumner Residential (Stratham Homes)	SFDR	129	DU
E4	TR35751	Condo/Townhouse	243	DU
E5	PP23219 (PM35865) (50% complete)	General Light Industrial	738.430	TSF
E6	Eastvale Shopping Center	Free-Standing Discount Superstore	192.000	TSF
		Specialty Retail	9.200	TSF
		Fast-Food Without Drive-Thru	7.200	TSF
		Coffee/Donut Shop w/ Drive Thru	2.000	TSF
		Fast-Food with Drive-Thru	3.500	TSF
		Gas Station w/ convenience store and car wash	16	VFP
E7	Van Leeuwen	SFDR	126	DU
E8	SP00358 - The Ranch at Eastvale	Shopping Center	267.200	TSF
		General Light Industrial	801.500	TSF
		Business Park	1,121.100	TSF
E9	SC Limonite, LLC	SFDR	323	DU
E10	Leal Master Plan	Lifestyle Center (Commercial)	1,300.000	TSF
		General Commercial	225.000	TSF
		Office	920.000	TSF
		Hotel	450	RM
		High Density Residential	500-660	DU
E11	Eastvale Commerce Center	Shopping Center	650.000	TSF
E12	S. Milliken Warehouse	High-Cube Warehouse	277.638	TSF
E13	15-1508 - Industrial Warehouse	Warehousing	156.478	TSF

Table 4-4

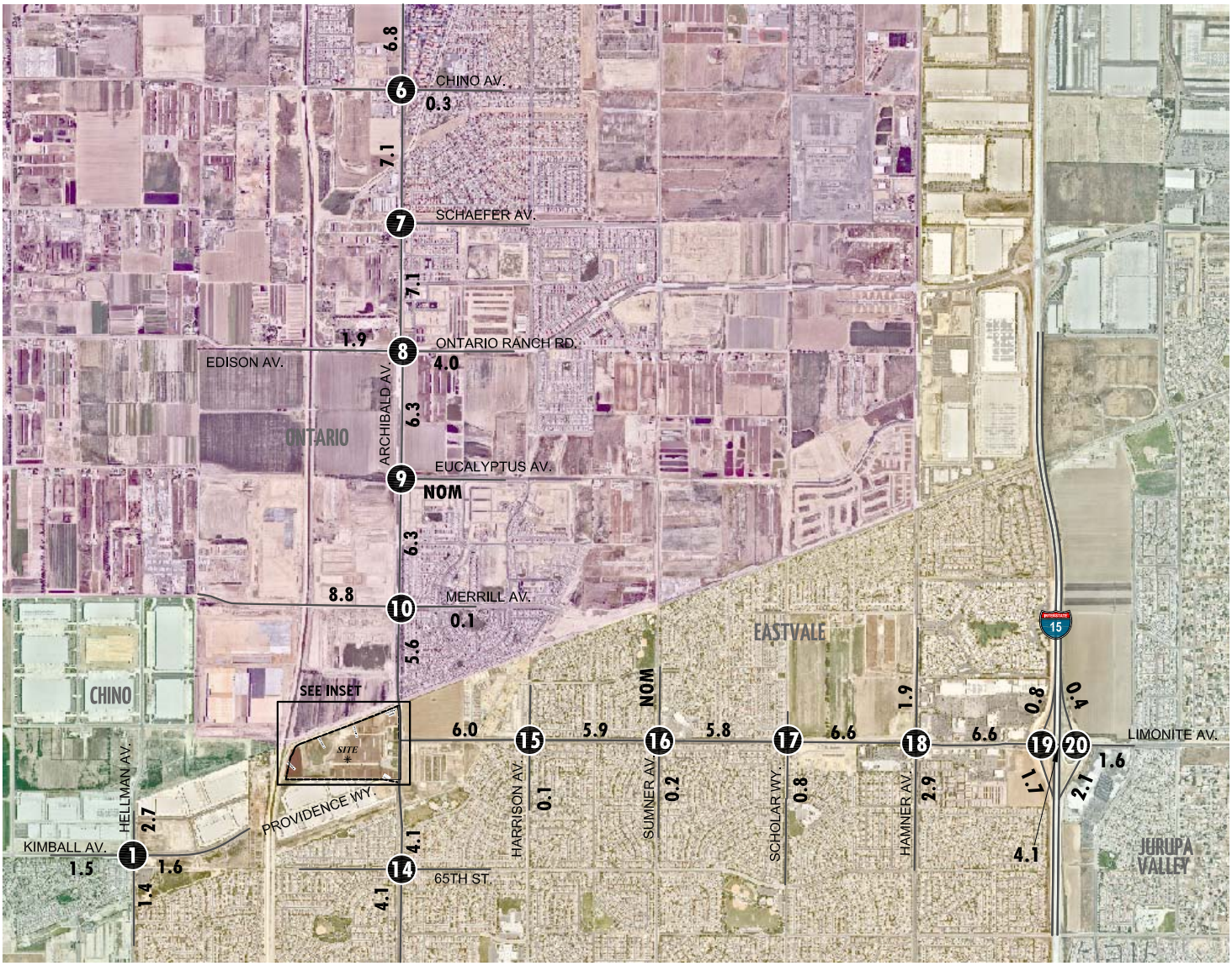
Cumulative Development Land Use Summary

#	Project/Location	Land Use[1]	Quantity	Units[2]
E15	Hamner Place (17-20015)	Gas Station	8	VFP
		Fast Food Restaurant with Drive-Thru	3.5000	TSF
		Coffee Shop with Drive-Thru	2.0000	TSF
		Restaurant	6.0000	TSF
		Restaurant with Drive-Thru	4.0000	TSF
		Office / Medical Building	10.0000	TSF
		Hotel	130	RM
		City Hall	40.0000	TSF
		Public Library	25.0000	TSF
E16	The Marketplace at the Enclave (14-2974)	Child Day Care Facility	9.131	TSF
E17	Copper Sky Residential by DR Horton (13-0395)	SFDR	224	DU
E18	Sunshine Growers Nursery (18-20040)	Greenhouse and Nursery	20	TSF
E19	The Campus (12-0750)	Industrial Buildings (11)	738.970	TSF
		Office / Medical Building		
E20	LBA Realty Industrial Building (14-1077)	Warehouse	446.173	TSF
E21	Restaurant with Pickup Window (Pizza Hut) (18-20037)	Fast Food Restaurant without Drive-Thru	6.380	TSF
E22	Vantage Point Church (15-1174)	Church	119.222	TSF
City of Chino Hills				
CH1	Vila Borba Specific Plan (TR 16414)	SFDR	172	DU
CH2	Country Club Villas	Condo/Townhouse	46	DU
CH3	Crossings at Chino Hills	Apartments	346	DU
CH4	The Goddard School	Daycare	10.587	TSF
CH5	Indus Light Industrial	General Light Industrial	100.330	TSF
CH6	The Santa Barbara	Condo/Townhouse - Low Rise	138	DU
		Condo/Townhouse - Mid Rise	186	DU
		Shopping Center	15.700	TSF
CH7	Heritage Professional Center	Hospital	55.000	TSF
		Medical Office Building	86.952	TSF
		Hotel	120	RM
		Shopping Center	38.848	TSF
		Restaurant	7.200	TSF
City of Jurupa Valley				
JV1	Thoroughbred Farms	General Light Industrial	42.6	AC
		Business Park	35.5	AC
		Commercial	19.1	AC
JV2	Harmony Trails	SFDR	176	DU
JV3	Vernola Marketplace Apartments	Apartments	397	DU
JV4	Riverbend (70% complete)	Residential	466	DU
JV5	Wineville Marketplace	Commercial	37.657	TSF
JV6	Express Car Wash	Car Wash	4.702	TSF
JV7	Shops @ Bellegrave	Commercial	10.000	TSF
JV8	Flying J Travel Center	Diesel Pumps	12	VFP
		Passenger Car Pumps	8	VFP

[1] SFDR = Single Family Detached Residential

[2] TSF = Thousand Square Feet; DU = Dwelling Unit; VFP = Vehicle Fueling Position ; AC = Acres

EXHIBIT 4-10: CUMULATIVE ONLY AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

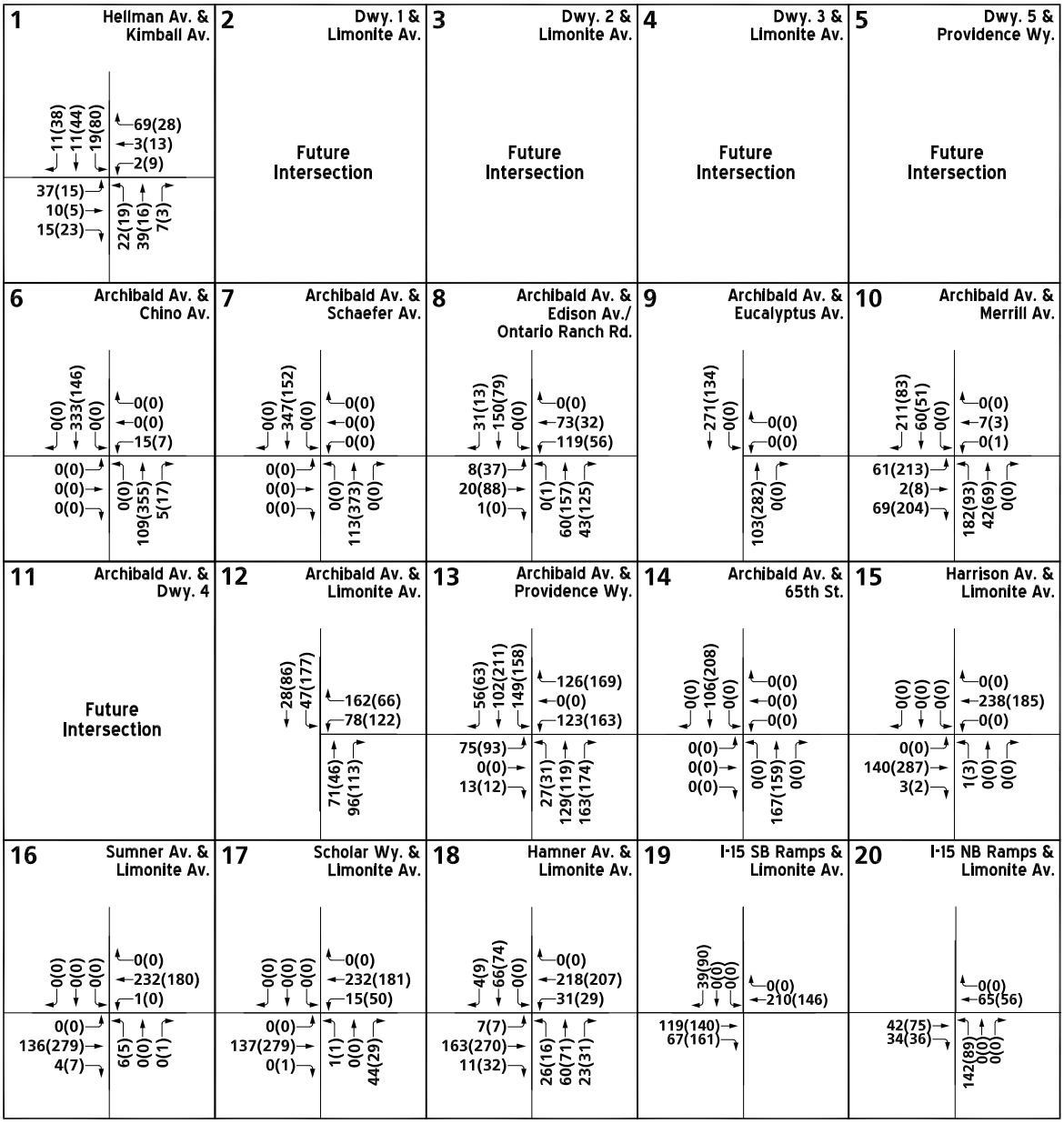


LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

EXHIBIT 4-11: CUMULATIVE ONLY PEAK HOUR TRAFFIC VOLUMES (IN PCE)



LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

4.7 HORIZON YEAR VOLUME DEVELOPMENT

Traffic projections for Horizon Year without Project conditions were derived from the RivTAM and SBTAM using accepted procedures for model forecast refinement and smoothing for study area intersections located within the County of Riverside and San Bernardino, respectively. The current version of the SBTAM (Version 2.20, March 2019) reflects the local input in the adopted 2016 SCAG RTP within the County of San Bernardino.

The traffic forecasts reflect the area-wide growth anticipated between Existing (2019) conditions and Horizon Year traffic conditions. In most instances the traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Therefore, the Horizon Year peak hour forecasts were refined using the model derived long range forecasts, base (validation) year model forecasts, along with existing peak hour traffic count data collected at each analysis location in May of 2019. The SBTAM has a base (validation) year of 2012 and a horizon (future forecast) year of 2040. The difference in model volumes (2040-2012) defines the growth in traffic over the 28-year period. The Riverside Transportation Analysis Model (RivTAM) has a base (validation) year of 2008 and a horizon (future forecast) year of 2040. The RivTAM 2040 model utilized for the purposes of this analysis assumes buildout of the City of Eastvale.

The refined future peak hour approach and departure volumes obtained from the model output data are then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program (NCHRP Report 255), along with initial estimates of turning movement proportions. A linear programming algorithm is used to calculate individual turning movements which match the known directional roadway segment forecast volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

The SBTAM uses an AM peak period-to-peak hour factor of 0.35 and a PM peak period-to-peak hour factor of 0.27. These factors represent the relationship of the highest single AM peak hour to the modeled 3-hour AM peak period (an even distribution would result in a factor of 0.33) and the highest single PM peak hour to the modeled 4-hour PM peak period (an even distribution would result in a factor of 0.25). The model data from RivTAM represents peak hour data and therefore did not require adjustments.

Typically, the model growth is prorated and is subsequently added to the existing (base validation) traffic volumes to represent Horizon Year traffic conditions. In an effort to conduct a conservative analysis, reductions to traffic forecasts from either Existing, Opening Year Cumulative, or Interim Year traffic conditions were not assumed as part of this analysis. As such, in conjunction with the addition of cumulative projects that are not consistent with the General Plan, additional growth has also been applied on a movement-by-movement basis, where applicable, to estimate reasonable Horizon Year forecasts. Horizon Year turning volumes were compared to Interim Year (2023) volumes in order to ensure a minimum growth as a part of the refinement process. The minimum growth includes any additional growth between Interim Year (2023) and Horizon Year traffic conditions that is not accounted for by the traffic generated by cumulative development projects and ambient growth rates assumed between Existing (2019)

and Interim Year (2023) conditions. Future estimated peak hour traffic data was used for new intersections and intersections with an anticipated change in travel patterns to further refine the Horizon Year peak hour forecasts.

The future Horizon Year Without Project peak hour turning movements were then reviewed by Urban Crossroads, Inc. for reasonableness, and in some cases, were adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes. Flow conservation checks ensure that traffic flow between two closely spaced intersections, such as two adjacent driveway locations, is verified in order to make certain that vehicles leaving one intersection are entering the adjacent intersection and that there is no unexplained loss of vehicles. The result of this traffic forecasting procedure is a series of traffic volumes which are suitable for traffic operations analysis.

RivTAM and SBTAM either do not include a truck component or have data that is unusually low. As such, in an effort to conduct a conservative analysis, the presence of trucks has been accounted for based on the manual volume adjustments made to demonstrate growth above Interim Year (2023) traffic forecasts, which are presented and evaluated in PCE (see Section 3.7 *Existing (2019) Traffic Counts* for discussion on PCE). As such, the Horizon Year forecasts are also assumed to be in PCE for the purposes of this analysis. Post-processing worksheets for Horizon Year Without Project traffic conditions are provided in Appendix 4.1.

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5 E+P TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing plus Project (E+P) conditions and the resulting intersection operations, traffic signal warrant, roadway segment capacity, freeway facility operations analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for E+P conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for E+P conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).
- The new interchange improvements at the I-15 Freeway and Limonite Avenue are completed (see Exhibit 3-21).

5.2 EXISTING PLUS PROJECT TRAFFIC VOLUME FORECASTS

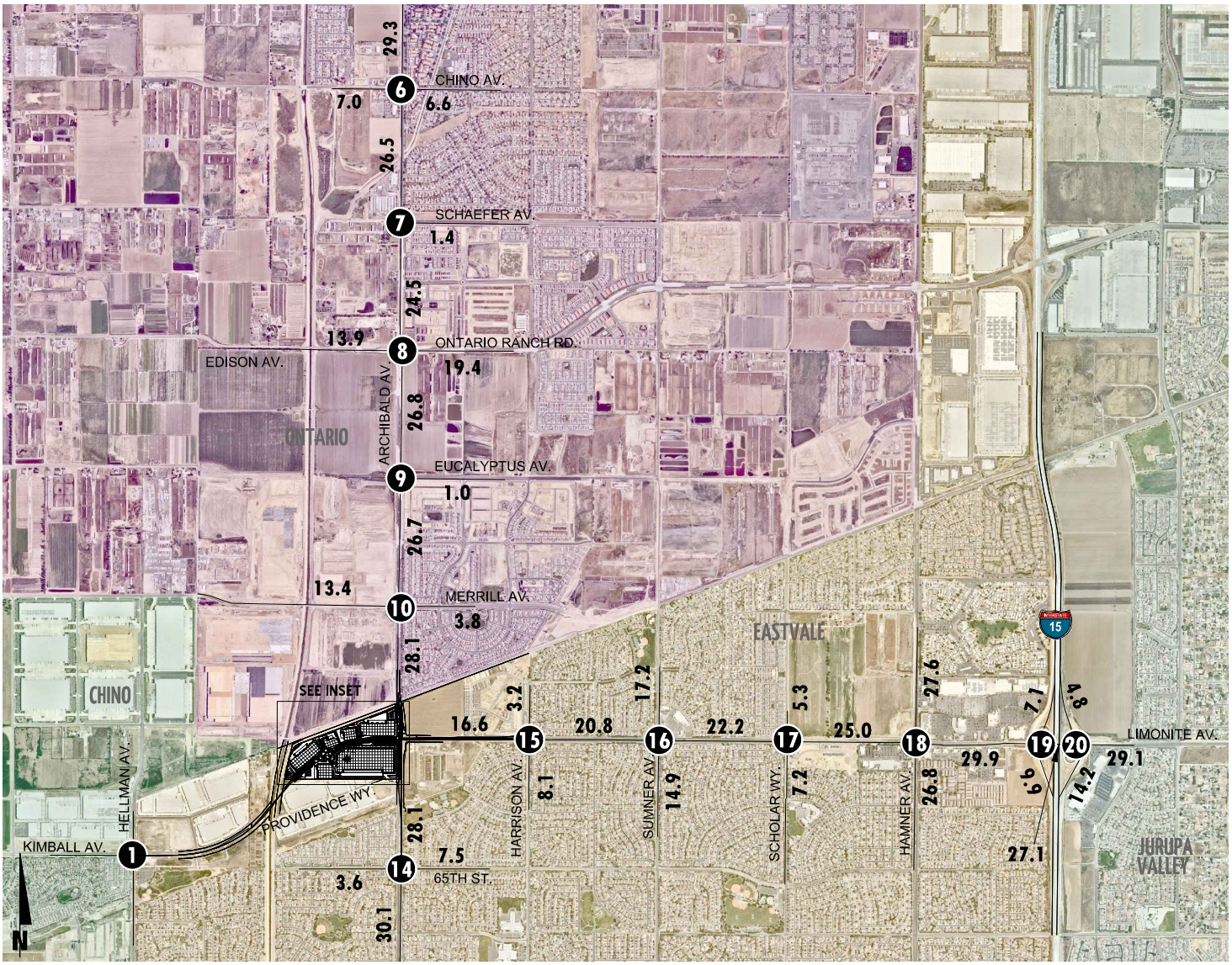
This scenario includes Existing traffic volumes plus Project traffic. The ADT volumes and weekday AM and PM peak hour intersection turning movement volumes which can be expected for E+P traffic conditions are shown on Exhibits 5-1 and 5-2, respectively.

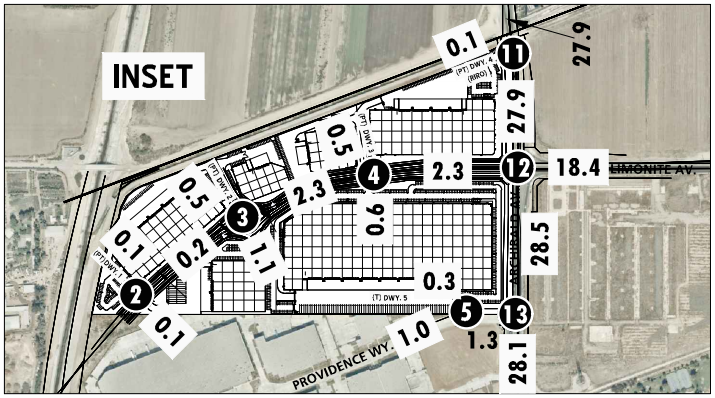
5.3 INTERSECTION OPERATIONS ANALYSIS

E+P peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results are summarized in Table 5-1, which indicates that with the addition of Project traffic, all study area intersections are anticipated to operate at an acceptable LOS during the peak hours, consistent with Existing (2019) traffic conditions.

Consistent with Table 5-1, a summary of the peak hour intersection LOS for E+P conditions is shown on Exhibit 5-3. The intersection operations analysis worksheets for E+P traffic conditions are included in Appendix 5.1 of this TIA.

EXHIBIT 5-1: E+P AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

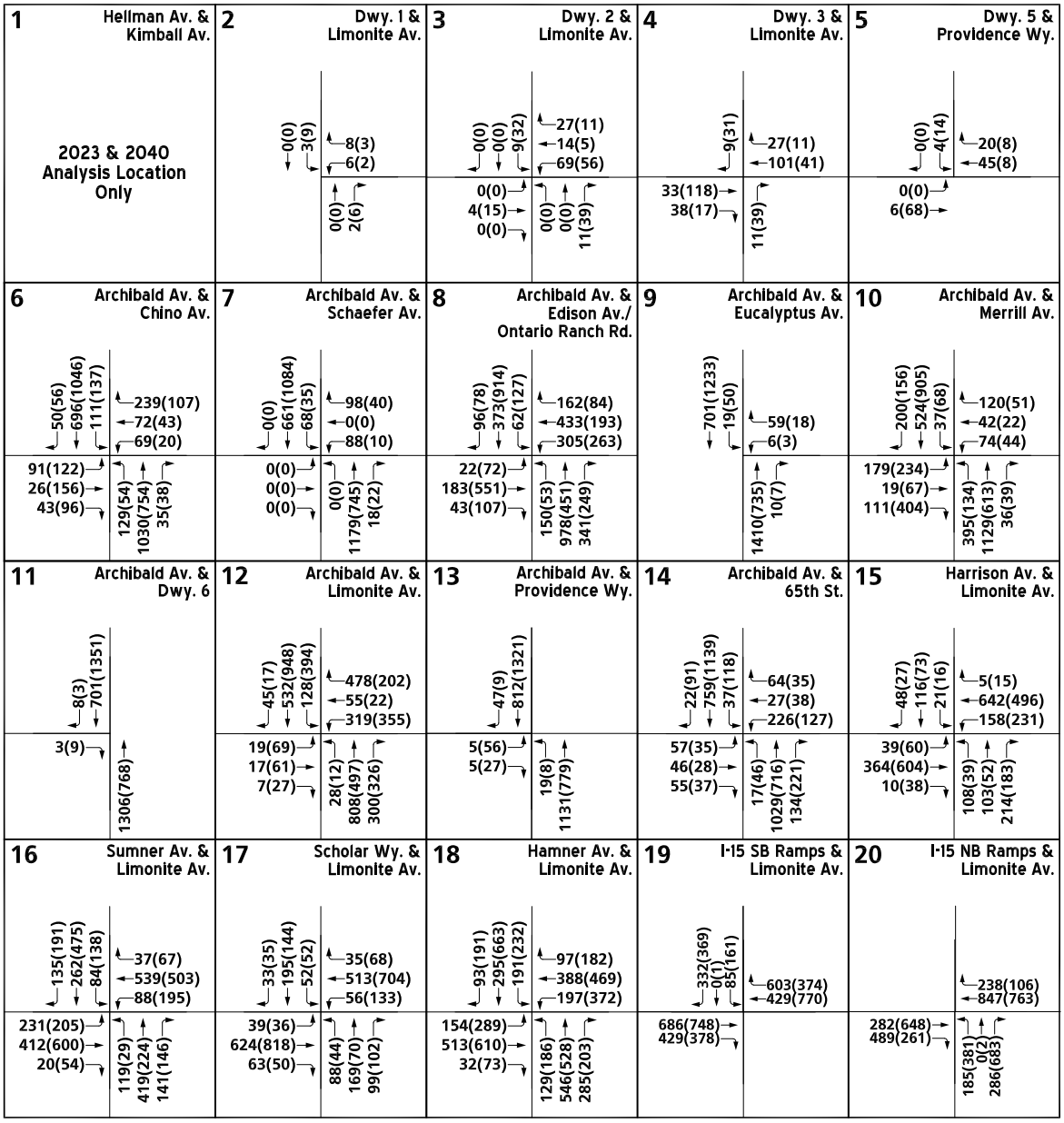




LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

EXHIBIT 5-2: E+P TRAFFIC VOLUMES (IN PCE)



LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

Table 5-1

Intersection Analysis for E+P Conditions

#	Intersection	Traffic Control[2]	Existing (2019) Delay[1] (secs.) AM	Existing (2019) Delay[1] (secs.) PM	Existing (2019) Level of Service AM	Existing (2019) Level of Service PM	E+P Delay[1] (secs.) AM	E+P Delay[1] (secs.) PM	E+P Level of Service AM	E+P Level of Service PM	Change in Delay (sec.)[3] AM	Change in Delay (sec.)[3] PM	Significant Impact?[4]	Acceptable LOS[5]
1	Hellman Av. & Kimball Av.		Not Analyzed[6]				Not Analyzed[6]				--	--	--	--
2	Driveway 1 & Limonite Av.	**CSS**	Future Intersection				8.6	8.6	A	A	--	--	No	D
3	Driveway 2 & Limonite Av.	**RA**	Future Intersection				2.9	2.9	A	A	--	--	No	D
4	Driveway 3 & Limonite Av.	**CSS**	Future Intersection				8.7	8.8	A	A	--	--	No	D
5	Driveway 5 & Providence Wy.	**CSS**	Future Intersection				8.8	9.0	A	A	--	--	No	D
6	Archibald Av. & Chino Av.	TS	19.4	20.8	B	C	19.5	20.9	B	C	N/A[7]	N/A[7]	No	E
7	Archibald Av. & Schaefer Av.	TS	11.1	7.0	B	A	11.1	7.0	B	A	N/A[7]	N/A[7]	No	E
8	Archibald Av. & Ontario Ranch Rd.	TS	28.7	29.4	C	C	29.0	29.9	C	C	N/A[7]	N/A[7]	No	E
9	Archibald Av. & Eucalyptus Av.	TS	5.2	3.8	A	A	5.2	3.8	A	A	N/A[7]	N/A[7]	No	E
10	Archibald Av. & Merrill Av.	TS	31.8	31.9	C	C	32.9	35.3	C	D	N/A[7]	N/A[7]	No	E
11	Archibald Av. & Driveway 4	**CSS**	Future Intersection				10.9	15.1	B	C	--	--	No	D
12	Archibald Av. & Limonite Av.	TS	23.4	23.8	C	C	38.0	44.4	D	D	--	--	No	D
13	Archibald Av. & Providence Wy.	TS	5.5	8.1	A	A	5.8	9.0	A	A	--	--	No	D
14	Archibald Av. & 65th St.	TS	23.2	23.7	C	C	23.4	24.8	C	C	--	--	No	D
15	Harrison Av. & Limonite Av.	TS	17.8	17.5	B	B	18.0	17.7	B	B	--	--	No	D
16	Sumner Av. & Limonite Av.	TS	18.6	18.6	B	B	18.9	18.9	B	B	--	--	No	D
17	Scholar Way & Limonite Av.	TS	15.9	15.5	B	B	15.9	15.6	B	B	--	--	No	D
18	Hamner Av. & Limonite Av.	TS	24.6	30.3	C	C	24.8	31.0	C	C	--	--	No	D
19	I-15 SB Ramps & Limonite Av.[8]	TS	5.9	6.5	A	A	6.2	6.5	A	A	--	--	No	D
20	I-15 NB Ramps & Limonite Av.[8]	TS	6.3	11.9	A	B	6.6	11.9	A	B	--	--	No	D

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

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

[2] CSS = Cross-street Stop; RA = Roundabout; TS = Traffic Signal; **CSS** = Improvement

[3] The change in delay is calculated between pre-project and With Project scenarios for City of Eastvale intersections already operating at an unacceptable LOS in the pre-project traffic condition.

[4] Impact is significant if the pre-project condition is at or better than LOS D (or acceptable LOS) and the project-generated traffic causes deterioration below acceptable levels, a deficiency is deemed to occur. However, if the pre-project condition is already below LOS D (or acceptable LOS), and the Project either contributes 50 or more peak hour trips or increases the delay by 2.5 seconds or more from the pre-project condition (City of Eastvale threshold), then the Project will be responsible for mitigating its impact to a LOS equal to or better than pre-project conditions.

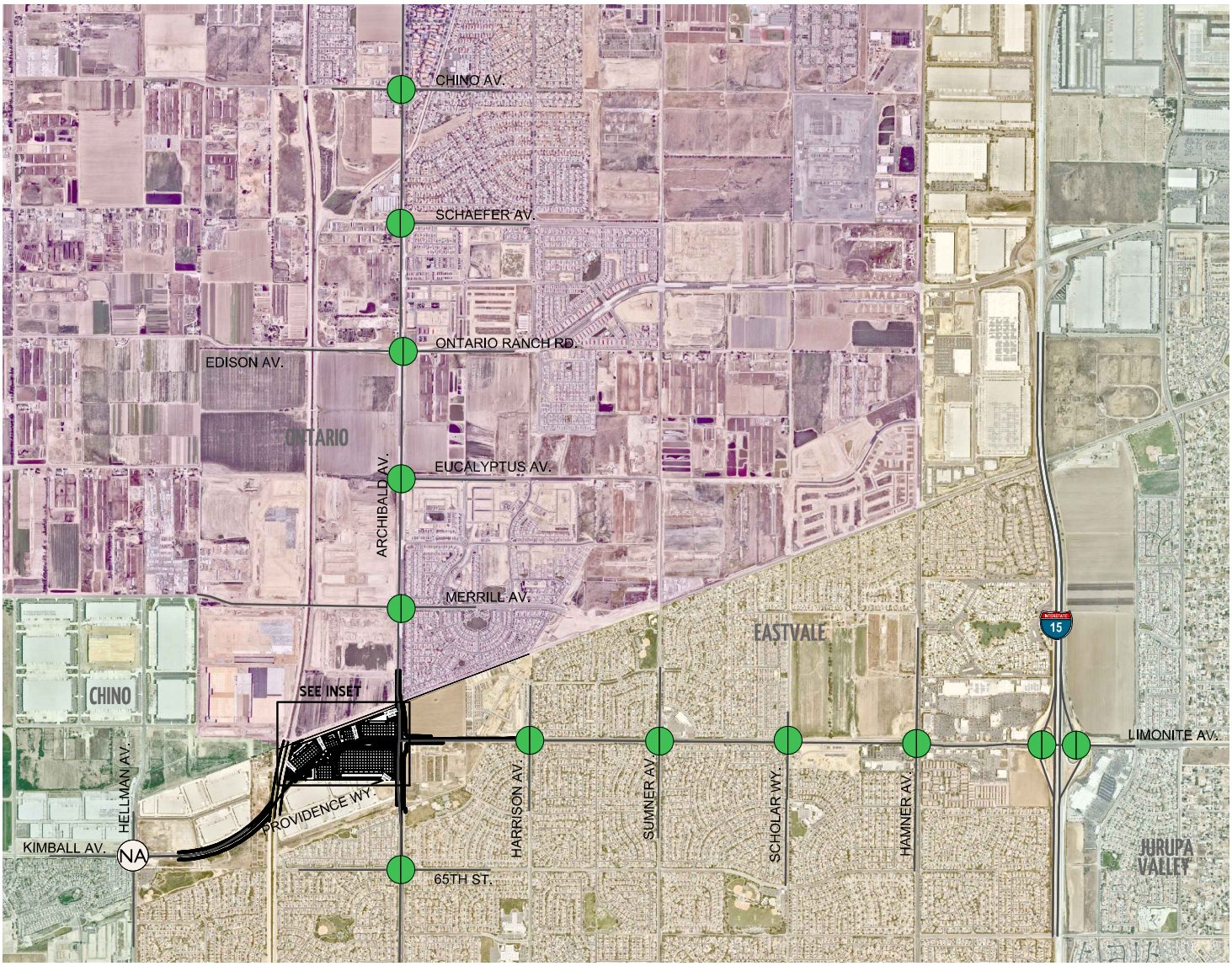
[5] Minimum acceptable LOS for each applicable jurisdiction.

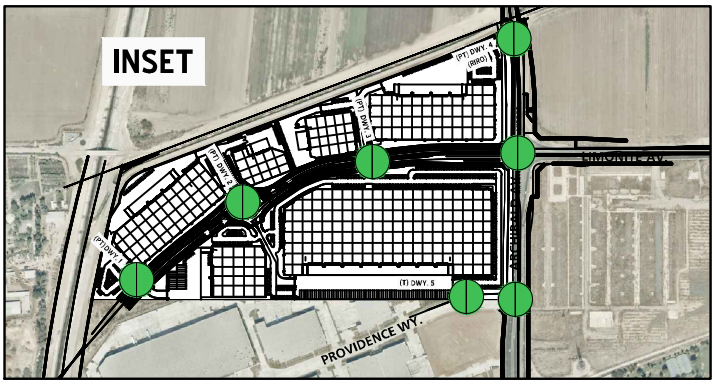
[6] Intersection is only analyzed under 2023 and 2040 conditions.

[7] N/A = Not Applicable. Change in delay is not applicable to City of Ontario, City of Chino, and Caltrans intersections. 50 peak hour trip criteria applied to these locations.

[8] Interchange project has been completed. As such, lane geometries at this location reflect the completed interchange project.

EXHIBIT 5-3: E+P SUMMARY OF LOS





LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS E
- = LOS F
- (NA) = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

N

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URBAN CROSSROADS

5.4 ROADWAY SEGMENT CAPACITY ANALYSIS

As noted previously, the City of Eastvale stated roadway segment capacities are approximate figures only and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future traffic demand. Table 5-2 provides a summary of the E+P conditions roadway segment capacity analysis based on the City of Eastvale General Plan Roadway Segment Capacity Thresholds identified previously in Table 2-3. As shown in Table 5-2 and consistent with Existing (2019) traffic conditions, the study area roadway segments are anticipated to continue to operate at an acceptable LOS based on the City's planning level daily roadway capacity thresholds.

5.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no study area intersections anticipated to warrant a planning level (daily volume based) traffic signal under E+P traffic conditions (see Appendix 5.2).

5.6 OFF-RAMP QUEUING ANALYSIS

Queuing analysis findings for E+P are presented in Table 5-3. As shown in Table 5-3 and consistent with Existing (2019) traffic conditions, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows with the addition of Project traffic. Worksheets for E+P traffic conditions off-ramp queuing analysis are provided in Appendix 5.3.

5.7 FREEWAY FACILITY ANALYSIS

E+P mainline directional volumes for the AM and PM peak hours are provided on Exhibit 5-4. As shown in Table 5-4 and consistent with Existing (2019) traffic conditions, all study area freeway mainline segments and merge/diverge ramp junctions are anticipated to continue to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours for E+P traffic conditions. E+P freeway facility analysis worksheets are provided in Appendix 5.4.

Table 5-2

Roadway Segment Capacity Analysis for E+P Conditions

#	Roadway	Segment Limits	Roadway Section	LOS Capacity[1]	Existing (2019)	V/C[2]	LOS[3]	Acceptable LOS	E+P	V/C[2]	LOS[3]	Acceptable LOS
1	Archibald Av.	Limonite Av. to 65th St.	4D	35,900	27,904	0.78	C	D	28,522	0.79	C	D
2	Limonite Av.	Archibald Av. to Sumner Av.	4D	35,900	20,570	0.57	A	D	21,533	0.60	A	D
3		Sumner Av. to Hamner Av.	4D	35,900	24,178	0.67	B	D	25,074	0.70	B	D
4		Hamner Av. to I-15 Freeway	6D	53,900	30,228	0.56	A	D	30,937	0.57	A	D

[1] These maximum roadway capacities have been obtained from the City of Eastvale's General Plan.

[2] V/C = Volume to Capacity Ratio

[3] LOS = Level of Service

Table 5-3

Peak Hour Freeway Off-Ramp Queuing Summary for E+P Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2019)				E+P			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak	PM Peak	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-15 SB Ramps & Limonite Av.	SBL	1,765	61	96	Yes	Yes	61	96	Yes	Yes
	SBL/T/R	1,765	61	97	Yes	Yes	61	97	Yes	Yes
	SBR	425	43	47	Yes	Yes	43	52	Yes	Yes
I-15 NB Ramps & Limonite Av.	NBL	1,765	74	140	Yes	Yes	80	141	Yes	Yes
	NBL/T/R	1,765	74	142	Yes	Yes	81	144	Yes	Yes
	NBR	475	32	189	Yes	Yes	32	190	Yes	Yes

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

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

EXHIBIT 5-4: E+P FREEWAY MAINLINE VOLUMES



LEGEND:

⟵ 100/200 = AM/PM PEAK HOUR VOLUMES

NOTE: VOLUMES IN ACTUAL VEHICLES (NOT PCE)

N

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Table 5-4

Freeway Facility Analysis for E+P Conditions

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	Existing (2019)				E+P			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]
I-15	Southbound	North of Limonite Avenue	3	21.8	C	18.6	C	22.1	C	18.6	C
		Off-Ramp at Limonite Avenue	3	25.3	C	22.6	C	25.6	C	22.6	C
		Loop On-Ramp at Limonite	3	23.2	C	17.5	B	23.2	C	17.5	B
		On-Ramp at Limonite Avenue	3	24.5	C	19.0	B	24.5	C	19.1	B
		South of Limonite Avenue	3	26.1	C	19.7	C	26.1	C	19.8	C
	Northbound	North of Limonite Avenue	3	21.7	C	21.1	C	21.8	C	21.4	C
		On-Ramp at Limonite Avenue	3	19.0	B	18.2	B	19.1	B	18.3	B
		Loop On-Ramp at Limonite	3	20.4	C	19.8	B	20.5	C	20.0	B
		Off-Ramp at Limonite Avenue	3	24.6	C	30.2	D	24.7	C	30.2	D
		South of Limonite Avenue	3	20.4	C	26.0	C	20.5	C	26.0	C

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] LOS = Level of Service

5.8 PROJECT DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

This section provides a summary of Project deficiencies and recommended improvements.

5.8.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

As shown previously in Table 5-1, the study area intersections are anticipated to operate at an acceptable LOS during the peak hours under E+P traffic conditions. As such, no improvements have been recommended.

5.8.2 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON ROADWAY SEGMENTS

As shown previously in Table 5-2, the study area roadway segments are anticipated to operate at an acceptable LOS during the peak hours under E+P traffic conditions. As such, no improvements have been recommended.

5.8.3 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON OFF-RAMP QUEUES

As shown previously in Table 5-3, there are no anticipated peak hour queuing issues at the I-15 Freeway and Limonite Avenue interchange for E+P traffic conditions. As such, no improvements have been recommended.

5.8.4 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON FREEWAY FACILITIES

As shown previously in Table 5-4, the study area freeway mainline segments or merge/diverge ramp junctions are anticipated to operate at an acceptable LOS during the peak hours. As such, no improvements have been recommended.

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6 OPENING YEAR CUMULATIVE (2021) TRAFFIC CONDITIONS

This section discusses the methods used to develop Opening Year Cumulative (2021) Without and With Project traffic forecasts, and the resulting intersection operations, traffic signal warrant, roadway segment capacity, and freeway facility operations analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2021) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways such as the eastern extension of Providence Way).
- The new interchange improvements at the I-15 Freeway and Limonite Avenue are completed (see Exhibit 3-21).

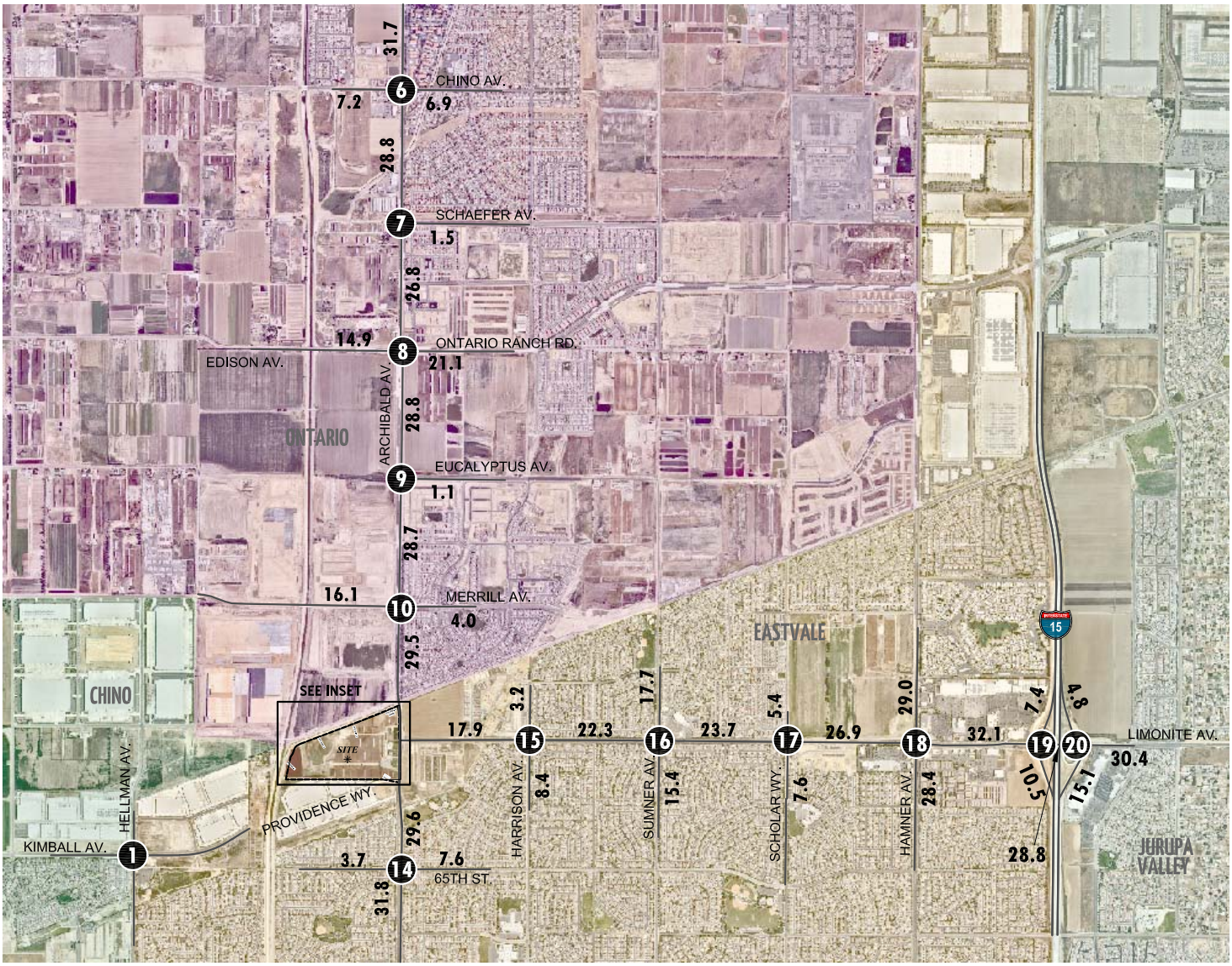
6.2 OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 3.23% plus traffic from pending and approved but not yet constructed known development projects in the area. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2021) Without Project traffic conditions are shown on Exhibits 6-1 and 6-2, respectively.

6.3 OPENING YEAR CUMULATIVE (2021) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Opening Year Cumulative (2021) Without Project traffic in conjunction with the addition of Project traffic. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2021) With Project traffic conditions are shown on Exhibit 6-3 and 6-4, respectively.

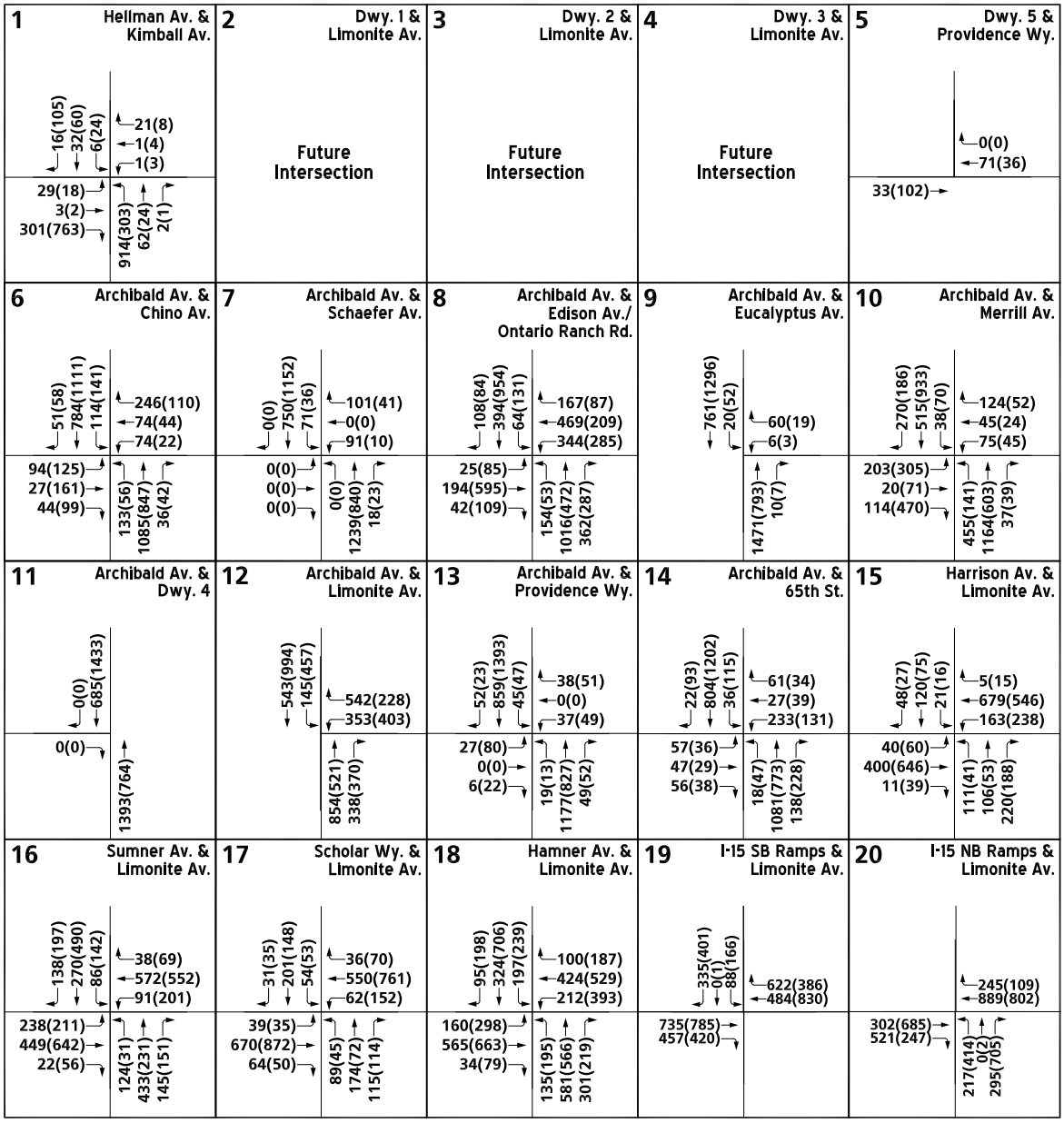
EXHIBIT 6-1: OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

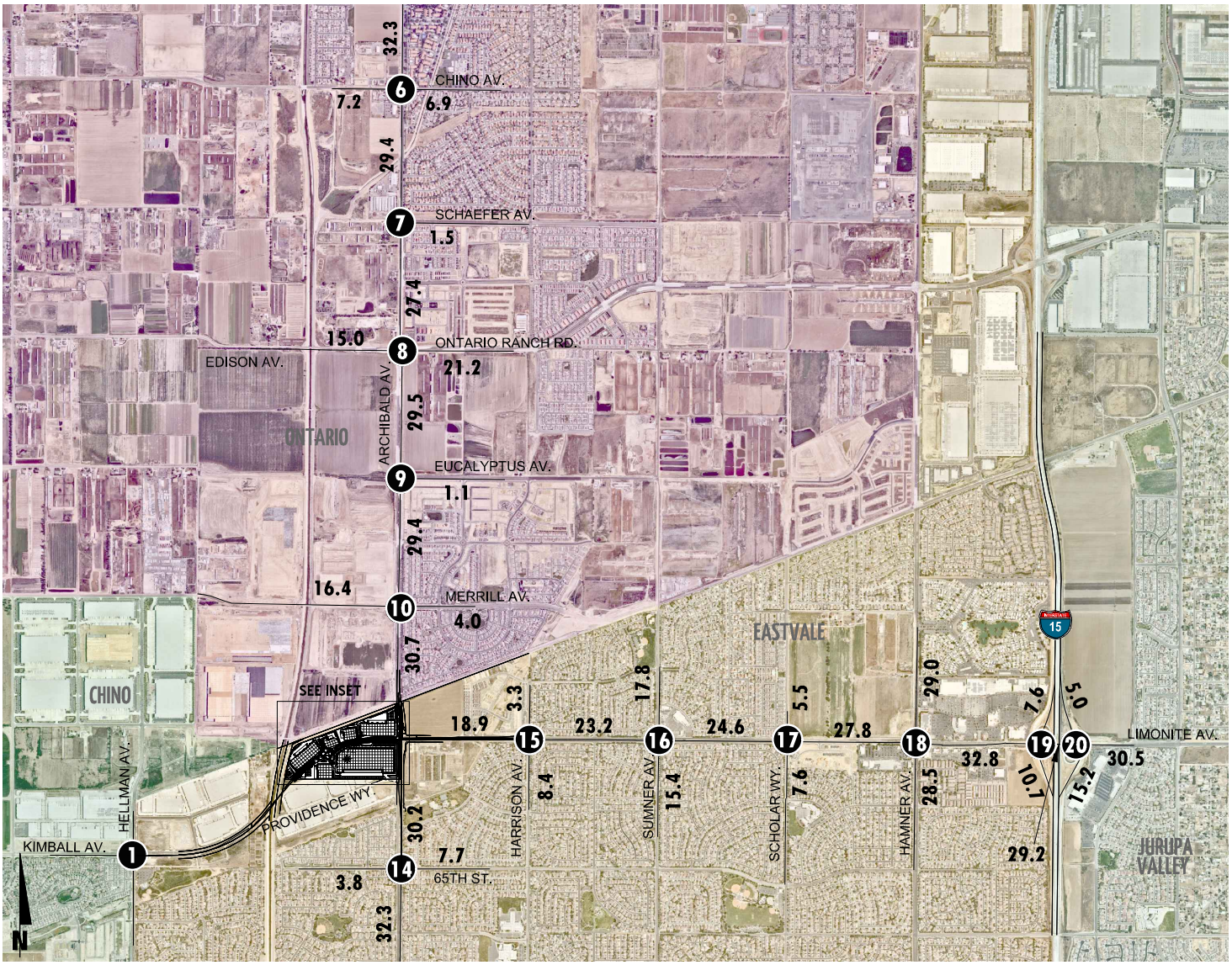
EXHIBIT 6-2: OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT TRAFFIC VOLUMES (IN PCE)

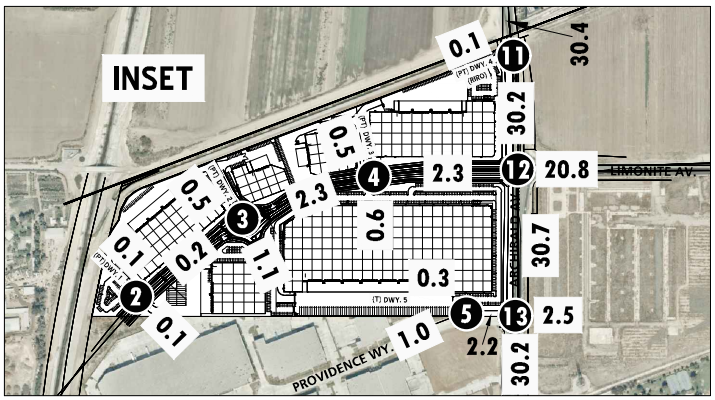


LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

EXHIBIT 6-3: OPENING YEAR CUMULATIVE (2021) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

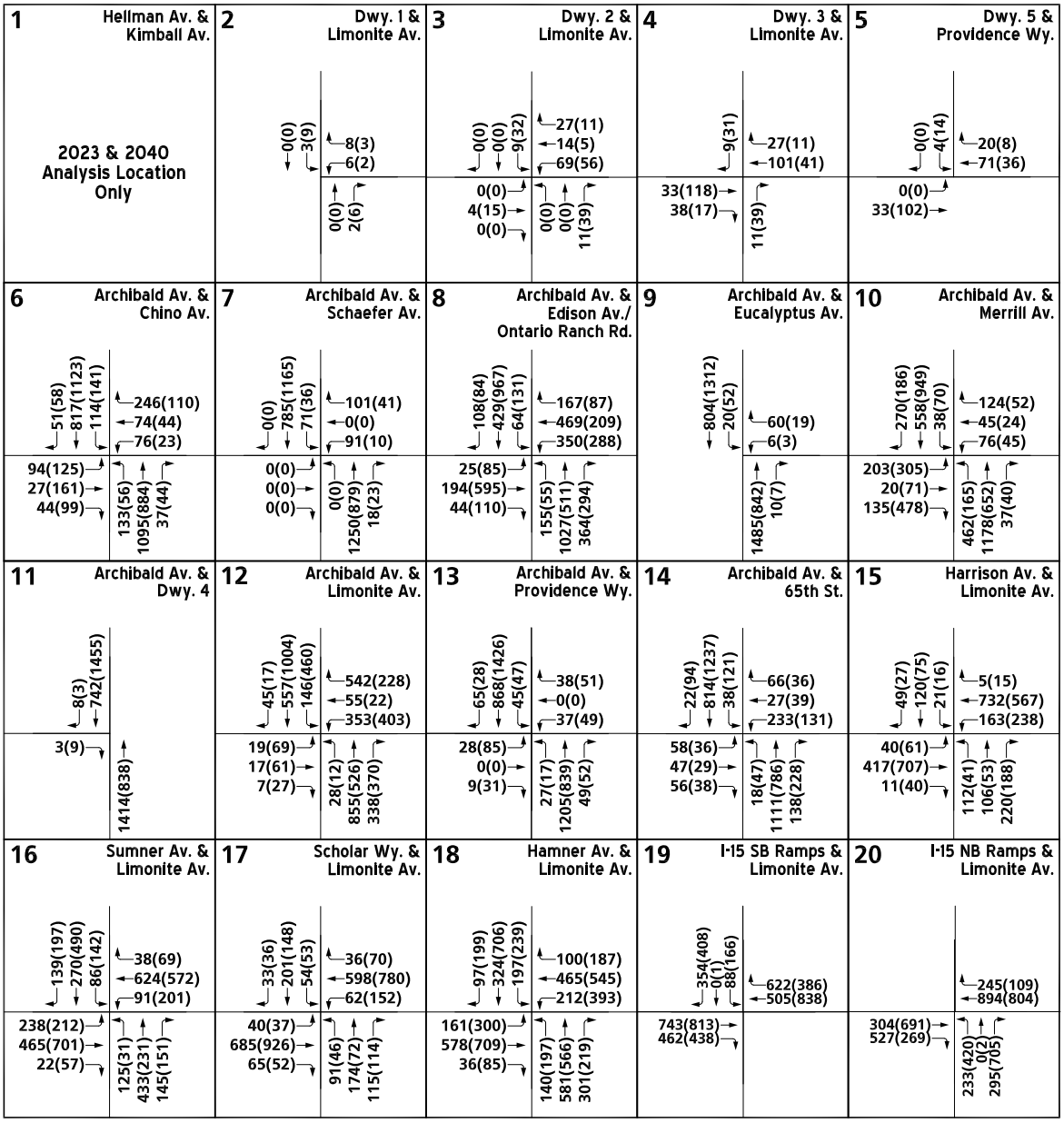




LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

EXHIBIT 6-4: OPENING YEAR CUMULATIVE (2021) WITH PROJECT TRAFFIC VOLUMES (IN PCE)



LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

N

6.4 INTERSECTION OPERATIONS ANALYSIS

6.4.1 OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT TRAFFIC CONDITIONS

LOS calculations were conducted for the study intersections to evaluate their operations under Opening Year Cumulative (2021) Without Project conditions with roadway and intersection geometrics consistent with Section 6.1 *Roadway Improvements*. As shown in Table 6-1, the study area intersections are anticipated to operate at an acceptable LOS under Opening Year Cumulative (2021) Without Project traffic conditions. A summary of the peak hour intersection LOS for Opening Year Cumulative (2021) Without Project conditions is shown on Exhibit 6-5. The intersection operations analysis worksheets for Opening Year Cumulative (2021) Without Project traffic conditions are included in Appendix 6.1 of this TIA.

6.4.2 OPENING YEAR CUMULATIVE (2021) WITH PROJECT TRAFFIC CONDITIONS

As shown in Table 6-1 and illustrated on Exhibit 6-6, the following study area intersection is anticipated to operate at an unacceptable LOS during the peak hours with the addition of Project traffic:

- Archibald Av. & Limonite Av. (#12) – LOS E AM and PM peak hours

The intersection operations analysis worksheets for Opening Year Cumulative (2021) With Project traffic conditions are included in Appendix 6.2 of this TIA.

6.5 ROADWAY SEGMENT CAPACITY ANALYSIS

As noted previously, the roadway segment capacities are approximate figures only, and are typically used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future forecasted traffic demand. Table 6-2 provides a summary of the Opening Year Cumulative (2021) conditions roadway segment capacity analysis based on the City of Eastvale General Plan Roadway Segment Capacity Thresholds identified previously in Table 2-3. As shown in Table 6-2 and consistent with Existing (2019) traffic conditions, all study area roadway segments are anticipated to continue operate at an acceptable LOS (based on daily roadway segment capacities) under Opening Year Cumulative (2021) Without and With Project traffic conditions.

6.6 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no unsignalized intersections for Opening Year Cumulative (2021) Without Project traffic conditions. As such, no traffic signal warrants have been evaluated for Opening Year Cumulative (2021) Without Project traffic conditions. For Opening Year Cumulative (2021) With Project traffic conditions, there are no future intersections anticipated to meet planning level traffic signal warrants (see Appendix 6.3).

Table 6-1

Intersection Analysis for Opening Year Cumulative (2021) Conditions

#	Intersection	Traffic Control[2]	2021 Without Project Delay[1] (secs.) AM	PM	Level of Service AM	PM	2021 With Project Delay[1] (secs.) AM	PM	Level of Service AM	PM	Change in Delay (sec.)[3] AM	PM	Significant Impact?[4]	Acceptable LOS[5]
1	Hellman Av. & Kimball Av.		Not Analyzed[6]				Not Analyzed[6]				--	--	--	--
2	Driveway 1 & Limonite Av.	**CSS**	Future Intersection				8.6	8.6	A	A	--	--	No	D
3	Driveway 2 & Limonite Av.	**RA**	Future Intersection				2.9	2.9	A	A	--	--	No	D
4	Driveway 3 & Limonite Av.	**CSS**	Future Intersection				8.7	8.8	A	A	--	--	No	D
5	Driveway 5 & Providence Wy.	**CSS**	Future Intersection				9.1	9.4	A	A	--	--	No	D
6	Archibald Av. & Chino Av.	TS	20.6	22.1	C	C	20.8	22.3	C	C	N/A[7]	N/A[7]	No	E
7	Archibald Av. & Schaefer Av.	TS	11.1	7.1	B	A	11.1	7.1	B	A	N/A[7]	N/A[7]	No	E
8	Archibald Av. & Ontario Ranch Rd.	TS	33.3	33.6	C	C	33.7	34.2	C	C	N/A[7]	N/A[7]	No	E
9	Archibald Av. & Eucalyptus Av.	TS	5.5	4.0	A	A	5.5	4.0	A	A	N/A[7]	N/A[7]	No	E
10	Archibald Av. & Merrill Av.	TS	41.8	47.5	D	D	43.8	52.0	D	D	N/A[7]	N/A[7]	No	E
11	Archibald Av. & Driveway 4	**CSS**	Future Intersection				11.1	16.0	B	C	--	--	No	D
12	Archibald Av. & Limonite Av.	TS	32.8	38.7	C	D	**55.2**	**65.1**	**E**	**E**	22.4	26.4	Yes	D
13	Archibald Av. & Providence Wy.[8]	TS	16.3	18.4	B	B	16.7	19.4	B	B	--	--	No	D
14	Archibald Av. & 65th St.	TS	24.1	24.3	C	C	24.4	25.4	C	C	--	--	No	D
15	Harrison Av. & Limonite Av.	TS	18.3	17.8	B	B	18.4	18.0	B	B	--	--	No	D
16	Sumner Av. & Limonite Av.	TS	19.4	19.5	B	B	19.7	19.9	B	B	--	--	No	D
17	Scholar Way & Limonite Av.	TS	16.3	16.4	B	B	16.4	16.6	B	B	--	--	No	D
18	Hamner Av. & Limonite Av.	TS	26.0	32.9	C	C	26.2	33.5	C	C	--	--	No	D
19	I-15 SB Ramps & Limonite Av.[9]	TS	6.2	6.9	A	A	6.5	7.0	A	A	N/A[7]	N/A[7]	No	D
20	I-15 NB Ramps & Limonite Av.[9]	TS	7.1	12.2	A	B	7.4	12.2	A	B	N/A[7]	N/A[7]	No	D

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

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

[2] CSS = Cross-street Stop; RA = Roundabout; TS = Traffic Signal; **CSS** = Improvement

[3] The change in delay is calculated between pre-project and With Project scenarios for City of Eastvale intersections already operating at an unacceptable LOS in the pre-project traffic condition.

[4] Impact is significant if the pre-project condition is at or better than LOS D (or acceptable LOS) and the project-generated traffic causes deterioration below acceptable levels, a deficiency is deemed to occur. However, if the pre-project condition is already below LOS D (or acceptable LOS), and the Project either contributes 50 or more peak hour trips or increases the delay by 2.5 seconds or more from the pre-project condition (City of Eastvale threshold), then the Project will be responsible for mitigating its impact to a LOS equal to or better than pre-project conditions.

[5] Minimum acceptable LOS for each applicable jurisdiction.

[6] Intersection is only analyzed under 2023 and 2040 conditions.

[7] N/A = Not Applicable. Change in delay is not applicable to City of Ontario, City of Chino, and Caltrans intersections. 50 peak hour trip criteria applied to these locations.

[8] Assumes the east leg is in place, which is needed to accommodate site access to a cumulative project.

[9] Interchange project has been completed. As such, lane geometries at this location reflect the completed interchange project.

Table 6-2

Roadway Segment Capacity Analysis for Opening Year Cumulative (2021) Conditions

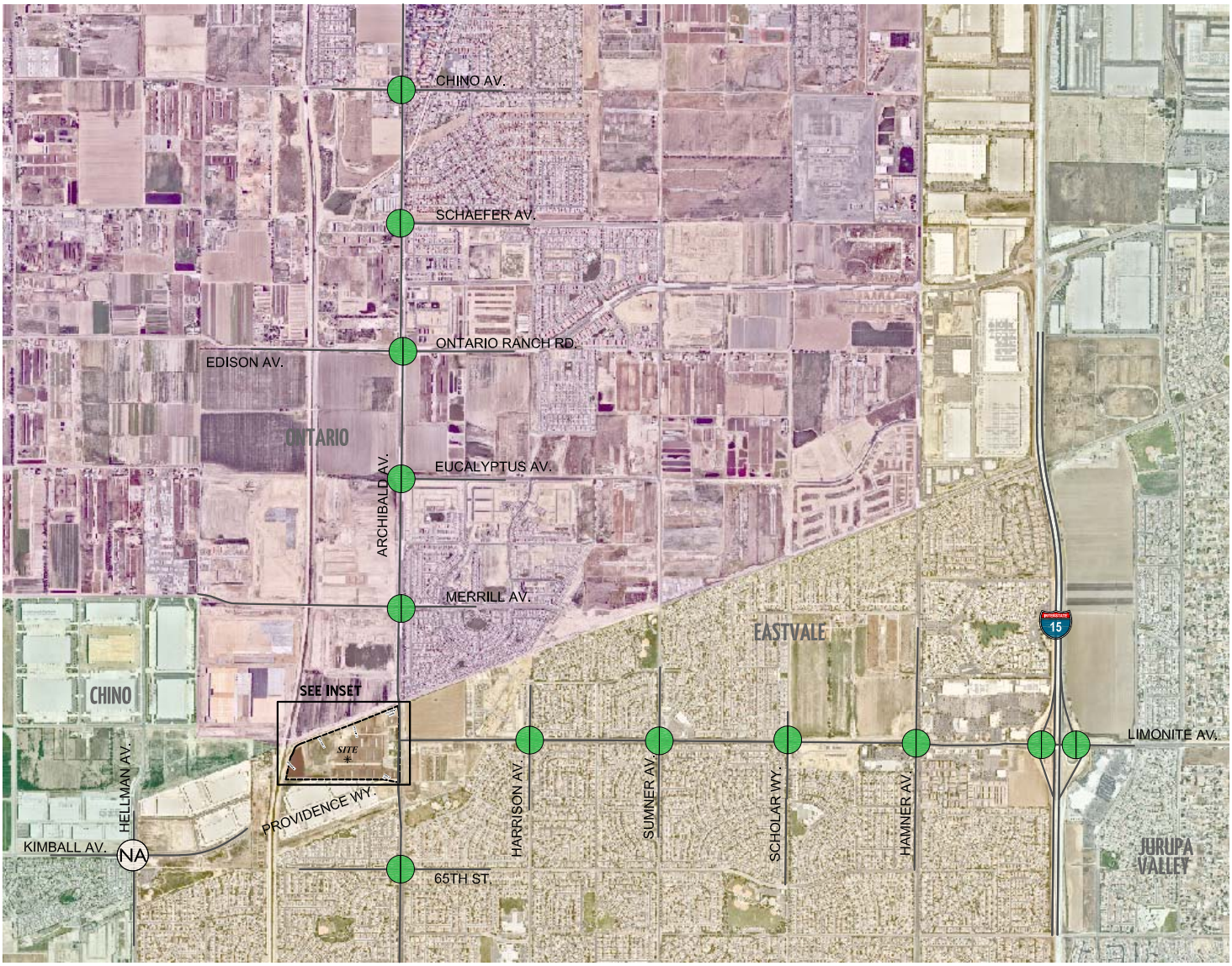
#	Roadway	Segment Limits	Roadway Section	LOS Capacity[1]	2021 NP	V/C[2]	LOS[3]	2021 WP	V/C[2]	LOS[3]	Acceptable LOS
1	Archibald Av.	Limonite Av. to 65th St.	4D	35,900	30,047	0.84	D	30,665	0.85	D	D
2	Limonite Av.	Archibald Av. to Sumner Av.	4D	35,900	23,028	0.64	B	23,991	0.67	B	D
3		Sumner Av. to Hamner Av.	4D	35,900	26,925	0.75	C	27,821	0.77	C	D
4		Hamner Av. to I-15 Freeway	6D	53,900	33,167	0.62	B	33,876	0.63	B	D

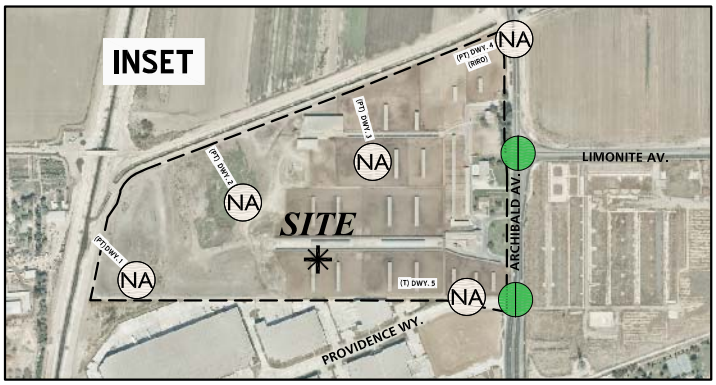
[1] These maximum roadway capacities have been obtained from the City of Eastvale's General Plan.

[2] V/C = Volume to Capacity Ratio

[3] LOS = Level of Service

EXHIBIT 6-5: OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT SUMMARY OF LOS



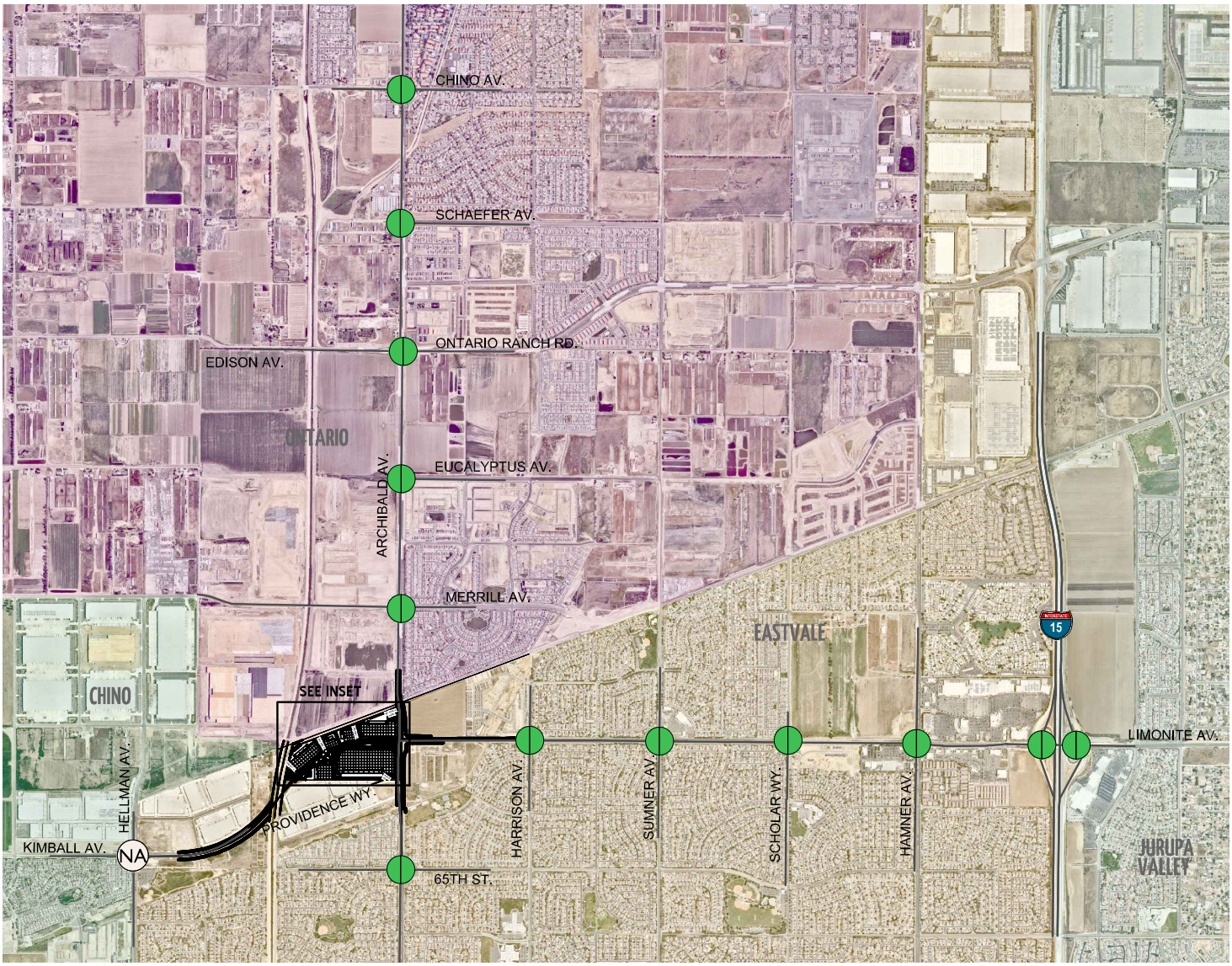


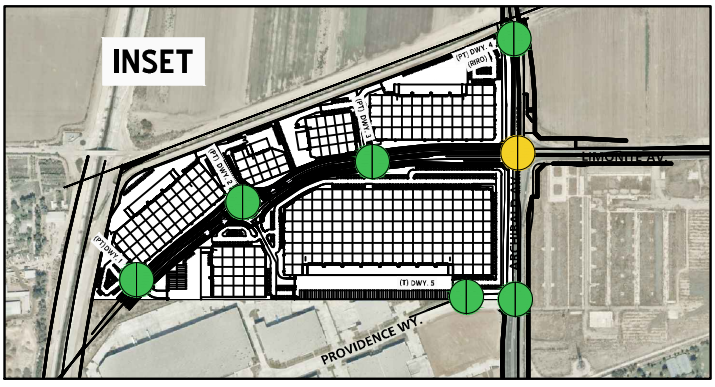
LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS E
- = LOS F
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

N

EXHIBIT 6-6: OPENING YEAR CUMULATIVE (2021) WITH PROJECT SUMMARY OF LOS





LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS E
- = LOS F
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

N

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6.7 OFF-RAMP QUEUING ANALYSIS

Queuing analysis findings for Opening Year Cumulative (2021) Without and With Project traffic conditions are shown in Table 6-3. As shown in Table 6-3, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for Opening Year Cumulative (2021) Without and With Project traffic conditions. Worksheets for Opening Year Cumulative (2021) Without and With Project traffic conditions off-ramp queuing analysis are provided in Appendices 6.4 and 6.5, respectively.

6.8 FREEWAY FACILITY ANALYSIS

Opening Year Cumulative (2021) Without Project and With Project mainline directional volumes for the AM and PM peak hours are provided on Exhibits 6-7 and 6-8, respectively. As shown in Table 6-4 and consistent with Existing (2019) traffic conditions, all study area freeway mainline segments and merge/diverge ramp junctions are anticipated to continue to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours for both Opening Year Cumulative (2021) Without Project and With Project traffic conditions. Opening Year Cumulative (2021) Without and With Project freeway facility analysis worksheets are provided in Appendix 6.6 and 6.7, respectively.

6.9 PROJECT DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

This section provides a summary of Project deficiencies and recommended improvements. Based on the City of Eastvale deficiency criteria discussed in Section 2.8 *Minimum Acceptable Levels of Service (LOS) and Intersection Deficiency Criteria*, the following intersection was found to be deficient. Improvements necessary to reduce project-related traffic deficiencies are also discussed below.

6.9.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

Improvement strategies have been recommended at intersections that have been identified as deficient in an effort to reduce each location's peak hour delay and improve the associated LOS grade to pre-project LOS or better. The effectiveness of the recommended improvement strategies discussed below to address Opening Year Cumulative (2021) traffic deficiencies are presented in Table 6-5 and described below.

Recommended Improvement – Archibald Avenue & Limonite Avenue (#12) – The following improvement is necessary to improve the deficiency to pre-project conditions or better:

- Add a 2nd southbound left turn lane.

Worksheets for Opening Year Cumulative (2021) With Project LOS With Improvements are provided in Appendix 6.8.

Table 6-3

Peak Hour Freeway Off-Ramp Queuing Summary for Opening Year Cumulative (2021) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	2021 Without Project				2021 With Project			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-15 SB Ramps & Limonite Av.	SBL	1,765	62	98	Yes	Yes	62	98	Yes	Yes
	SBL/T/R	1,765	63	100	Yes	Yes	63	100	Yes	Yes
	SBR	425	44	83	Yes	Yes	44	89	Yes	Yes
I-15 NB Ramps & Limonite Av.	NBL	1,765	90	152	Yes	Yes	96	154	Yes	Yes
	NBL/T/R	1,765	91	153	Yes	Yes	96	155	Yes	Yes
	NBR	475	32	207	Yes	Yes	32	209	Yes	Yes

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

Table 6-4

Freeway Facility Analysis for Opening Year Cumulative (2021) Conditions

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	2021 Without Project				2021 With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]
I-15	Southbound	North of Limonite Avenue	3	22.7	C	19.3	C	23.0	C	19.3	C
		Off-Ramp at Limonite Avenue	3	26.0	C	23.4	C	26.3	C	23.4	C
		Loop On-Ramp at Limonite	3	23.9	C	18.1	B	23.9	C	18.1	B
		On-Ramp at Limonite Avenue	3	25.5	C	20.0	B	25.5	C	20.1	C
		South of Limonite Avenue	3	27.4	D	20.7	C	27.4	D	20.7	C
	Northbound	North of Limonite Avenue	3	22.7	C	22.0	C	22.7	C	22.3	C
		On-Ramp at Limonite Avenue	3	19.9	B	19.0	B	19.9	B	19.0	B
		Loop On-Ramp at Limonite	3	21.3	C	20.6	C	21.4	C	20.8	C
		Off-Ramp at Limonite Avenue	3	25.6	C	31.2	D	25.7	C	31.4	D
		South of Limonite Avenue	3	21.4	C	27.3	D	21.4	C	27.7	D

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] LOS = Level of Service

Table 6-5

Intersection Analysis for Opening Year Cumulative (2021) With Project Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
12	Archibald Av. & Limonite Av.																	
	- Without Improvements	TS	**1**	1	1>	1	**2**	0	**2**	**2**	**1**	1	**2**	1>	**55.2**	**65.1**	**E**	**E**
	- With Improvements	TS	**1**	1	1>	**2**	**2**	0	**2**	**2**	**1**	1	**2**	1>	53.2	39.7	D	D

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

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

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

[3] TS = Traffic Signal

EXHIBIT 6-7: OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT FREEWAY MAINLINE VOLUMES



LEGEND:

⟵ 100/200 = AM/PM PEAK HOUR VOLUMES

NOTE: VOLUMES IN ACTUAL VEHICLES (NOT PCE)

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EXHIBIT 6-8: OPENING YEAR CUMULATIVE (2021) WITH PROJECT FREEWAY MAINLINE VOLUMES



6.9.2 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON ROADWAY SEGMENTS

As shown previously in Table 6-2, the study area roadway segments are anticipated to operate at an acceptable LOS during the peak hours. As such, no improvements have been recommended.

6.9.3 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON OFF-RAMP QUEUES

As shown previously in Table 6-3, there are no anticipated peak hour queuing issues at the I-15 Freeway and Limonite Avenue interchange for Opening Year Cumulative (2021) traffic conditions. As such, no improvements have been recommended.

6.9.4 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON FREEWAY FACILITIES

As shown previously in Table 6-4, the study area freeway mainline segments or merge/diverge ramp junctions are currently operating at an acceptable LOS during the peak hours. As such, no improvements have been recommended.

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7 INTERIM YEAR (2023) TRAFFIC CONDITIONS

This section discusses the methods used to develop Interim Year (2023) Without and With Project traffic forecasts, and the resulting intersection operations, traffic signal warrant, roadway segment capacity, and freeway facility operations analyses.

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Interim Year (2023) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Interim Year conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Interim Year conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways such as the eastern extension of Providence Way).
- The new interchange improvements at the I-15 Freeway and Limonite Avenue are completed (see Exhibit 3-21).
- The Limonite Avenue extension over the Cucamonga Creek is assumed to be completed.

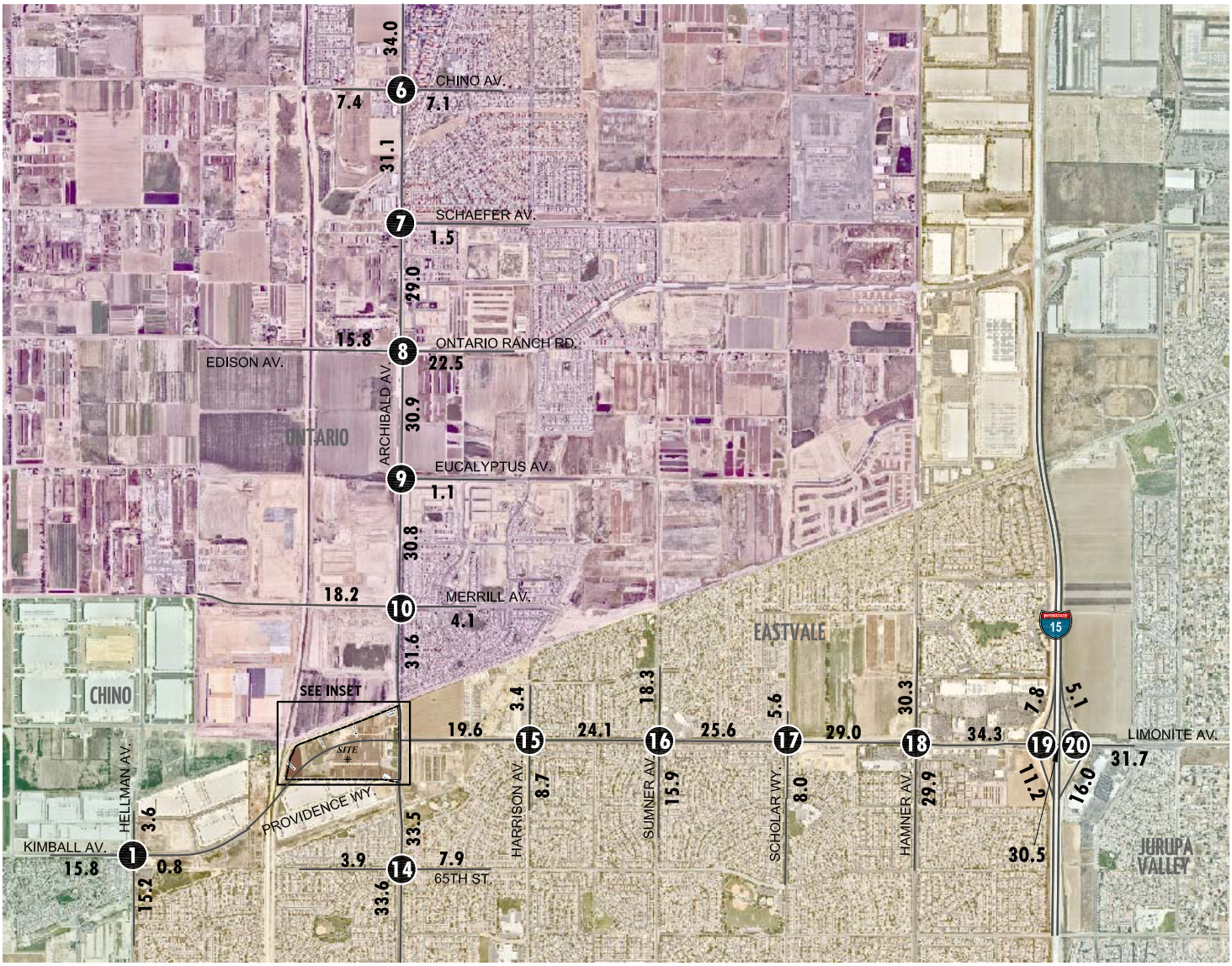
7.2 INTERIM YEAR (2023) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 6.56% plus traffic from pending and approved but not yet constructed known development projects in the area. As discussed in Section 7.1 *Roadway Improvements*, the Limonite Avenue extension is assumed to be completed. As such, the Interim Year (2023) traffic forecasts reflect the change in travel patterns. The traffic forecasts at the intersections affected by change in travel patterns have been interpolated from the Horizon Year (2040) traffic forecasts, which also assume the future Limonite Avenue extension to Hellman Avenue. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Interim Year (2023) Without Project traffic conditions are shown on Exhibits 7-1 and 7-2, respectively.

7.3 INTERIM YEAR (2023) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 6.56%, plus traffic from pending and approved but not yet constructed known development projects in the area, plus the traffic generated by the proposed Project. As discussed in Section 7.1 *Roadway Improvements*, the Limonite Avenue extension is assumed to be completed. As such, the Interim Year (2023) traffic forecasts reflect the change in travel patterns. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Interim Year (2023) With Project traffic conditions are shown on Exhibits 7-3 and 7-4, respectively.

EXHIBIT 7-1: INTERIM YEAR (2023) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

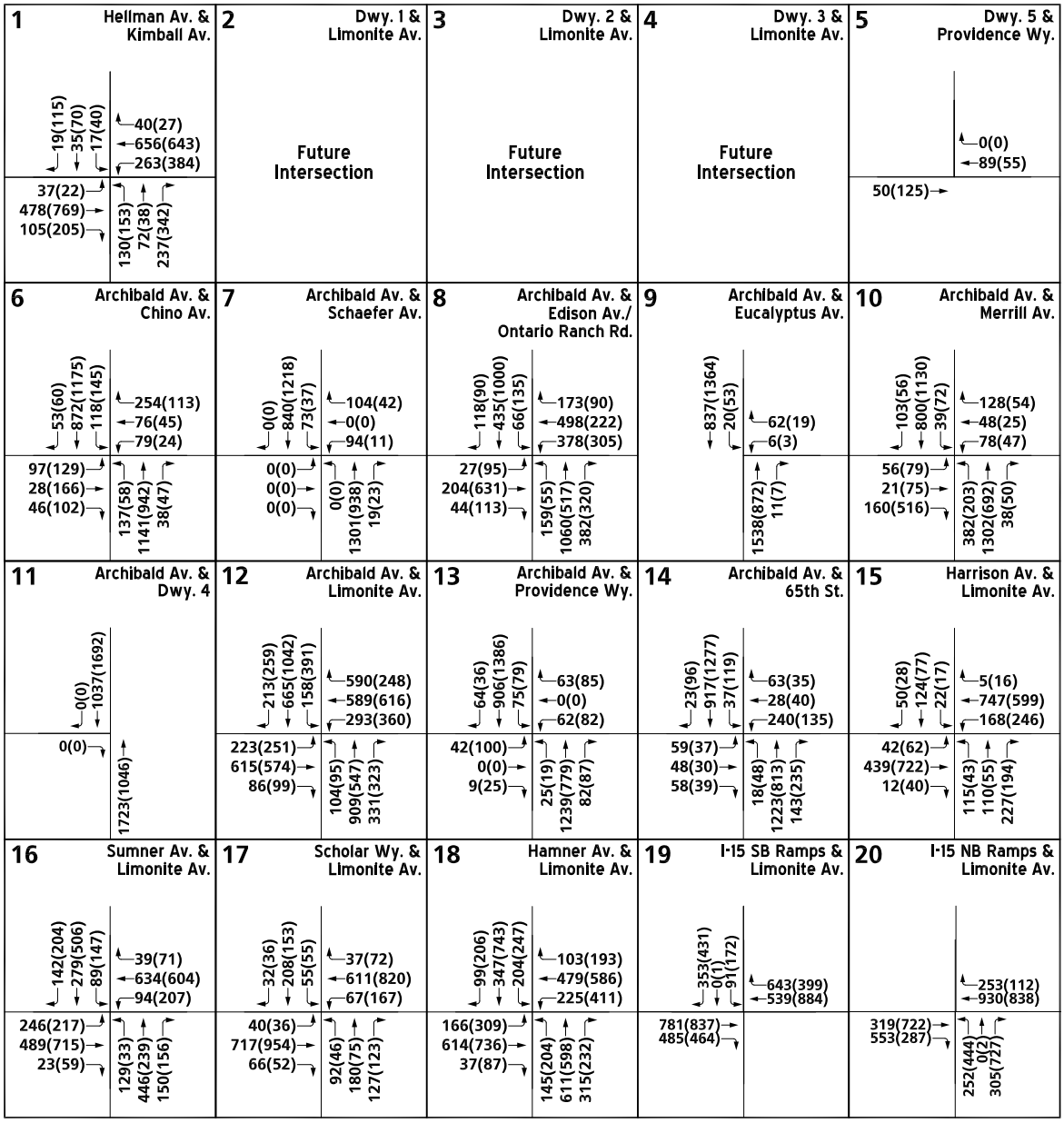




LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

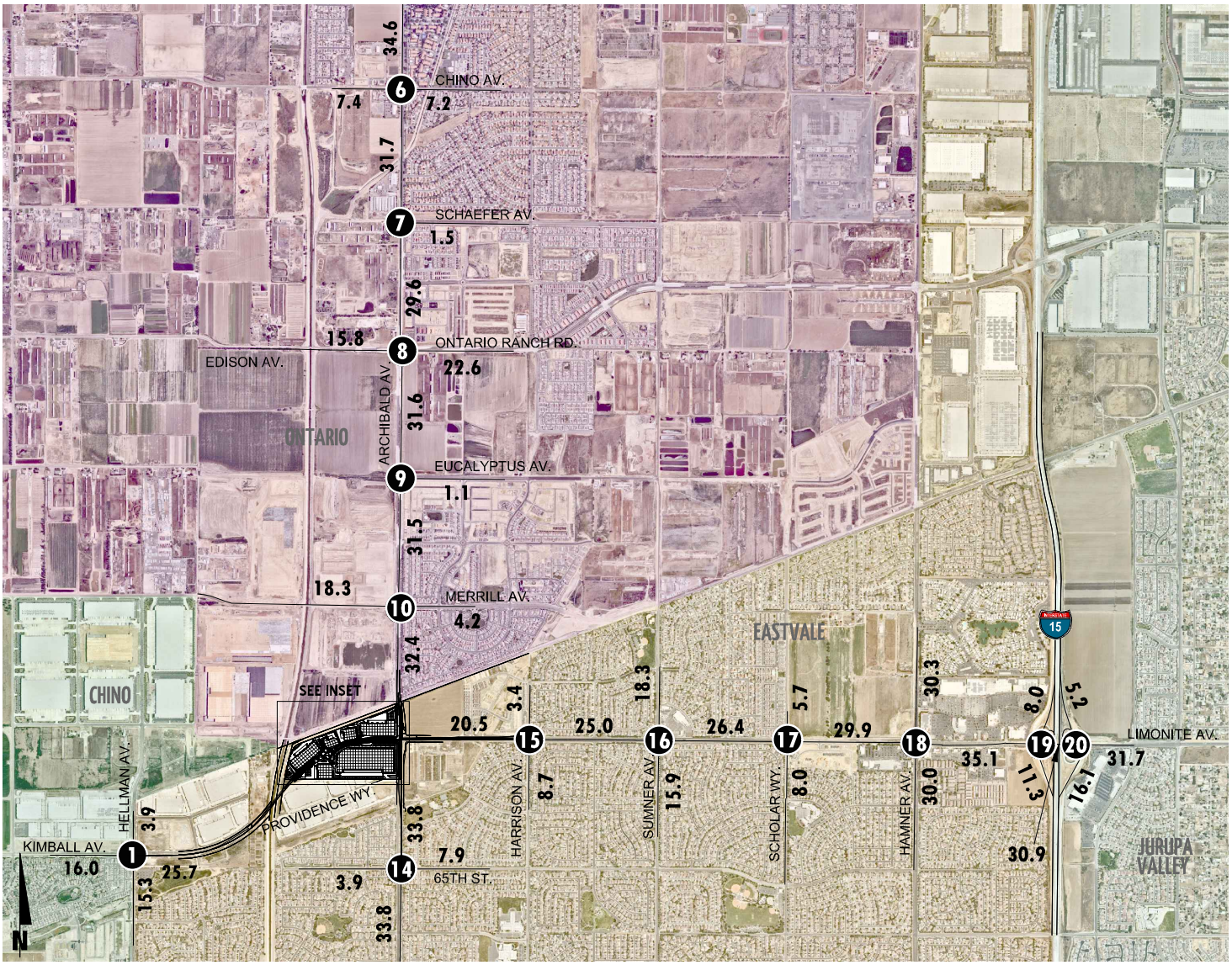
EXHIBIT 7-2: INTERIM YEAR (2023) WITHOUT PROJECT TRAFFIC VOLUMES (IN PCE)

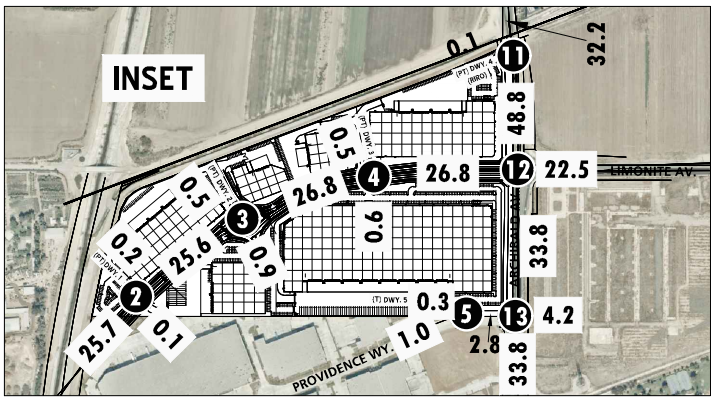


LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

EXHIBIT 7-3: INTERIM YEAR (2023) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

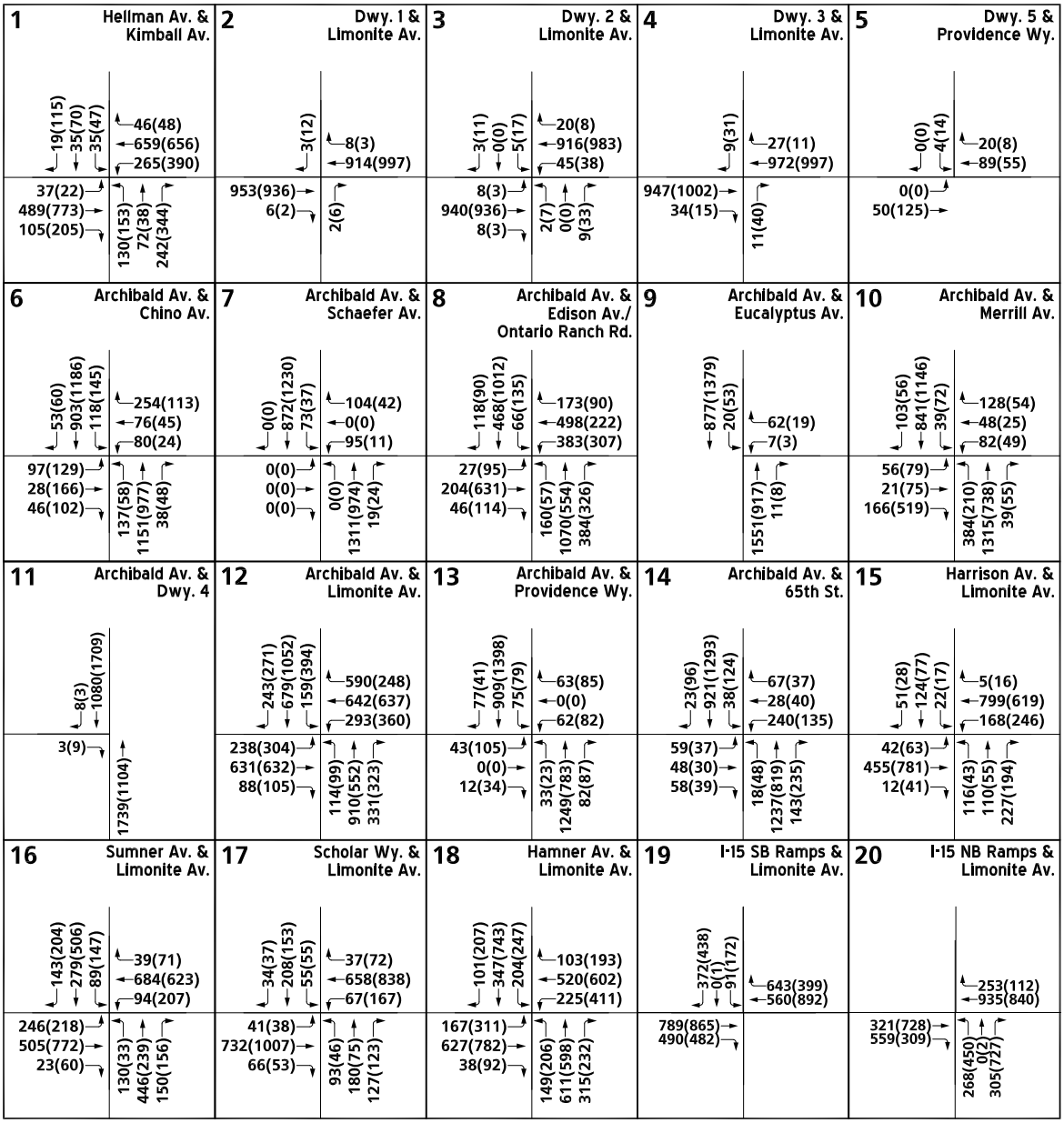




LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

EXHIBIT 7-4: INTERIM YEAR (2023) WITH PROJECT TRAFFIC VOLUMES (IN PCE)



LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

N

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7.4 INTERSECTION OPERATIONS ANALYSIS

7.4.1 INTERIM YEAR (2023) WITHOUT PROJECT TRAFFIC CONDITIONS

LOS calculations were conducted for the study intersections to evaluate their operations under Interim Year (2023) Without Project conditions with roadway and intersection geometrics consistent with Section 7.1 *Roadway Improvements*. As shown in Table 7-1, the following study area intersections are anticipated to operate at an unacceptable LOS under Interim Year (2023) Without Project traffic conditions:

- Hellman Av. & Kimball Av. (#1) – LOS F AM and PM peak hours
- Archibald Av. & Limonite Av. (#12) – LOS F AM and PM peak hours

A summary of the peak hour intersection LOS for Interim Year (2023) Without Project conditions is shown on Exhibit 7-5. The intersection operations analysis worksheets for Interim Year (2023) Without Project traffic conditions are included in Appendix 7.1 of this TIA.

7.4.2 INTERIM YEAR (2023) WITH PROJECT TRAFFIC CONDITIONS

As shown in Table 7-1 and illustrated on Exhibit 7-6, there are no additional intersections anticipated to result in an unacceptable LOS with the addition of Project traffic in addition to the intersections previously identified under Interim Year (2023) Without Project traffic conditions. The intersection operations analysis worksheets for Interim Year (2023) With Project traffic conditions are included in Appendix 7.2 of this TIA.

7.5 ROADWAY SEGMENT CAPACITY ANALYSIS

As noted previously, the roadway segment capacities are approximate figures only, and are typically used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future forecasted traffic demand. Table 7-2 provides a summary of the Interim Year (2023) conditions roadway segment capacity analysis based on the City of Eastvale General Plan Roadway Segment Capacity Thresholds identified previously in Table 2-3. As shown in Table 7-2, the following roadway segment is anticipated to operate at an unacceptable LOS (based on daily roadway segment capacities) under Interim Year (2023) Without Project traffic condition:

- Archibald Av., Limonite Av. to 65th St. (#1) – LOS E

A peak hour assessment of intersections located on either side of a deficient roadway segment has been conducted to determine if peak hour traffic flows can be accommodated by the potentially deficient roadway segment. If it is determined that peak traffic flows can be accommodated at the City's stated LOS thresholds, then roadway segment widening is typically not recommended.

Table 7-1

Intersection Analysis for Interim Year (2023) Conditions

#	Intersection	Traffic Control[2]	2023 Without Project				2023 With Project				Change in Delay (sec.)[3]		Significant Impact?[4]	Acceptable LOS[5]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service					
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
1	Hellman Av. & Kimball Av.	**TS**[6]	**106.8**	**>200.0**	**F**	**F**	**111.4**	**>200.0**	**F**	**F**	4.6	>2.5	Yes	D
2	Driveway 1 & Limonite Av.	**CSS**	Future Intersection				12.2	12.6	B	B	--	--	No	D
3	Driveway 2 & Limonite Av.	**RA**	Future Intersection				6.3	6.5	A	A	--	--	No	D
4	Driveway 3 & Limonite Av.	**CSS**	Future Intersection				12.5	13.2	B	B	--	--	No	D
5	Driveway 5 & Providence Wy.	**CSS**	Future Intersection				9.3	9.6	A	A	--	--	No	D
6	Archibald Av. & Chino Av.	TS	22.1	22.5	C	C	22.5	22.6	C	C	N/A[7]	N/A[7]	No	E
7	Archibald Av. & Schaefer Av.	TS	11.1	7.1	B	A	11.1	7.1	B	A	N/A[7]	N/A[7]	No	E
8	Archibald Av. & Ontario Ranch Rd.	TS	39.9	38.2	D	D	40.9	38.9	D	D	N/A[7]	N/A[7]	No	E
9	Archibald Av. & Eucalyptus Av.	TS	5.8	4.1	A	A	5.9	4.2	A	A	N/A[7]	N/A[7]	No	E
10	Archibald Av. & Merrill Av.	TS	31.8	44.5	C	D	35.1	47.3	D	D	N/A[7]	N/A[7]	No	E
11	Archibald Av. & Driveway 4	**CSS**	Future Intersection				13.0	18.7	B	C	--	--	No	D
12	Archibald Av. & Limonite Av.[8]	TS	**82.3**	**173.7**	**F**	**F**	**88.2**	**177.8**	**F**	**F**	5.9	4.1	Yes	D
13	Archibald Av. & Providence Wy.[9]	TS	19.8	22.8	B	C	20.3	23.6	C	C	--	--	No	D
14	Archibald Av. & 65th St.	TS	26.0	25.2	C	C	26.2	26.4	C	C	--	--	No	D
15	Harrison Av. & Limonite Av.	TS	18.7	18.2	B	B	18.9	18.3	B	B	--	--	No	D
16	Sumner Av. & Limonite Av.	TS	20.2	20.4	C	C	20.5	20.7	C	C	--	--	No	D
17	Scholar Way & Limonite Av.	TS	16.7	17.3	B	B	16.8	17.6	B	B	--	--	No	D
18	Hamner Av. & Limonite Av.	TS	27.2	35.1	C	D	27.4	35.8	C	D	--	--	No	D
19	I-15 SB Ramps & Limonite Av.[10]	TS	6.4	7.3	A	A	6.8	7.4	A	A	N/A[7]	N/A[7]	No	D
20	I-15 NB Ramps & Limonite Av.[10]	TS	7.7	12.5	A	B	7.9	12.5	A	B	N/A[7]	N/A[7]	No	D

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

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

2 CSS = Cross-street Stop; RA = Roundabout; TS = Traffic Signal; **CSS** = Improvement

3 The change in delay is calculated between pre-project and With Project scenarios for City of Eastvale intersections already operating at an unacceptable LOS in the pre-project traffic condition.

4 Impact is significant if the pre-project condition is at or better than LOS D (or acceptable LOS) and the project-generated traffic causes deterioration below acceptable levels, a deficiency is deemed to occur. However, if the pre-project condition is already below LOS D (or acceptable LOS), and the Project either contributes 50 or more peak hour trips or increases the delay by 2.5 seconds or more from the pre-project condition (City of Eastvale threshold), then the Project will be responsible for mitigating its impact to a LOS equal to or better than pre-project conditions.

5 Minimum acceptable LOS for each applicable jurisdiction.

6 Assumes signalization of the intersection and buildout of the east leg.

7 N/A = Not Applicable. Change in delay is not applicable to City of Ontario, City of Chino, and Caltrans intersections. 50 peak hour trip criteria applied to these locations.

8 Assumes the extension of Limonite Avenue over the Cucamonga Creek is in place.

9 Assumes the east leg is in place, which is needed to accommodate site access to a cumulative project.

10 Interchange project has been completed. As such, lane geometries at this location reflect the completed interchange project.

Table 7-2

Roadway Segment Capacity Analysis for Interim Year (2023) Conditions

#	Roadway	Segment Limits	Roadway Section	LOS Capacity[1]	2023 NP	V/C[2]	LOS[3]	2023 WP	V/C[2]	LOS[3]	Change in V/C[4]	Acceptable LOS
1	Archibald Av.	Limonite Av. to 65th St.	4D	35,900	**33,476**	**0.93**	**E**	**33,790**	**0.94**	**E**	0.01	D
2	Limonite Av.	Archibald Av. to Sumner Av.	4D	35,900	24,908	0.69	B	25,837	0.72	C	--	D
3		Sumner Av. to Hamner Av.	4D	35,900	29,041	0.81	D	29,903	0.83	D	--	D
4		Hamner Av. to I-15 Freeway	6D	53,900	35,483	0.66	B	36,192	0.67	B	--	D

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

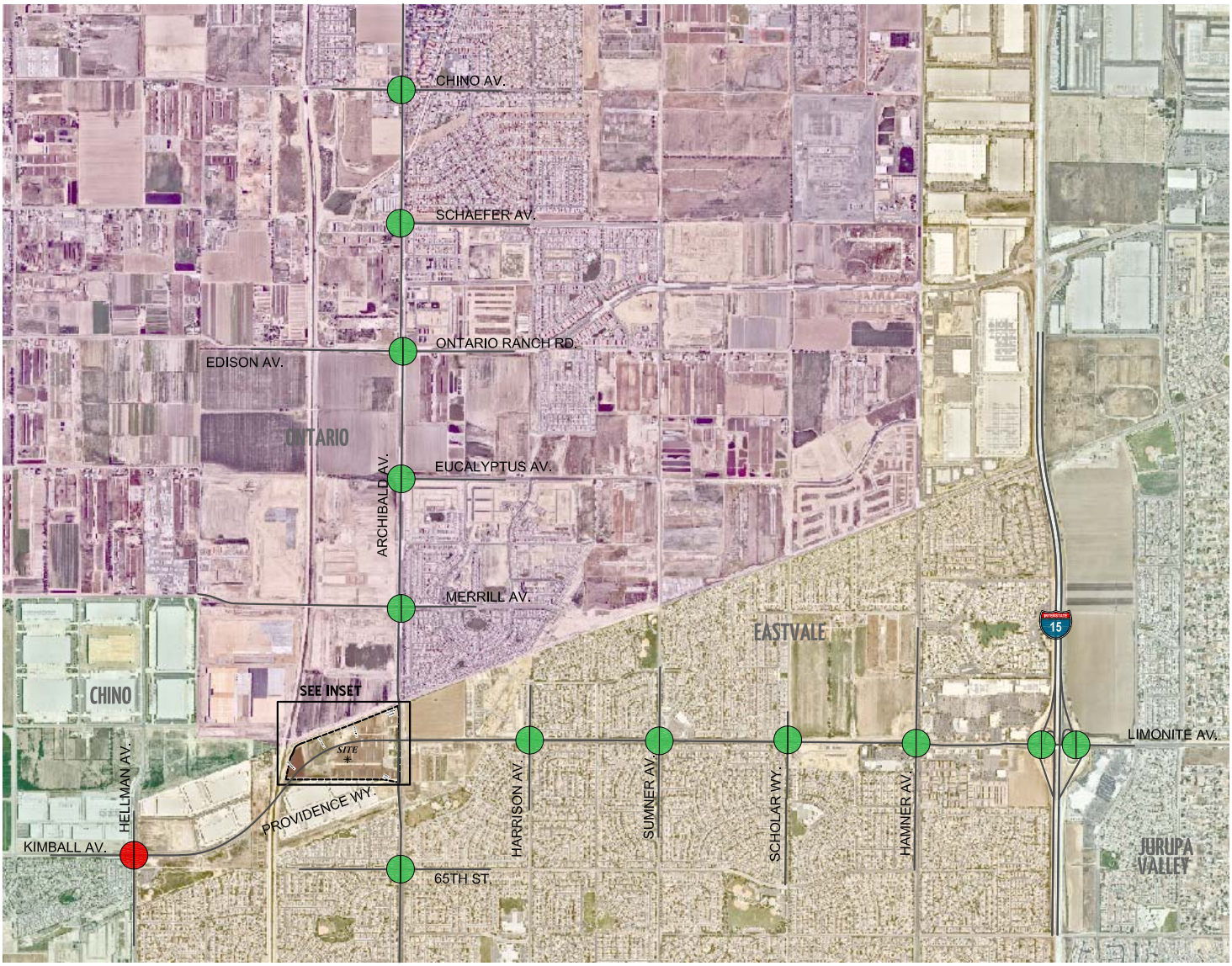
[1] These maximum roadway capacities have been obtained from the City of Eastvale's General Plan.

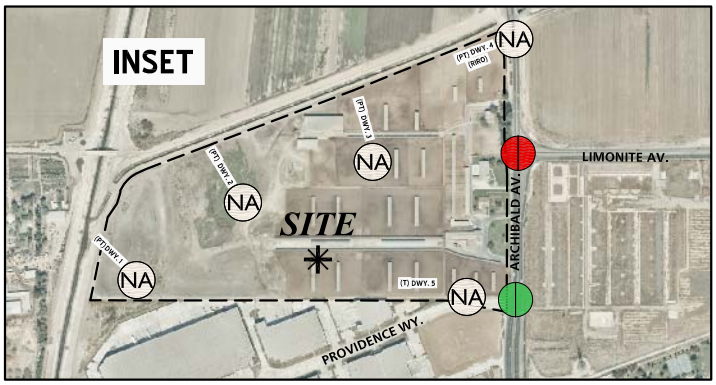
[2] V/C = Volume to Capacity Ratio

[3] LOS = Level of Service

[4] The change in V/C is calculated between Without Project and With Project scenarios for roadway segments operating at an unacceptable LOS under pre-project conditions.

EXHIBIT 7-5: INTERIM YEAR (2023) WITHOUT PROJECT SUMMARY OF LOS



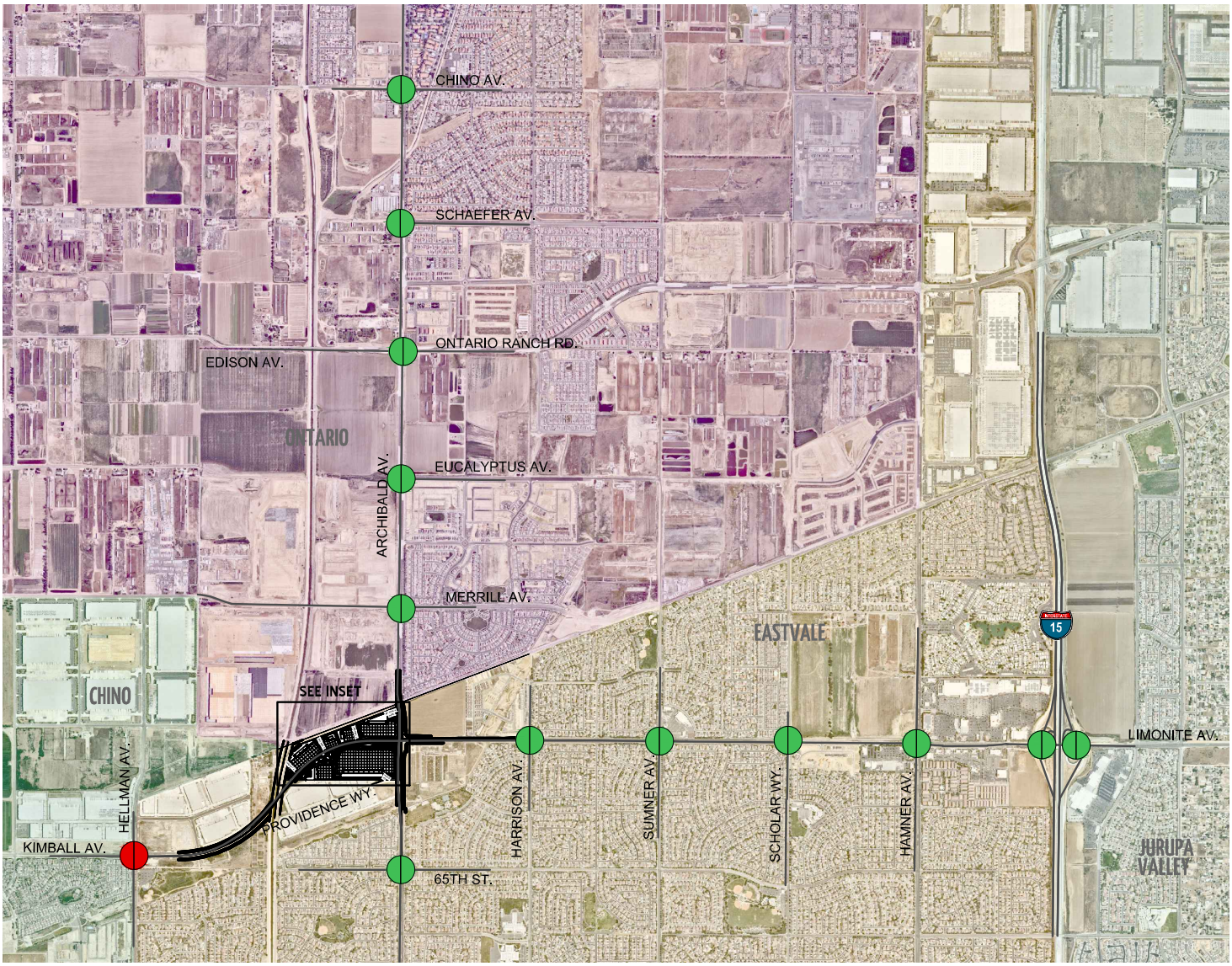


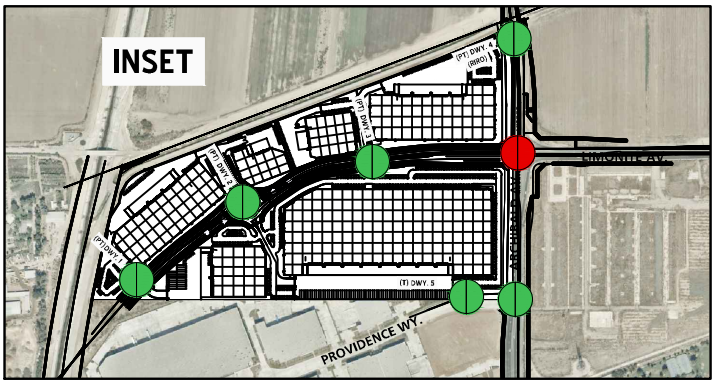
LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS E
- = LOS F
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

N

EXHIBIT 7-6: INTERIM YEAR (2023) WITH PROJECT SUMMARY OF LOS





LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS E
- = LOS F

N

7.6 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no unsignalized intersections for Interim Year (2023) Without Project traffic conditions. As such, no traffic signal warrants have been evaluated for Interim Year (2023) Without Project traffic conditions. For Interim Year (2023) With Project traffic conditions, there are no future intersections anticipated to meet planning level traffic signal warrants (see Appendix 7.3).

7.7 OFF-RAMP QUEUING ANALYSIS

Queuing analysis findings for Interim Year (2023) Without and With Project traffic conditions are shown in Table 7-3. As shown in Table 7-3 and consistent with Existing (2019) traffic conditions, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for Interim Year (2023) Without and With Project traffic conditions. Worksheets for Interim Year (2023) Without and With Project traffic conditions off-ramp queuing analysis are provided in Appendices 7.4 and 7.5, respectively.

7.8 FREEWAY FACILITY ANALYSIS

Interim Year (2023) Without Project and With Project mainline directional volumes for the AM and PM peak hours are provided on Exhibits 7-7 and 7-8, respectively. As shown in Table 7-4 and consistent with Existing (2019) traffic conditions, all study area freeway mainline segments and merge/diverge ramp junctions are anticipated to continue to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours for both Interim Year (2023) Without Project and With Project traffic conditions. Interim Year (2023) Without and With Project freeway facility analysis worksheets are provided in Appendix 7.6 and 7.7, respectively.

7.9 PROJECT DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

This section provides a summary of Project deficiencies and recommended improvements. Based on the City of Eastvale deficiency criteria discussed in Section 2.8 *Minimum Acceptable Levels of Service (LOS) and Intersection Deficiency Criteria*, the following intersections were found to be deficient. Improvements necessary to reduce project-related traffic deficiencies are also discussed below.

7.9.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

Significant impacts have been identified at deficient intersections if the Project contributes 50 or more peak hours or if the addition of Project traffic increases the delay by 2.5 seconds or more (for the intersections in the City of Eastvale). As shown previously in Table 7-1, based on the significance criteria for each applicable agency, the following intersections are anticipated to be cumulatively impacted for Interim Year (2023) traffic conditions:

- Hellman Av. & Kimball Av. (#1)
- Archibald Av. & Limonite Av. (#12)

Table 7-3

Peak Hour Freeway Off-Ramp Queuing Summary for Interim Year (2023) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	2023 Without Project				2023 With Project			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-15 SB Ramps & Limonite Av.	SBL	1,765	64	101	Yes	Yes	63	101	Yes	Yes
	SBL/T/R	1,765	64	103	Yes	Yes	63	103	Yes	Yes
	SBR	425	44	111	Yes	Yes	45	117	Yes	Yes
I-15 NB Ramps & Limonite Av.	NBL	1,765	102	161	Yes	Yes	108	164	Yes	Yes
	NBL/T/R	1,765	103	164	Yes	Yes	108	166	Yes	Yes
	NBR	475	32	224	Yes	Yes	32	225	Yes	Yes

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

Table 7-4

Freeway Facility Analysis for Interim Year (2023) Conditions

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	2023 Without Project				2023 With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]
I-15	Southbound	North of Limonite Avenue	3	23.6	C	20.1	C	23.9	C	20.1	C
		Off-Ramp at Limonite Avenue	3	26.8	C	24.1	C	27.1	C	24.2	C
		Loop On-Ramp at Limonite	3	24.7	C	18.7	B	24.7	C	18.7	B
		On-Ramp at Limonite Avenue	3	26.4	C	20.9	C	26.5	C	21.0	C
		South of Limonite Avenue	3	28.7	D	21.5	C	28.7	D	21.7	C
	Northbound	North of Limonite Avenue	3	23.6	C	22.9	C	23.6	C	23.2	C
		On-Ramp at Limonite Avenue	3	20.7	C	19.7	B	20.7	C	19.8	B
		Loop On-Ramp at Limonite	3	22.1	C	21.4	C	22.2	C	21.6	C
		Off-Ramp at Limonite Avenue	3	26.4	C	32.2	C	26.5	C	32.3	D
		South of Limonite Avenue	3	22.3	C	29.0	D	22.4	C	29.0	D

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] LOS = Level of Service

EXHIBIT 7-7: INTERIM YEAR (2023) WITHOUT PROJECT FREEWAY MAINLINE VOLUMES



LEGEND:

⟵ 100/200 = AM/PM PEAK HOUR VOLUMES

NOTE: VOLUMES IN ACTUAL VEHICLES (NOT PCE)

N

EXHIBIT 7-8: INTERIM YEAR (2023) WITH PROJECT FREEWAY MAINLINE VOLUMES



LEGEND:

⟵ 100/200 = AM/PM PEAK HOUR VOLUMES

NOTE: VOLUMES IN ACTUAL VEHICLES (NOT PCE)

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Improvement strategies have been recommended at intersections that have been identified as cumulatively impacted in an effort to reduce each location's peak hour delay and improve the associated LOS grade to pre-project LOS or better. The effectiveness of the recommended improvement strategies discussed below to address Interim Year (2023) traffic deficiencies are presented in Table 7-5 and described below.

Recommended Improvement – Hellman Avenue & Kimball Avenue (#1) – The following improvement is necessary to improve the deficiency to pre-project conditions or better:

- Add a 2nd northbound left turn lane.

Recommended Improvement – Archibald Avenue & Limonite Avenue (#12) – The following improvement is necessary to improve the deficiency to pre-project conditions or better:

- Add a 2nd southbound left turn lane.

Worksheets for Interim Year (2023) With Project LOS With Improvements are provided in Appendix 7.8.

7.9.2 Recommended Improvements To Address Deficiencies On Roadway Segments

The peak hour intersection operations analysis for the study area intersections on either end of the impacted roadway segment indicates acceptable peak hour operations with the recommended intersection improvements (see Table 7-1 and Table 7-5). As such, no roadway segment widening has been recommended.

7.9.3 Recommended Improvements To Address Deficiencies On Off-Ramp Queues

As shown previously in Table 7-3, there are no anticipated peak hour queuing issues at the I-15 Freeway and Limonite Avenue interchange for Interim Year (2023) traffic conditions. As such, no improvements have been recommended.

7.9.4 Recommended Improvements To Address Deficiencies On Freeway Facilities

As shown previously in Table 7-4, the study area freeway mainline segments or merge/diverge ramp junctions are currently operating at an acceptable LOS during the peak hours. As such, no improvements have been recommended.

Table 7-5

Intersection Analysis for Interim Year (2023) With Project Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Hellman Av. & Kimball Av.																	
	- Without Improvements	TS[4]	1	2	0	1	2	d	1	1	1>	2	2	1	**111.4**	**>200.0**	**F**	**F**
	- With Improvements	TS[4]	**2**	2	0	1	2	d	1	1	1>	2	2	1	38.8	**105.9**	D	**F**
12	Archibald Av. & Limonite Av.																	
	- Without Improvements	TS	**1**	1	1>	1	**2**	0	**2**	**2**	**1**	1	**2**	1>	**88.2**	**177.8**	**F**	**F**
	- With Improvements	TS	**1**	1	1>	**2**	**2**	0	**2**	**2**	**1**	1	**2**	1>	**62.8**	**67.6**	**E**	**F**

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

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

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

[3] TS = Traffic Signal

[4] Assumes signalization of the intersection and the buildout of the east leg.

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8 HORIZON YEAR (2040) TRAFFIC CONDITIONS

This section discusses the methods used to develop Horizon Year (2040) Without and With Project traffic forecasts, and the resulting intersection operations, traffic signal warrant, roadway segment capacity, freeway facility operations analyses.

8.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Horizon Year (2040) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Horizon Year conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Horizon Year conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways such as the eastern extension of Providence Way).
- Other parallel facilities, that although not evaluated for the purposes of this analysis, are anticipated to be in place for Horizon Year traffic conditions and would affect the travel patterns within the study area (e.g., new future roadways within the New Model Colony area such as Schaefer Avenue east of Archibald Avenue, Eucalyptus Avenue east of Archibald Avenue, Merrill Avenue east of Archibald Avenue, etc.).
- The new interchange improvements at the I-15 Freeway and Limonite Avenue are completed (see Exhibit 3-21).
- The Limonite Avenue extension over the Cucamonga Creek is assumed to be completed.

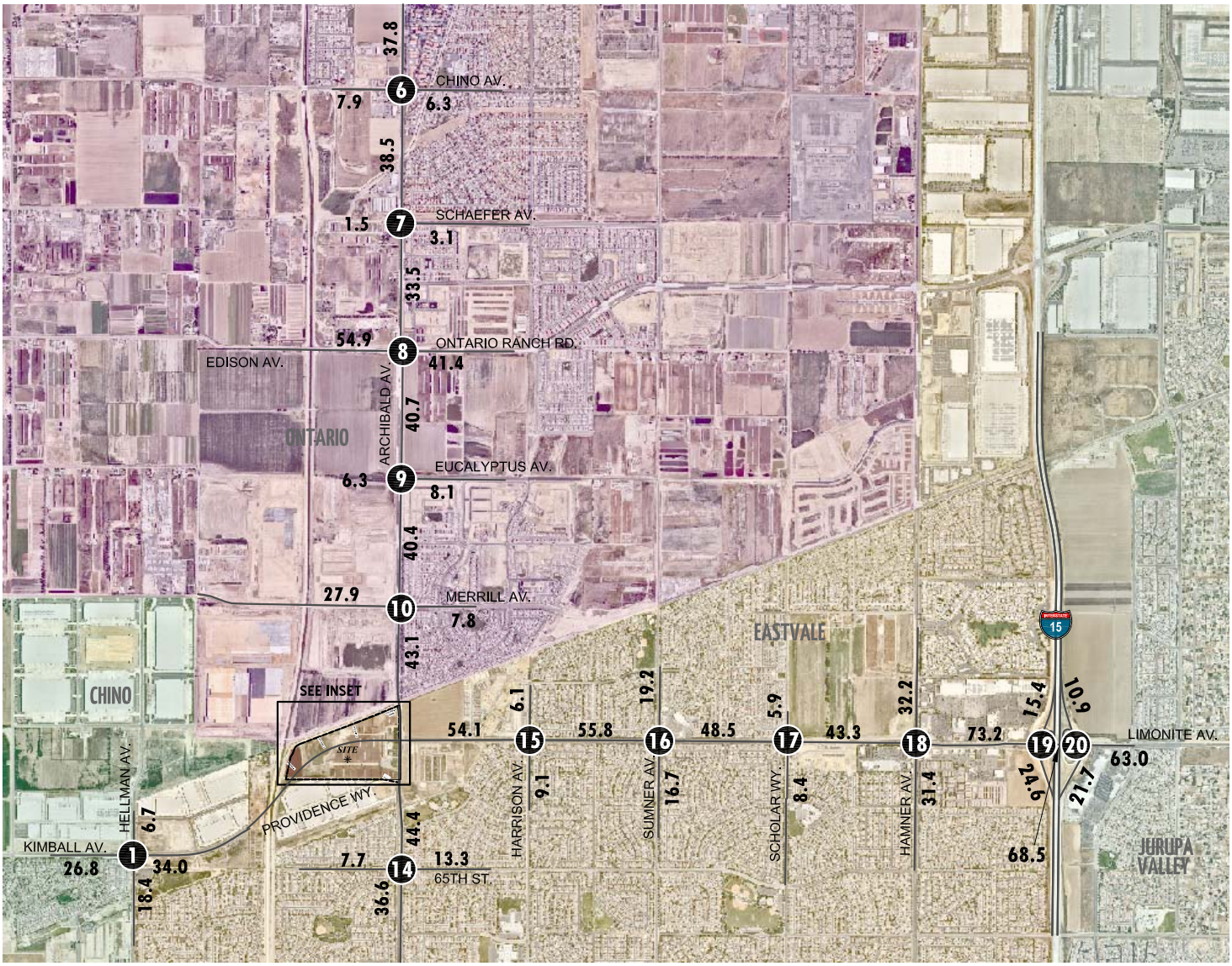
8.2 HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

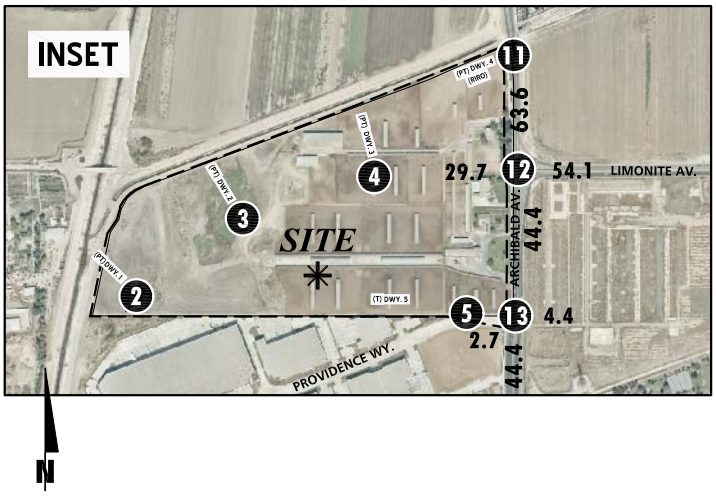
This scenario includes the refined post-processed volumes obtained from the RivTAM and SBTAM (see Section 4.7 *Horizon Year Volume Development* of this TIA for a detailed discussion on the post-processing methodology) and represents the General Plan buildout of the City of Eastvale. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year Without Project traffic conditions are shown on Exhibits 8-1 and 8-2, respectively.

8.3 HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes the refined post-processed volumes obtained from the RivTAM and SBTAM, plus the traffic generated by the proposed Project (see Section 4.7 *Horizon Year Volume Development* of this TIA for a detailed discussion on the post-processing methodology). Horizon Year With Project traffic forecasts reflects buildout of the Project. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year With Project traffic conditions are shown on Exhibits 8-3 and 8-4, respectively.

EXHIBIT 8-1: HORIZON YEAR (2040) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

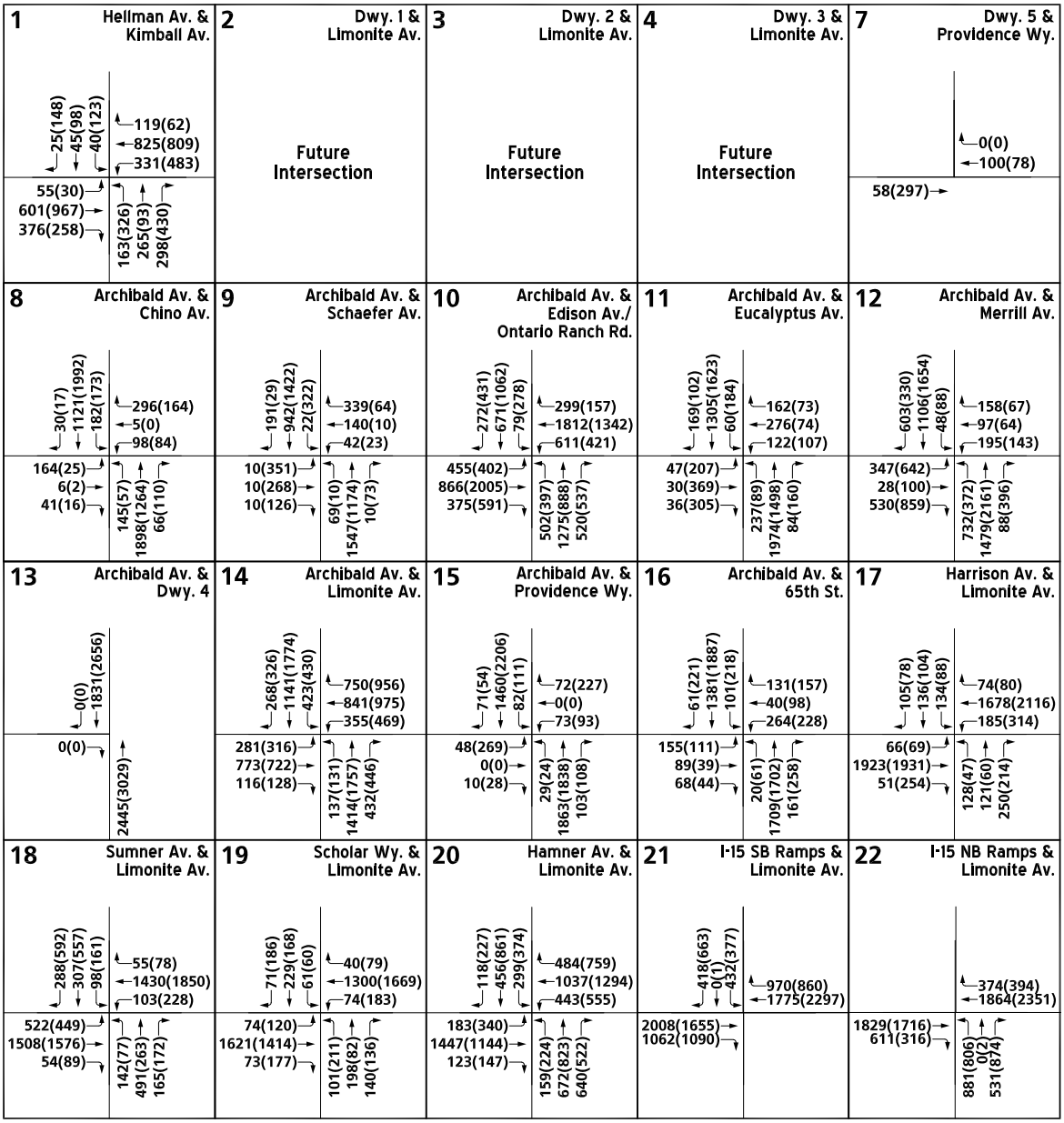




LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

EXHIBIT 8-2: HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUMES (IN PCE)



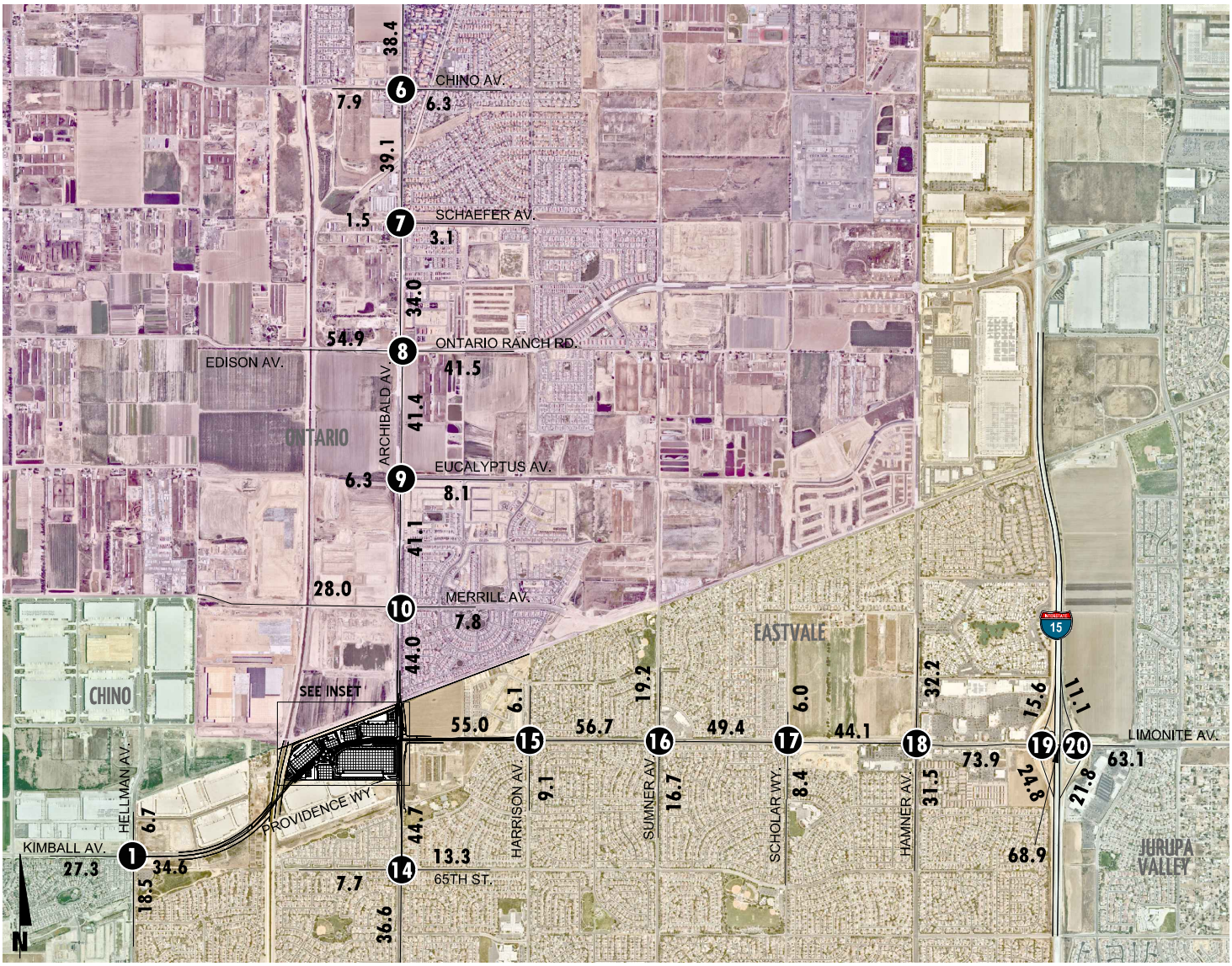
LEGEND:

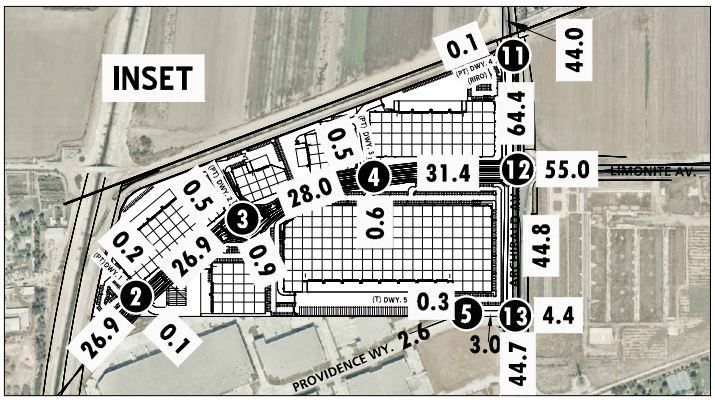
10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

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EXHIBIT 8-3: HORIZON YEAR (2040) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

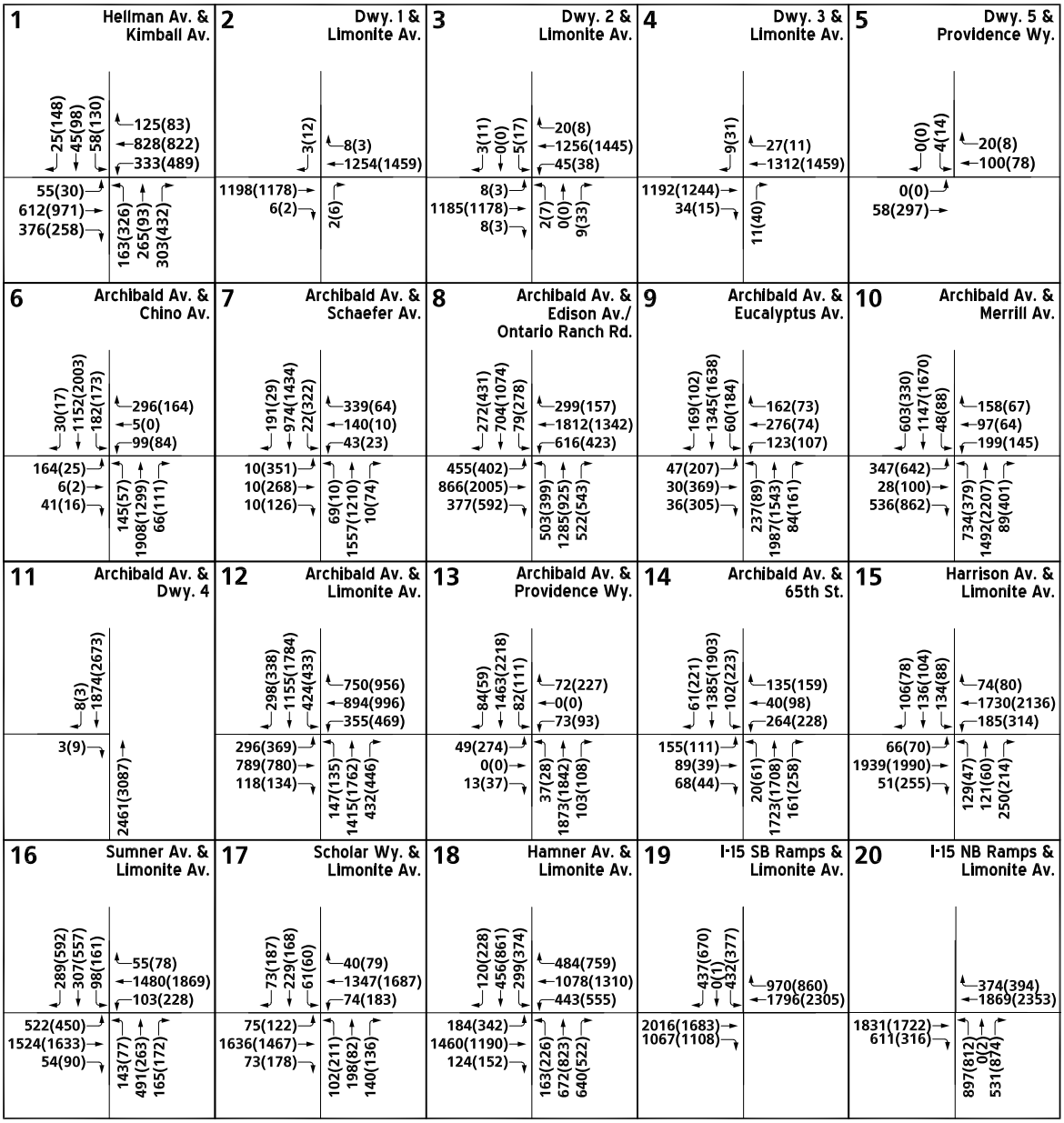




LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

EXHIBIT 8-4: HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUMES (IN PCE)



LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

N

8.4 INTERSECTION OPERATIONS ANALYSIS

8.4.1 HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS

LOS calculations were conducted for the study intersections to evaluate their operations under Horizon Year Without Project traffic conditions with roadway and intersection geometrics consistent with Section 8.1 *Roadway Improvements*. As shown in Table 8-1, the following study area intersections are anticipated to operate at an unacceptable LOS under Horizon Year Without Project traffic conditions:

- Hellman Av. & Kimball Av. (#1) – LOS F AM and PM peak hours
- Archibald Av. & Schaefer Av. (#7) – LOS F PM peak hour only
- Archibald Av. & Ontario Ranch Rd. (#8) – LOS F AM and PM peak hours
- Archibald Av. & Eucalyptus Av. (#9) – LOS F PM peak hour only
- Archibald Av. & Merrill Av. (#10) – LOS F AM and PM peak hours
- Archibald Av. & Limonite Av. (#12) – LOS F AM and PM peak hours
- Archibald Av. & Providence Wy. (#13) – LOS F PM peak hour only
- Archibald Av. & 65th St. (#14) – LOS E AM and PM peak hours

A summary of the peak hour intersection LOS for Horizon Year Without Project traffic conditions is shown on Exhibit 8-5. The intersection operations analysis worksheets for Horizon Year Without Project traffic conditions are included in Appendix 8.1 of this TIA.

8.4.2 HORIZON YEAR (2040) WITH PROJECT TRAFFIC CONDITIONS

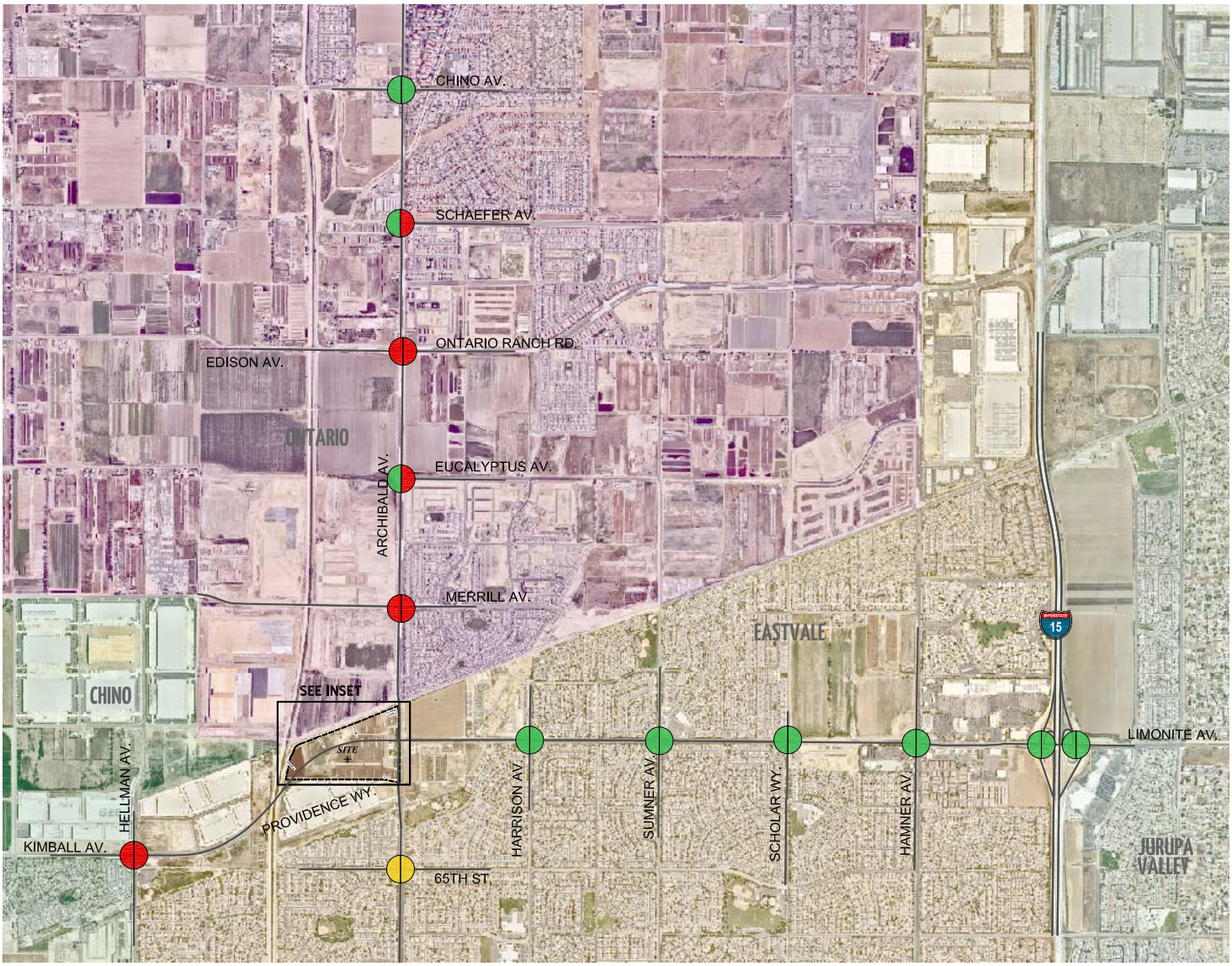
As shown in Table 8-1 and illustrated on Exhibit 8-6, with the addition of Project traffic, there are no intersections anticipated to result in an unacceptable LOS in addition to the intersections previously identified under Horizon Year Without Project traffic conditions. The intersection operations analysis worksheets for Horizon Year With Project traffic conditions are included in Appendix 8.2 of this TIA.

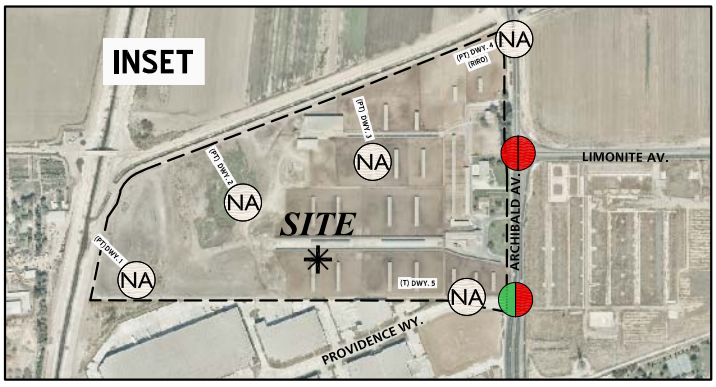
8.5 ROADWAY SEGMENT CAPACITY ANALYSIS

As noted previously, the roadway segment capacities are approximate figures only, and are typically used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future forecasted traffic demand. Table 8-2 provides a summary of the Horizon Year conditions roadway segment capacity analysis based on the City of Eastvale General Plan Roadway Segment Capacity Thresholds identified previously in Table 2-3. As shown in Table 8-2, the all of the study area roadway segments are anticipated to operate at an unacceptable LOS (based on daily roadway segment capacities):

- Archibald Av., Limonite Av. to 65th St. (#1) – LOS F
- Limonite Av., Archibald Av. to Sumner Av. (#2) – LOS F
- Limonite Av., Sumner Av. to Hamner Av. (#3) – LOS F
- Limonite Av., Hamner Av. to I-15 Freeway (#4) – LOS F

EXHIBIT 8-5: HORIZON YEAR (2040) WITHOUT PROJECT SUMMARY OF LOS



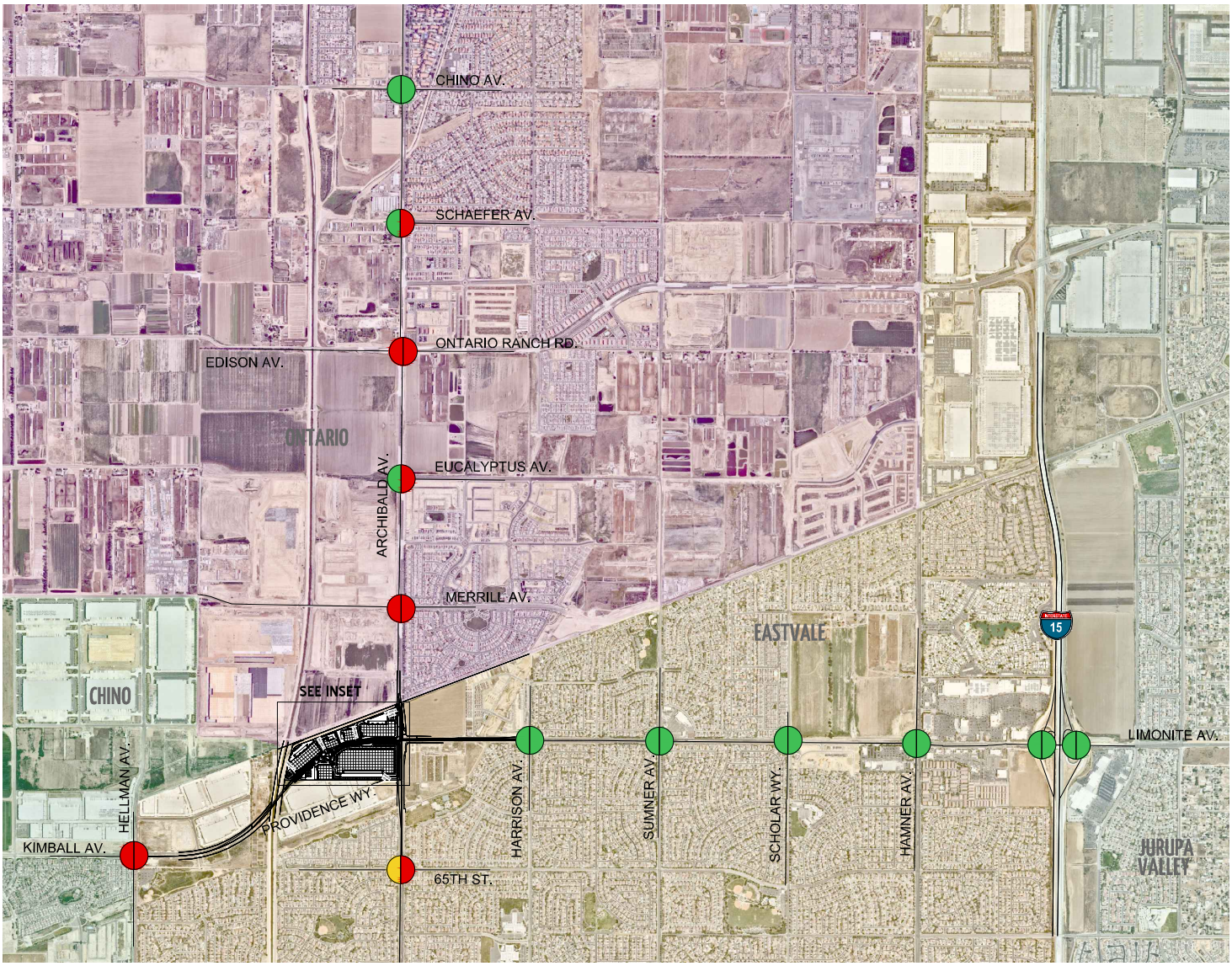


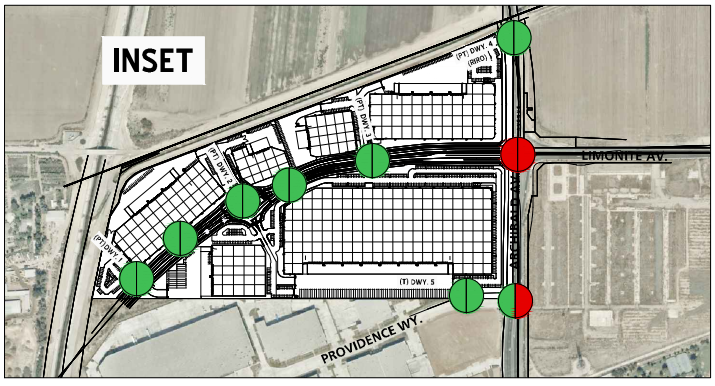
LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS E
- = LOS F
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

N

EXHIBIT 8-6: HORIZON YEAR (2040) WITH PROJECT SUMMARY OF LOS





LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS E
- = LOS F

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URBAN CROSSROADS

Table 8-1

Intersection Analysis for Horizon Year (2040) Conditions

#	Intersection	Traffic Control[2]	2040 Without Project				2040 With Project				Change in Delay (sec.)[3]		Significant Impact?[4]	Acceptable LOS[5]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service					
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
1	Hellman Av. & Kimball Av.	**TS**[6]	**144.4**	**>200.0**	**F**	**F**	**151.1**	**>200.0**	**F**	**F**	6.7	>2.5	Yes	D
2	Driveway 1 & Limonite Av.	**CSS**	Future Intersection				14.2	16.2	B	C	--	--	No	D
3	Driveway 2 & Limonite Av.	**RA**	Future Intersection				8.0	8.7	A	A	--	--	No	D
4	Driveway 3 & Limonite Av.	**CSS**	Future Intersection				15.0	17.0	C	C	--	--	No	D
5	Driveway 5 & Providence Wy.	**CSS**	Future Intersection				9.5	11.2	A	B	--	--	No	D
6	Archibald Av. & Chino Av.	TS	42.9	32.7	D	C	43.1	33.2	D	C	N/A[7]	N/A[7]	No	E
7	Archibald Av. & Schaefer Av.	TS	42.2	**152.5**	D	**F**	43.3	**152.1**	D	**F**	N/A[7]	N/A[7]	Yes	E
8	Archibald Av. & Ontario Ranch Rd.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	N/A[7]	N/A[7]	Yes	E
9	Archibald Av. & Eucalyptus Av.	TS	48.3	**106.1**	D	**F**	49.9	**106.2**	D	**F**	N/A[7]	N/A[7]	Yes	E
10	Archibald Av. & Merrill Av.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	N/A[7]	N/A[7]	Yes	E
11	Archibald Av. & Driveway 4	**CSS**	Future Intersection				20.4	34.4	C	D	--	--	No	D
12	Archibald Av. & Limonite Av.[8]	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	>2.5	>2.5	Yes	D
13	Archibald Av. & Providence Wy.[9]	TS	34.3	**115.3**	C	**F**	35.4	**116.8**	D	**F**	--	1.5	No	D
14	Archibald Av. & 65th St.	TS	**71.2**	**79.0**	**E**	**E**	**73.1**	**80.6**	**E**	**F**	1.9	1.6	No	D
15	Harrison Av. & Limonite Av.	TS	37.9	45.5	D	D	38.3	46.2	D	D	--	--	No	D
16	Sumner Av. & Limonite Av.	TS	36.7	53.3	D	D	37.5	54.6	D	D	--	--	No	D
17	Scholar Way & Limonite Av.	TS	27.6	53.0	C	D	28.3	54.7	C	D	--	--	No	D
18	Hamner Av. & Limonite Av.	TS	48.9	53.0	D	D	49.3	53.9	D	D	--	--	No	D
19	I-15 SB Ramps & Limonite Av.[10]	TS	13.5	15.2	B	B	13.7	15.9	B	B	N/A[7]	N/A[7]	No	D
20	I-15 NB Ramps & Limonite Av.[10]	TS	17.1	17.6	B	B	17.8	18.5	B	B	N/A[7]	N/A[7]	No	D

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

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

[2] CSS = Cross-street Stop; RA = Roundabout; TS = Traffic Signal; **CSS** = Improvement

[3] The change in delay is calculated between pre-project and With Project scenarios for City of Eastvale intersections already operating at an unacceptable LOS in the pre-project traffic condition.

[4] Impact is significant if the pre-project condition is at or better than LOS D (or acceptable LOS) and the project-generated traffic causes deterioration below acceptable levels, a deficiency is deemed to occur. However, if the pre-project condition is already below LOS D (or acceptable LOS), and the Project either contributes 50 or more peak hour trips or increases the delay by 2.5 seconds or more from the pre-project condition (City of Eastvale threshold), then the Project will be responsible for mitigating its impact to a LOS equal to or better than pre-project conditions.

[5] Minimum acceptable LOS for each applicable jurisdiction.

[6] Assumes signalization of the intersection and buildout of the east leg.

[7] N/A = Not Applicable. Change in delay is not applicable to City of Ontario, City of Chino, and Caltrans intersections. 50 peak hour trip criteria applied to these locations.

[8] Assumes the extension of Limonite Avenue over the Cucamonga Creek is in place.

[9] Assumes the east leg is in place, which is needed to accommodate site access to a cumulative project.

[10] Interchange project has been completed. As such, lane geometries at this location reflect the completed interchange project.

Table 8-2

Roadway Segment Capacity Analysis for Horizon Year (2040) Conditions

#	Roadway	Segment Limits	Roadway Section	LOS Capacity[1]	2040 NP	V/C[2]	LOS[3]	2040 WP	V/C[2]	LOS[3]	Change in V/C[4]	Acceptable LOS
1	Archibald Av.	Limonite Av. to 65th St.	4D	35,900	**44,433**	**1.24**	**F**	**44,747**	**1.25**	**F**	0.01	D
2	Limonite Av.	Archibald Av. to Sumner Av.	4D	35,900	**55,789**	**1.55**	**F**	**56,718**	**1.58**	**F**	0.03	D
3		Sumner Av. to Hamner Av.	4D	35,900	**48,501**	**1.35**	**F**	**49,363**	**1.38**	**F**	0.02	D
4		Hamner Av. to I-15 Freeway	6D	53,900	**73,801**	**1.37**	**F**	**74,510**	**1.38**	**F**	0.01	D

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

[1] These maximum roadway capacities have been obtained from the City of Eastvale's General Plan.

[2] V/C = Volume to Capacity Ratio

[3] LOS = Level of Service

[4] The change in V/C is calculated between Without Project and With Project scenarios for roadway segments operating at an unacceptable LOS under pre-project conditions.

A peak hour assessment of intersections located on either side of a deficient roadway segment has been conducted to determine if peak hour traffic flows can be accommodated by the potentially deficient roadway segment. If it is determined that peak traffic flows can be accommodated at the City's stated LOS thresholds, then roadway segment widening is typically not recommended.

8.6 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are currently no existing unsignalized intersections. As such, no traffic signal warrants have been evaluated for Horizon Year Without Project traffic conditions. For Horizon Year With Project traffic conditions, there are no future intersections anticipated to warrant a traffic signal (see Appendix 8.3).

8.7 OFF-RAMP QUEUING ANALYSIS

Queuing analysis findings for Horizon Year traffic conditions are presented in Table 8-3. As shown in Table 8-3, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for Horizon Year Without and With Project traffic conditions. Worksheets for Horizon Year Without and With Project traffic conditions off-ramp queuing analysis are provided in Appendices 8.4 and 8.5, respectively.

8.8 FREEWAY FACILITY ANALYSIS

Horizon Year Without Project mainline directional volumes for the AM and PM peak hours are provided on Exhibit 8-7. As shown in Table 8-4, the following freeway segments or merge/diverge ramp junctions analyzed for this study are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) during the peak hours for Horizon Year Without Project traffic conditions:

- I-15 Freeway Southbound, North of Limonite Av. (#1) – LOS E AM peak hour only
- I-15 Freeway Southbound, Off-Ramp at Limonite Av. (#2) – LOS F AM peak hour only
- I-15 Freeway Southbound, Loop On-Ramp at Limonite Av. (#3) – LOS F AM peak hour only
- I-15 Freeway Southbound, On-Ramp at Limonite Av. (#4) – LOS F AM peak hour only
- I-15 Freeway Southbound, South of Limonite Av. (#5) – LOS F AM peak hour only
- I-15 Freeway Northbound, Off-Ramp at Limonite Av. (#9) – LOS E AM peak hour only

Horizon Year With Project mainline directional volumes for the AM and PM peak hours are provided on Exhibit 8-8. There are no additional study area freeway segments or merge/diverge ramp junctions anticipated to operate at an unacceptable LOS with the addition of Project traffic. Horizon Year Without Project and With Project freeway facility analysis worksheets are provided in Appendix 8.6 and 8.7, respectively.

Table 8-3

Peak Hour Freeway Off-Ramp Queuing Summary for Horizon Year (2040) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	2040 Without Project				2040 With Project			
			95th Percentile Queue (Feet)[3]		Acceptable? [1]		95th Percentile Queue (Feet)[3]		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-15 SB Ramps & Limonite Av.	SBL	1,765	229	194	Yes	Yes	228	194	Yes	Yes
	SBL/T/R	1,765	231	197	Yes	Yes	230	197	Yes	Yes
	SBR	425	203	346	Yes	Yes	214	350	Yes	Yes
I-15 NB Ramps & Limonite Av.	NBL	1,765	338	298	Yes	Yes	345	300	Yes	Yes
	NBL/T/R	1,765	340	298	Yes	Yes	346	303	Yes	Yes
	NBR	475	179	334	Yes	Yes	178	334	Yes	Yes

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

Table 8-4

Freeway Facility Analysis for Horizon Year (2040) Conditions

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	2040 Without Project				2040 With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]	Density[2]	LOS[3]
I-15	Southbound	North of Limonite Avenue	3	**40.1**	**E**	26.8	D	**40.3**	**E**	26.8	D
		Off-Ramp at Limonite Avenue	3	**35.5**	**F**	30.2	D	**35.6**	**F**	30.2	D
		Loop On-Ramp at Limonite	3	**34.8**	**F**	25.6	C	**34.8**	**F**	25.6	C
		On-Ramp at Limonite Avenue	3	**40.5**	**F**	31.5	D	**40.5**	**F**	31.6	D
		South of Limonite Avenue	3	**38.2**	**F**	34.6	D	**38.2**	**F**	34.7	D
	Northbound	North of Limonite Avenue	3	29.6	D	24.0	C	29.7	D	24.1	C
		On-Ramp at Limonite Avenue	3	25.4	C	21.5	C	25.4	C	21.5	C
		Loop On-Ramp at Limonite	3	25.8	C	20.7	C	25.9	C	20.9	C
		Off-Ramp at Limonite Avenue	3	**35.1**	**E**	34.8	D	**35.2**	**E**	34.8	D
		South of Limonite Avenue	3	34.1	D	31.6	D	34.2	D	31.7	D

* **BOLD** = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] LOS = Level of Service

EXHIBIT 8-7: HORIZON YEAR (2040) WITHOUT PROJECT FREEWAY MAINLINE VOLUMES



EXHIBIT 8-8: HORIZON YEAR (2040) WITH PROJECT FREEWAY MAINLINE VOLUMES



8.9 HORIZON YEAR (2040) DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

This section provides a summary of Project deficiencies and recommended improvements. Based on the City of Eastvale deficiency criteria discussed in Section 2.8 *Minimum Acceptable Levels of Service (LOS) and Intersection Deficiency Criteria*, the following intersections were found to be deficient. Improvements necessary to reduce project-related traffic deficiencies are also discussed below.

8.9.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

Significant impacts have been identified at deficient intersections if the Project contributes 50 or more peak hours or if the addition of Project traffic increases the delay by 2.5 seconds or more (for the intersections in the City of Eastvale). As shown previously in Table 8-1, based on the significance criteria for each applicable agency, the following intersections are anticipated to be cumulatively impacted for Horizon Year traffic conditions:

- Hellman Av. & Kimball Av. (#1)
- Archibald Av. & Schaefer Av. (#7)
- Archibald Av. & Ontario Ranch Rd. (#8)
- Archibald Av. & Eucalyptus Av. (#9)
- Archibald Av. & Merrill Av. (#10)
- Archibald Av. & Limonite Av. (#12)

Improvement strategies have been recommended at intersections that have been identified as cumulatively impacted in an effort to reduce each location's peak hour delay and improve the associated LOS grade to pre-project LOS or better. The effectiveness of the recommended improvement strategies discussed below to address Horizon Year traffic deficiencies are presented in Table 8-5 and described below.

Recommended Improvement – Hellman Avenue & Kimball Avenue (#1) – The following improvement is necessary to improve the deficiency to acceptable levels:

- Add a 2nd northbound left turn lane.

Recommended Improvement – Archibald Avenue & Schaefer Avenue (#7) – The following improvements are necessary to improve the deficiency to acceptable levels:

- Add a 3rd southbound through lane.
- Add an eastbound left turn lane.

Table 8-5

Intersection Analysis for Horizon Year (2040) With Project Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Hellman Av. & Kimball Av.																	
	- Without Improvements	TS[4]	1	2	0	1	2	d	1	1	1>	2	2	1	**151.1**	**>200.0**	**F**	**F**
	- With Improvements	TS[4]	**2**	2	0	1	2	d	1	1	1>	2	2	1	51.4	**179.2**	D	**F**
7	Archibald Av. & Schaefer Av.																	
	- Without Improvements	TS	1	3	0	1	2	0	0	1	0	1	1	0	43.3	**152.1**	D	**F**
	- With Improvements	TS	1	3	0	1	**3**	0	**1**	1	0	1	1	0	29.1	46.8	C	D
8	Archibald Av. & Ontario Ranch Rd.																	
	- Without Improvements	TS	1	2	1>>	1	2	1	2	2	1>>	2	1	1	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements	TS	**2**	**3**	1>>	**2**	**3**	**1>**	2	**4**	1>>	2	**4**	1	62.8	71.5	E	E
9	Archibald Av. & Eucalyptus Av.																	
	- Without Improvements	TS	0	2	d	1	2	0	0	0	0	2	0	2	49.9	**106.2**	D	**F**
	- With Improvements	TS	**1**	**3**	**0**	1	**3**	0	**1**	**1**	0	2	**1**	**1**	32.5	67.4	C	E
10	Archibald Av. & Merrill Av.																	
	- Without Improvements	TS	1	2	1	2	2	d	1	1	1	1	1	1	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements	TS	1	**3**	1	2	**3**	**1>**	**2**	1	**1>>**	1	1	1	77.7	71.0	E	E
12	Archibald Av. & Limonite Av.																	
	- Without Improvements	TS	**1**	1	1>	1	**2**	0	**2**	**2**	**1**	1	**2**	1>	**>200.0**	**>200.0**	**F**	**F**
	- With Improvements	TS	**1**	**3**	1>	**2**	**3**	0	**2**	**2**	**1**	1	**2**	1>	**65.7**	**101.5**	**E**	**F**

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

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

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

[3] TS = Traffic Signal

[4] Assumes signalization of the intersection and the buildout of the east leg.

Recommended Improvement – Archibald Avenue & Ontario Ranch Road (#8) – The following improvements are necessary to improve the deficiency to acceptable levels:

- Add a 2nd northbound left turn lane.
- Add a 3rd northbound through lane.
- Add a 2nd southbound left turn lane.
- Add a 3rd southbound through lane.
- Add a 3rd eastbound through lane.
- Add a 4th eastbound through lane.
- Add a 2nd westbound through lane.
- Add a 3rd westbound through lane.
- Add a 4th westbound through lane.
- Modify the traffic signal to implement overlap phasing for the southbound right turn lane.

Recommended Improvement – Archibald Avenue & Eucalyptus Avenue (#9) – The following improvements are necessary to improve the deficiency to acceptable levels:

- Add a northbound left turn lane.
- Add a 3rd northbound through lane.
- Add a 3rd southbound through lane.
- Add an eastbound left turn lane.
- Add an eastbound shared through-right turn lane.
- Restripe the westbound approach to provide two left turn lanes, one through lane, and one right turn lane.

Recommended Improvement – Archibald Avenue & Merrill Avenue (#10) – The following improvements are necessary to improve the deficiency to acceptable levels:

- Add 3rd northbound through lane.
- Add 3rd southbound through lane.
- Stripe the southbound right turn.
- Add a 2nd eastbound left turn lane.
- Add a free eastbound right turn lane.
- Modify the traffic signal to implement overlap phasing for the southbound right turn lane.

Recommended Improvement – Archibald Avenue & Limonite Avenue (#12) – The following improvements are necessary to improve the deficiency to pre-project conditions or better:

- Add a northbound left turn lane (needed for site access).
- Add 2nd and 3rd northbound through lanes.
- Add a 2nd southbound left turn lane.
- Add 2nd southbound through lane (site adjacent roadway improvement).
- Add 3rd southbound through lane.
- Add dual eastbound left turn lanes (needed for site access).
- Add 1st and 2nd eastbound through lanes (needed for site access/site adjacent roadway improvement).
- Add an eastbound right turn lane (needed for site access/site adjacent roadway improvement).
- Add 1st and 2nd westbound through lanes (one lane needed for site access).

The Project Applicant shall participate in the funding of off-site improvements, including traffic signals that are needed to serve cumulative traffic conditions through the payment of City of Eastvale DIF (if the improvements are included in the DIF program), Western Riverside Council of Governments (WRCOG) TUMF, Mira Loma RBBD, or on a fair share basis (if the improvements are not included in a pre-existing fee program). These fees shall be collected by the City of Eastvale, with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases. Each of the improvements shown in Table 8-5 have been identified as being included as part of a pre-existing fee program or fair share contribution in Section 9 *Local and Regional Funding Mechanisms* of this TIA.

Worksheets for Horizon Year With Project traffic conditions, with improvements, HCM calculation worksheets are provided in Appendix 8.8.

8.9.2 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON ROADWAY SEGMENTS

The intersection improvements shown in Table 8-5 consist of installation of additional turn lanes, additional through lanes, and traffic signal modifications to accommodate right turn overlap phasing. Table 8-6 shows the LOS for each of the applicable roadway segments with improvements consistent with those shown in Table 8-5 for the adjacent study area intersections, where roadway widening through additional through lanes has been recommended. It should be noted the improvements are consistent with the City of Eastvale General Plan roadway classifications.

Table 8-6

Roadway Segment Capacity Analysis for Horizon Year (2040) Conditions With Improvements

#	Roadway	Segment Limits	Roadway Section[1]	LOS Capacity[2]	2040 NP	V/C[3]	LOS[4]	2040 WP	V/C[3]	LOS[4]	Acceptable LOS
1	Archibald Av.	Limonite Av. to 65th St.	**6D**	53,900	44,433	0.82	D	44,747	0.83	D	D
2	Limonite Av.	Archibald Av. to Sumner Av.	**6D**	53,900	**55,789**	**1.04**	**F**	**56,718**	**1.05**	**F**	D
3		Sumner Av. to Hamner Av.	**6D**	53,900	48,501	0.90	D	**49,363**	**0.92**	**E**	D
4		Hamner Av. to I-15 Freeway	6D	53,900	**73,801**	**1.37**	**F**	**74,510**	**1.38**	**F**	D

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

[1] **6D** = Improvement

[2] These maximum roadway capacities have been obtained from the City of Eastvale's General Plan.

[3] V/C = Volume to Capacity Ratio

[4] LOS = Level of Service

As shown in Table 8-6, the study area roadway segment along Archibald Avenue is anticipated to operate at an acceptable LOS with the recommended roadway widening. The study area roadway segments along Limonite Avenue are anticipated to continue to operate at an unacceptable LOS, however the LOS is expected to improve from the without improvement conditions, with the exception of the segment between Hamner Avenue and the I-15 Freeway (which remains unchanged). However, additional roadway segment widening does not appear necessary to address the deficiencies at the identified roadway segments based on the peak hour intersection operations analysis shown in Table 8-1 and Table 8-5, which demonstrates that the intersections (choke points along the roadway segment) are anticipated to process peak hour traffic flows with the improvements shown. As such, no additional roadway widening is recommended. Furthermore, additional roadway widening would not be consistent with the City of Eastvale General Plan.

8.9.3 Recommended Improvements To Address Deficiencies On Off-Ramp Queues

As shown previously in Table 8-3, there are no anticipated peak hour queuing issues at the I-15 Freeway and Limonite Avenue interchange for Horizon Year traffic conditions. As such, no improvements have been recommended.

8.9.4 Recommended Improvements To Address Deficiencies On Freeway Facilities

The Riverside County Transportation Commission (RCTC), in partnership with Caltrans, is investing $455 million to improve the I-15 Freeway between Cajalco Road and SR-60 Freeway. The "I-15 Express Lanes Project" will add two tolled express lanes in each direction, with multiple entrances and exits. Construction began in 2018, and the express lanes will be open to traffic in 2020.

Caltrans typically assumes a reduction of fourteen percent to the freeway mainline through volumes to account for vehicles utilizing the express lanes. The reduction to the I-15 Freeway mainline volumes (14% per lane for 2 lanes, or 28% total) has been applied to account for the proposed express lanes. The analysis has been performed assuming the same number of mixed-flow lanes and on and off-ramp configurations as existing baseline conditions at the I-15 Freeway study area interchanges.

Table 8-7 shows that the I-15 Freeway mainline segments and merge/diverge ramp junctions are anticipated to improve operations with the improvements discussed above, with the exception of the I-15 Freeway Southbound segment, South of Limonite Avenue, which is anticipated to continue to operate at an unacceptable LOS during the AM peak hour. Worksheets for Horizon Year With Project conditions freeway facility analysis, with improvements, are provided in Appendix 8.9.

Table 8-7

Freeway Facility Analysis for Horizon Year (2040) Conditions With Improvements

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	2040 With Project			
				AM Peak Hour		PM Peak Hour	
				Density[2]	LOS[3]	Density[2]	LOS[3]
I-15	Southbound	North of Limonite Avenue	3	25.2	C	19.2	C
		Off-Ramp at Limonite Avenue	3	28.9	D	24.4	C
		Loop On-Ramp at Limonite	3	26.6	C	19.4	B
		On-Ramp at Limonite Avenue	3	32.1	D	25.4	C
		South of Limonite Avenue	3	**35.4**	**E**	24.7	C
	Northbound	North of Limonite Avenue	3	20.1	C	17.2	B
		On-Ramp at Limonite Avenue	3	18.0	B	15.2	B
		Loop On-Ramp at Limonite	3	18.5	B	14.8	B
		Off-Ramp at Limonite Avenue	3	29.1	D	29.4	D
		South of Limonite Avenue	3	23.0	C	22.5	C

* **BOLD** = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on planned toll lanes (2 toll lanes in each direction).

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] LOS = Level of Service

9 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements within the City of Eastvale are funded through a combination of improvements constructed by the Project, development impact fee programs or fair share contributions, such as the City of Eastvale Development Impact Fee (DIF) program. Identification and timing of needed improvements is generally determined through local jurisdictions based upon a variety of factors.

9.1 CITY OF EASTVALE DEVELOPMENT IMPACT FEE PROGRAM

The City of Eastvale has created its own local DIF program to impose and collect fees from new residential, commercial and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City's General Plan Circulation Element. The City's DIF includes regional improvements to comply with Measure "I." The fee schedule was last updated in April 6, 2015 and is reviewed/adjusted annually based upon changes in the construction cost index (CCI). Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program.

The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of implementing the improvements listed in its facilities list. The City also uses this data to ensure that the improvements listed on the facilities list are constructed before the LOS falls below the LOS performance standards adopted by the City. In this way, the improvements are constructed before the LOS falls below the City's LOS performance thresholds.

The Project Applicant will be subject to the City's DIF fee program, and will pay the requisite City DIF fees at the rates then in effect pursuant to the City's ordinance. The Project Applicant's payment of the requisite DIF at the rates then in effect, pursuant to the City DIF Program, would satisfy the Project's proportional mitigation requirements at potentially affected DIF-funded facilities.

9.2 TRANSPORTATION UNIFORM MITIGATION FEE (TUMF) PROGRAM

The TUMF program is administered by the WRCOG based upon a regional Nexus Study most recently updated in 2016 to address major changes in right of way acquisition and improvement cost factors. (14) This regional program was put into place to ensure that development pays its fair share and that funding is in place for construction of facilities needed to maintain the requisite level of service and critical to mobility in the region. TUMF is a truly regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County.

TUMF guidelines empower a local zone committee to prioritize and arbitrate certain projects. The Project is located in the Northwest Zone. The zone has developed a 5-year capital improvement program to prioritize public construction of certain roads. TUMF is focused on improvements necessitated by regional growth.

9.3 MIRA LOMA ROAD AND BRIDGE BENEFIT DISTRICT (RBBD) PROGRAM

Similar to other regions within Riverside County, the City of Eastvale is anticipated to experience substantial growth. Extensive improvements are necessitated by new development within the region. In particular, Riverside County recognized the impact of this growth on the vicinity of the study area when it formed the Mira Loma RBBD. The proposed Project lies within Zone D of the Mira Loma RBBD. Zone D is generally bounded by the San Bernardino County line to the north and west, Hamner Avenue to the east, and the City of Corona to the south. As discussed above, the facilities improvements that will be ultimately constructed as a result of the collection of these fees and assessments are significant. The fee for industrial use is currently $9,117 per gross acre within Zone D. They include:

Mira Loma Road and Bridge Benefits District (Zone D):

- Limonite Avenue and I-15 Freeway interchange improvements
- Archibald Avenue widening from River Road to San Bernardino/Riverside County Line, including the landscaped median
- Limonite Avenue widening from Hamner Avenue to Archibald Avenue, including the landscaped median
- Schleisman Road from Hamner Avenue to San Bernardino/Riverside County Line, including the landscaped median
- Hamner Avenue landscaped median from Bellegrave Avenue to the Santa Ana River

9.4 FAIR SHARE CONTRIBUTION

Project improvement may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the City's discretion).

When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations, for each peak hour, has been provided in Table 9-1 for the applicable deficient study area intersections.

These fees are collected with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

Table 9-1

Project Fair Share Calculations

#	Intersection		Existing	Total Project	2040 With Project Volume	Total New Traffic	Project % of New Traffic
1	Hellman Av. & Kimball Av.						
		AM:	1,274	45	3,189	1,915	**2.35%**
		PM:	1,188	54	3,881	2,693	2.01%
7	Archibald Av. & Schaefer Av.						
		AM:	2,065	53	3,375	1,310	**4.05%**
		PM:	1,883	49	3,921	2,038	2.40%
8	Archibald Av. & Ontario Ranch Rd.						
		AM:	3,088	53	7,789	4,701	**1.13%**
		PM:	3,075	60	8,571	5,496	1.09%
9	Archibald Av. & Eucalyptus Av.						
		AM:	2,147	54	4,556	2,409	**2.24%**
		PM:	1,981	61	4,852	2,871	2.12%
10	Archibald Av. & Merrill Av.						
		AM:	2,779	67	5,478	2,699	**2.48%**
		PM:	2,636	79	6,956	4,320	1.83%
12	Archibald Av. & Limonite Av.						
		AM:	2,548	142	7,073	4,525	**3.14%**
		PM:	2,702	172	8,602	5,900	2.92%

BOLD = Denotes highest fair share percentage.

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10 REFERENCES

1. **Riverside County Transportation Department.** *Traffic Impact Analysis Preparation Guide.* County of Riverside : s.n., April 2008.
2. **California Department of Transportation.** *Guide for the Preparation of Traffic Impact Studies.* December 2002.
3. **San Bernardino Associated Governments.** *Congestion Management Program for County of San Bernardino.* County of San Bernardino : s.n., Updated June 2016.
4. **Institute of Transportation Engineers.** *Trip Generation Manual.* 10th Edition. 2017.
5. **WSP.** *High Cube Warehouse Trip Generation Study.* January 29, 2019.
6. **Western Riverside Council of Governments.** *TUMF Nexus Study, 2016 Program Update.* July 2017.
7. **Riverside County Transportation Commission.** *2011 Riverside County Congestion Management Program.* County of Riverside : RCTC, December 14, 2011.
8. **Transportation Research Board.** *Highway Capacity Manual (HCM).* 6th Edition. s.l. : National Academy of Sciences, 2016.
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10. **Transportation, California Department of.** *Freeway Performance Measurement (PeMS).* [Online] http://pems.dot.ca.gov/.
11. **The City of Chino.** *Envision Chino General Plan 2025.* Chino : s.n., July 2010.
12. **Institute of Transportation Engineers.** *High Cube Warehouse Vehicle Trip Generation Analysis.* Washington, DC : ITE, October 2016.
13. **SCAQMD.** *Warehouse Truck Trip Study Data Results and Usage.* June 2014.
14. **Southern California Association of Governments.** *2016 Regional Transportation Plan/Sustainable Communities Strategy.* April 2016.
15. **Western Riverside Council of Governments.** *TUMF Nexus Study, 2016 Program Update.* July 2017.

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CAPPENDIX 1.1:

APPROVED TRAFFIC STUDY SCOPING AGREEMENT

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Charlene Hwang So

From: Ruth Smith <rsmith@interwestgrp.com>
Sent: Thursday, May 23, 2019 1:06 PM
To: Charlene Hwang So
Cc: Kanika Kith.Eastvale; William Hemsley; 'Craig Bradshaw' (cbradshaw@eastvaleca.gov); Eric Norris (enorris@eastvaleca.gov); Minegar, Peter; Dahi Kim (dkim@eastvaleca.gov); CMS Administrator; Raymond Polverini; Connor Paquin; Aric Evatt
Subject: RE: 11963 The Homestead Traffic Scoping Agreement

Hi Charlene –

You're good to go.

Thanks!

Ruth

Consultant Traffic Engineer for the City of Eastvale
Services provided by Interwest Consulting Group

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From: Charlene Hwang So [mailto:cso@urbanxroads.com]
Sent: Thursday, May 23, 2019 12:59 PM
To: Ruth Smith
Cc: Kanika Kith.Eastvale; William Hemsley; 'Craig Bradshaw' (cbradshaw@eastvaleca.gov); Eric Norris (enorris@eastvaleca.gov); Minegar, Peter; Dahi Kim (dkim@eastvaleca.gov); CMS Administrator; Raymond Polverini; Connor Paquin; Aric Evatt
Subject: JN:11963 The Homestead Traffic Scoping Agreement

Hi Ruth,

Please find the revised scope per your comments below. Thank you!

Regards,

CHARLENE SO, P.E.
Senior Associate

URBAN

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Costa Mesa, CA 92626
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From: Ruth Smith <rsmith@interwestgrp.com>
Sent: Thursday, May 23, 2019 12:15 PM
To: Charlene Hwang So <cso@urbanxroads.com>
Cc: Kanika Kith.Eastvale <kkith.eastvale@interwestgrp.com>; William Hemsley <whemsley@interwestgrp.com>; 'Craig Bradshaw' (cbradshaw@eastvaleca.gov) <cbradshaw@eastvaleca.gov>; Eric Norris (enorris@eastvaleca.gov) <enorris@eastvaleca.gov>; Minegar, Peter <peter.minegar@mbakerintl.com>; Dahi Kim (dkim@eastvaleca.gov) <dkim@eastvaleca.gov>; CMS Administrator <cmsadmin@urbanxroads.com>; Raymond Polverini <rpolverini@orbisrep.com>; Connor Paquin <cpaquin@urbanxroads.com>; Aric Evatt <aevatt@urbanxroads.com>
Subject: RE: 11963 The Homestead Traffic Scoping Agreement

Hi Charlene –

Thanks for making the changes. I don't think we discussed it yesterday, but I think that a majority of the passenger car trips (10% of the 16%) that are going west on Merrill from Archibald would instead go west on Limonite, then north on Hellman and west on Merrill, like the trucks would.

Please make that change on Exhibit 4. It looks like no additional study intersections would be added as a result.

Also, on Exh. 6, please add the percentage of trips on Limonite going west to the main exhibit, not just the inset.

I expect to approve the proposed scope with these changes. Please let me know if you have any questions.

Thanks!

Ruth

Consultant Traffic Engineer for the City of Eastvale
Services provided by Interwest Consulting Group

Ruth Smith, TE, PTP | Municipal Services – Traffic Engineer
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From: Charlene Hwang So [mailto:cso@urbanxroads.com]
Sent: Thursday, May 23, 2019 10:38 AM
To: Ruth Smith
Cc: Kanika Kith.Eastvale; William Hemsley; 'Craig Bradshaw' (cbradshaw@eastvaleca.gov); Eric Norris (enorris@eastvaleca.gov); Minegar, Peter; Dahi Kim (dkim@eastvaleca.gov); CMS Administrator; Raymond Polverini; Connor Paquin; Aric Evatt
Subject: JN:11963 The Homestead Traffic Scoping Agreement
Importance: High

Hi Ruth,

The scoping agreement has been revised per our discussion yesterday. The truck distribution has been modified for the 2023 and 2040 analysis scenarios to assume 20% heading westbound on Limonite Avenue. The E+P and Opening Year 2021 truck distribution will remain as we had it previously as the connection will not be in place until 2023.

Based on the Project trip generation (PCE based) and the trip distribution, here is the calculation of Project (PCE) trips heading to/from the west on Limonite Avenue with the extension in place:

- 13% of passenger cars x 142 total passenger car PM PCE trips = 19 PM PCE trips
- 20% of trucks x 71 total truck PM PCE trips = 14 PM PCE trips
- Total = 33 PM PCE trips

Regards,

CHARLENE SO, P.E.
Senior Associate

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From: Ruth Smith <rsmith@interwestgrp.com>
Sent: Wednesday, May 22, 2019 3:30 PM
To: Charlene Hwang So <cso@urbanxroads.com>
Cc: Kanika Kith.Eastvale <kkith.eastvale@interwestgrp.com>; William Hemsley <whemsley@interwestgrp.com>; 'Craig Bradshaw' (cbradshaw@eastvaleca.gov) <cbradshaw@eastvaleca.gov>; Eric Norris (enorris@eastvaleca.gov) <enorris@eastvaleca.gov>; Minegar, Peter <peter.minegar@mbakerintl.com>; Dahi Kim (dkim@eastvaleca.gov) <dkim@eastvaleca.gov>; CMS Administrator <cmsadmin@urbanxroads.com>; Raymond Polverini <rpolverini@orbisrep.com>; Connor Paquin <cpaquin@urbanxroads.com>
Subject: Re: JN:11963 The Homestead Traffic Scoping Agreement

Hi Charlene -

After our conversation, I took another look at the latest scoping agreement. I think the only needed changes are related to the trip distribution. Just make the changes we discussed, and provide specific project volumes to show why intersections west of the project or on Hellman wouldn't meet the 50-trip rule, and resubmit.

Thanks!

Ruth Smith, TE, PTP

Consulting Traffic Engineer for the City of Eastvale
Services provided by Interwest Consulting Group

Municipal Services - Traffic Engineer

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Sent from my iPhone

From: Charlene Hwang So <cso@urbanxroads.com>

Sent: Wednesday, May 22, 2019 12:37 PM

To: Ruth Smith

Cc: Kanika Kith.Eastvale; William Hemsley; 'Craig Bradshaw' (cbradshaw@eastvaleca.gov); Eric Norris (enorris@eastvaleca.gov); Minegar, Peter; Dahi Kim (dkim@eastvaleca.gov); CMS Administrator; Raymond Polverini; Connor Paquin

Subject: JN:11963 The Homestead Traffic Scoping Agreement

Hi Ruth,

I am following up on the status of your review of the scoping agreement. If possible we would like to take traffic counts tomorrow. I'd like to avoid taking counts next week since it is the absolute last week we can take counts and I'd prefer to have those days available to us in the event we need to retake any counts. Thank you!

Regards,

CHARLENE SO, PE
Senior Associate

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Sent from my iPhone

On May 20, 2019, at 2:07 PM, Ruth Smith <rsmith@interwestgrp.com> wrote:

> Hi Charlene –

Another item to be included in the scoping agreement is for the PM traffic counts to be collected from 3-6 PM instead of the usual 4-6 PM. We have noticed in various daily counts in the City that the PM peak hour sometimes occurs from 3-4 PM.

To keep things clean, I have updated my previous comments (attached), with the new item included as #4.

Please let me know if you have any questions.

Thanks!

Ruth

Ruth Smith, TE, PTP

Consultant Traffic Engineer for the City of Eastvale

Services provided by Interwest Consulting Group

<image003.jpg>

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From: Ruth Smith

Sent: Friday, May 17, 2019 3:54 PM

To: Charlene Hwang So <cso@urbanxroads.com>

Cc: Kanika Kith.Eastvale <kkith.eastvale@interwestgrp.com>; Bill Hemsley EV (whemsley.eastvale@interwestgrp.com) <whemsley.eastvale@interwestgrp.com>; 'Craig Bradshaw' (cbradshaw@eastvaleca.gov) <cbradshaw@eastvaleca.gov>; Eric Norris (enorris@eastvaleca.gov) <enorris@eastvaleca.gov>; 'Minegar, Peter' <Peter.Minegar@mbakerintl.com>; Dahi Kim (dkim@eastvaleca.gov) <dkim@eastvaleca.gov>; CMS Administrator <cmsadmin@urbanxroads.com>; 'Raymond Polverini' <rpolverini@orbisrep.com>; Connor Paquin <cpaquin@urbanxroads.com>

Subject: RE: JN:11963 The Homestead Traffic Scoping Agreement

Importance: High

Hi Charlene –

Please see the attached memo for Public Works' comments on the draft traffic scoping agreement for The Homestead development. Please note that we have added another scenario that includes the extension of Limonite to Kimball in the near-term (2023). Please see the memo for more details.

We appreciate the need to take traffic counts before school is out and will do our best to expedite your next submittal.

Please let me know if you have any questions.

Thanks!

Ruth

Ruth Smith, TE, PTP

Consultant Traffic Engineer for the City of Eastvale

Services provided by Interwest Consulting Group

<image005.jpg>

Interwest Consulting Group | www.interwestgrp.com

rsmith@interwestgrp.com | C 657.307.4468

From: Charlene Hwang So <cso@urbanxroads.com>

Sent: Monday, May 13, 2019 3:11 PM

To: Kanika Kith.Eastvale <kkith.eastvale@interwestgrp.com>

Cc: CMS Administrator <cmsadmin@urbanxroads.com>; 'Raymond Polverini' <rpolverini@orbisrep.com>; Connor Paquin <cpaquin@urbanxroads.com>; 'Minegar, Peter' <Peter.Minegar@mbakerintl.com>; Ruth Smith <rsmith@interwestgrp.com>; William Hemsley <whemsley@interwestgrp.com>

Subject: JN:11963 The Homestead Traffic Scoping Agreement

Thank you!

Regards,

CHARLENE SO, P.E.

Senior Associate

<image006.png>

260 E. Baker Street, Suite 200

Costa Mesa, CA 92626

(949) 336-5982 Direct

(949) 861-0177 Cell

(949) 660-1994 Main

urbanxroads.com

From: Kanika Kith.Eastvale <kkith.eastvale@interwestgrp.com>

Sent: Monday, May 13, 2019 3:10 PM

To: Charlene Hwang So <cso@urbanxroads.com>

Cc: CMS Administrator <cmsadmin@urbanxroads.com>; 'Raymond Polverini' <rpolverini@orbisrep.com>; Connor Paquin <cpaquin@urbanxroads.com>; 'Minegar, Peter' <Peter.Minegar@mbakerintl.com>; Ruth Smith <rsmith@interwestgrp.com>; William Hemsley <whemsley@interwestgrp.com>

Subject: RE: 11963 The Homestead Traffic Scoping Agreement

Hi Charlene,

I gave the team until May 15th to provide comments. I will forward to you as soon as they come in.

Kanika

From: Charlene Hwang So <cso@urbanxroads.com>

Sent: Monday, May 13, 2019 2:19 PM

To: Eastvale Contact Joe Indrawan <jindrawan@eastvaleca.gov>; 'kkith@eastvaleca.gov' <kkith@eastvaleca.gov>

Cc: CMS Administrator <cmsadmin@urbanxroads.com>; 'Raymond Polverini' <rpolverini@orbisrep.com>; Connor Paquin <cpaquin@urbanxroads.com>

Subject: JN:11963 The Homestead Traffic Scoping Agreement

Hi Kanika,

I am following up on the status of the City's review of the scoping agreement. We would like to get the traffic counts ordered soon.

Regards,

CHARLENE SO, P.E.

Senior Associate

<image006.png>

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urbanxroads.com

From: Charlene Hwang So

Sent: Friday, May 3, 2019 10:04 AM

To: jindrawan@eastvaleca.gov; kkith@eastvaleca.gov

Cc: CMS Administrator <cmsadmin@urbanxroads.com>; Raymond Polverini <rpolverini@orbisrep.com>; Connor Paquin (cpaquin@urbanxroads.com) <cpaquin@urbanxroads.com>

Subject: JN:11963 The Homestead Traffic Scoping Agreement

Importance: High

Hi Joe and Kanika,

Attached for the City's review is the traffic study scoping agreement for The Homestead Project. Please let me know if you have any questions. We would like to get feedback on at least the study area so that we can take these traffic counts before local schools are out on Summer break. Thank you!

Regards,

CHARLENE SO, P.E.

Senior Associate

<image006.png>

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urbanxroads.com

<Homestead Scoping Agreement (5-1-19)_TE Review Comments_Updated 5-20-19.pdf>

URBAN CROSSROADS

260 E. Baker St. | Suite 200 | Costa Mesa, CA 92626 | (949) 660-1994
urbanxroads.com

May 23, 2019

Mr. Bill Hemsley
City of Eastvale
12363 Limonite Avenue, Suite 910
Eastvale, CA 91752

SUBJECT: SCOPING AGREEMENT FOR THE HOMESTEAD TRAFFIC IMPACT ANALYSIS

Dear Mr. Bill Hemsley:

The firm of Urban Crossroads, Inc. is pleased to submit this scoping agreement for the proposed The Homestead development (referred to as "Project"), which is located on the west of Archibald Avenue and on either side of Limonite Avenue in the City of Eastvale. The Project is proposed to consist of the following uses:

- 532,340 square feet of high-cube fulfillment center use
- 204,660 square feet of high-cube transload and short-term storage warehouse
- 319,250 square feet of warehousing use

Our goal is to obtain comments from City of Eastvale staff, to ensure that the traffic study fully addresses the potential impacts of the proposed Project. The remainder of this letter describes the draft proposed analysis methodology, project trip generation, trip distribution, and project traffic assignment/project trips on the surrounding roadway network, which have been used to establish the draft proposed project study area and analysis locations.

Exhibit 1 depicts the location of the proposed Project in relation to the existing roadway network. It is anticipated that the project will be built and occupied by Year 2021.

STUDY AREA

The traffic impact study area was defined in conformance with the requirements of the County's TIA guidelines. Based on these guidelines, the minimum area to be studied shall include any intersection of "Collector" or higher classification street, with "Collector" or higher classification streets, at which the proposed Project will add 50 or more peak hour trips. Exhibit 2 presents the study area intersection analysis locations.

Study area intersections will be evaluated using the Highway Capacity Manual (HCM) (6th Edition) methodology. However, the following intersections fall within the jurisdiction of Caltrans, SBCTA, or Riverside County, and will be evaluated using HCM 6th Edition only as directed by the respective jurisdiction:

- Archibald Avenue & Riverside Drive

- I-15 SB Ramps & Limonite Avenue
- I-15 NB Ramps & Limonite Avenue

HCM will be reported in delay and the City's significance threshold is based on HCM delay. The list of study area intersections is provided on Table 1. Daily volume-to-capacity roadway analysis will be conducted for the following segments for all analysis scenarios:

1. Limonite Avenue, Archibald Avenue to Sumner Avenue
2. Limonite Avenue, Sumner Avenue to Hamner Avenue
3. Limonite Avenue, Hamner Avenue to I-15 Freeway
4. Archibald Avenue, Limonite Avenue to 65th Street

The following daily volume thresholds will be utilized for the roadway segment analysis:

Roadway Lanes	City of Eastvale[1]
2-Lane	18,000
4-Lane	35,900
6-Lane	53,900

[1] Based on LOS E maximum two-way traffic volume (ADT) thresholds from the City of Eastvale General Plan (Table C-1) for an Urban Arterial.

The City of Chino, City of Ontario, and City of Jurupa Valley do not require segment analysis for roadways within their respective jurisdictions.

ANALYSIS SCENARIOS

Consistent with the City's TIA guidelines, the analysis of peak hour operations at study area intersections will be provided for the following analysis scenarios:

- Existing (2019) Conditions
- Existing plus Project (E+P) Conditions
- Opening Year Cumulative (2021) Without Project, Without Limonite Avenue Extension (EAC) Conditions
- Opening Year Cumulative (2021) With Project, Without Limonite Avenue Extension (EAPC) Conditions
- Interim Year (2023) Without Project, With Limonite Avenue Extension (EAC) Conditions
- Interim Year (2023) With Project, With Limonite Avenue Extension (EAPC) Conditions
- Horizon Year (2040) Without Project, With Limonite Avenue Extension Conditions

- Horizon Year (2040) With Project, With Limonite Avenue Extension Conditions

As part of Existing (2019) traffic conditions, the traffic study will include an assessment of existing pedestrian facilities, bicycle facilities, and transit. The traffic study will also discuss the Project's effects on the planned pedestrian and bicycle facilities and transit. The baseline traffic counts and future cumulative development traffic will be reallocated for the Opening Year Cumulative (2023) conditions analysis to account for the changes to travel patterns with the Limonite Avenue extension in place. The forecasts for Opening Year Cumulative (2023) conditions will be compared to the Horizon Year (2040) forecasts to ensure reasonableness.

All analysis scenarios will first be analyzed based on Existing (2019) lane geometrics. Subsequently, analysis will then be conducted based on recommended improvements to demonstrate acceptable peak hour operations. Recommended improvements will include new traffic signals that will be shown based on the analysis scenario that they are warranted under.

TRIP GENERATION

In order to develop the traffic characteristics of the proposed Project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition, 2017) or the TUMF High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019) were used for the following land uses (see Table 2):

- High Cube Fulfillment Center Warehouse – WSP
- Warehouse – ITE Land Use 150
- High Cube Transload and Short-Term Storage Warehouse – ITE Land Use 154

- High-Cube Fulfillment Center Warehouse has been used to derive site specific trip generation estimates for up to 532,340 square feet of the proposed Project. The ITE Trip Generation Manual (2017) has trip generation rates for high-cube fulfillment center use (ITE land use code 155), however, these rates are unreliable because they are based on limited data (i.e., one to two surveyed sites) and the ITE Trip Generation Manual recommends the use of local data sources where available. As such, the trip-generation statistics published in the TUMF High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019) which was commissioned by the Western Riverside Council of Governments (WRCOG) in support of the Transportation Uniform Mitigation Fee (TUMF) update, has been utilized for the high-cube fulfillment center use. The WSP trip generation rates were published in January 2019 and are based on data collected at 11 local high-cube fulfillment center sites. However, the WSP study does not include a split for inbound and outbound vehicles, as such, the inbound and outbound splits per the ITE High-Cube Warehouse Vehicle Trip Generation Analysis (October 2016) have been utilized.

- ITE land use code 150 (Warehousing) has been used to derive site specific trip generation estimates for up to 319,250 square feet of the proposed Project. The ITE Trip Generation Handbook (3rd Edition, 2017) identifies a 20% mix of heavy trucks, however, does not provide a breakdown of the 20% further by axle type. As such, the South Coast Air Quality Management District (SCAQMD) Warehouse Truck Trip Study Data Results and Usage (2014) for warehouse trucks has been utilized for the truck mix: 16.7% 2-axle trucks, 20.7% 3-axle trucks, and 62.6% 4+-axle trucks.
- ITE land use code 154 (High-Cube Transload and Short-Term Storage Warehouse) has been used to derive site specific trip generation estimates for up to 204,660 square feet of the proposed Project. The truck percentage was obtained from the ITE's High Cube Warehouse Vehicle Trip Generation Analysis (October 2016). The vehicle mix varies by peak hour and overall daily: 69.2% passenger cars in the AM peak hour, 78.3% passenger cars in the PM peak hour, and 67.8% passenger cars weekday daily, with the remaining percentages associated with heavy trucks. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. For the purposes of this analysis, the percentage of trucks, by axle type, were obtained from the SCAQMD Warehouse Truck Trip Study Data Results and Usage (2014) recommended truck mix. The SCAQMD has recently performed surveys of existing facilities and compiled the data to provide interim guidance on the mix of heavy trucks for these types of high-cube warehousing/distribution facilities. Based on this interim guidance from the SCAQMD, the following truck fleet mix was utilized for the purposes of estimating the truck trip generation for the site (without cold storage): 16.7% of the total trucks as 2-axle trucks, 20.7% of the total trucks as 3-axle trucks, and 62.6% of the total trucks as 4+-axle trucks.

Finally, PCE factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in Appendix B of the San Bernardino County Congestion Management Program (CMP), 2016 Update.

As shown on Table 3, the proposed Project is anticipated to generate a net total of 1,984 actual vehicle trip-ends per day with 135 AM peak hour trips and 169 PM peak hour trips. In comparison, the proposed Project is anticipated to generate a net total of 2,616 PCE trip-ends per day, 177 PCE AM peak hour trips and 213 PCE PM peak hour trips (see Table 4).

TRIP DISTRIBUTION

The following exhibits illustrate the proposed Project trip distribution patterns, by land use:

- Exhibit 3: Project (E+P and Opening Year Cumulative Passenger Car) Trip Distribution
- Exhibit 4: Project (Interim Year and Horizon Year Passenger Car) Trip Distribution, which assumes the extension of Limonite Avenue to the west over the Cucamonga Creek
- Exhibit 5: Project (E+P and Opening Year Cumulative Truck) Trip Distribution
- Exhibit 6: Project (Interim Year and Horizon Year Truck) Trip Distribution, which assumes the extension of Limonite Avenue to the west over the Cucamonga Creek

TRAFFIC IMPACT ANALYSIS

SYNCHRO ANALYSIS

Assess intersection capacity and level of service (LOS), for the 17 study area intersections for each of the listed analysis scenarios. The list of study area intersections is provided on Table 1.

TRAFFIC SIGNAL ANALYSIS

Perform traffic signal warrant analyses to determine if any unsignalized study area intersection would warrant a traffic signal under the listed analysis scenarios. However, driveways or intersections with restricted access will not evaluate traffic signal warrants such as Driveway 6 on Archibald Avenue.

FREEWAY ANALYSIS

Conduct freeway segment analysis for the I-15 mainline freeway segments based on the currently accepted Highway Capacity Manual (HCM) Basic Freeway Segment Analysis methodology for each of the listed analysis scenarios.

Perform merge/diverge analysis to determine the LOS of the I-15 ramp junctions based on the currently accepted Highway Capacity Manual (HCM) Merge/Diverge Analysis methodology for each of the listed analysis scenarios.

LEVEL OF SERVICE (LOS) CRITERIA

Per Policy C-10 of the City of Eastvale General Plan, the following LOS will be utilized for study area intersections located within the City: Seek to maintain the following target levels of service: C along all City-maintained roads. A peak hour level of service of D may be allowed in commercial and employment areas, and at intersections of any combination of Major Highways, Urban Arterials, Secondary Highways, or freeway ramp intersections.

For each of the off-site study area intersections within the City of Eastvale the intersecting roadways were found to be Secondary Highway or higher on the City's General Plan Circulation Element. As such, the minimum level of service applicable to the study area intersections is LOS D. Therefore, any intersection operating at LOS E or worse will be considered deficient for the purposes of this analysis.

Acceptable LOS for intersections located in the City of Ontario is LOS E. For the study intersections at Caltrans freeway-to-arterial ramps, LOS D is also the minimum acceptable condition that should be maintained during the peak commute hours.

CEQA CHECKLIST

Site Access Evaluation

The turn pocket lengths will be determined through peak hour traffic simulations developed using Synchro and SimTraffic software in an effort to identify the required storage capacity for turn lanes at each Project driveway. The site access evaluation will address two-way traffic of a variation of vehicles including passenger vehicles, trucks, and emergency vehicles.

Transit Service, Pedestrian, and Bicycle Facilities

The traffic impact study will address potential conflicts or performance issues with the existing and future policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.

THRESHOLDS OF SIGNIFICANCE – INTERSECTIONS

Project related significant impacts will be identified by comparing the Without Project condition to the With Project condition based on the following criteria:

- If the LOS deteriorates from acceptable LOS (LOS D or better) to unacceptable LOS (LOS E or F); or
- If the intersection is already operating at an unacceptable LOS (LOS E or F) in Without Project conditions and the addition of Project traffic increases the delay by more than 5.0 seconds.

Cumulative traffic impacts are created as a result of a combination of the proposed Project together with other future developments contributing to the overall traffic impacts requiring additional improvements to maintain acceptable level of service operations with or without the Project. A Project's contribution to a significant cumulative impact can be reduced to less than significant if the Project is required to implement or fund its fair share of improvements designed to alleviate its cumulatively considerable contribution to the impact.

In the event that an intersection is operating at or is forecast to operate at a deficient LOS, the Congestion Management Program (CMP) guidelines have defined a series of steps to be completed to

determine the Project's contribution to the deficiency of intersections, which has been applied to both CMP and non-CMP study area intersections. The steps are as follows:

- Determine the mitigation measures necessary to achieve an acceptable service level,
- Calculate the Project's share in the future traffic volume projections for the peak hours,
- Estimate the cost to implement recommended mitigation measures, and
- Calculate the Project's fair-share contribution to mitigate the Project's traffic impacts

THRESHOLDS OF SIGNIFICANCE – ROADWAY SEGMENTS

Project related significant impacts will be identified by comparing the Without Project condition to the With Project condition based on the following criteria:

- If the LOS deteriorates from acceptable LOS (LOS D or better) to unacceptable LOS (LOS E or F); or
- If the roadway segment is already operating at an unacceptable LOS (LOS E or F) in Without Project conditions and the addition of Project traffic increases the volume-to-capacity ratio by 0.01 or greater.

EXISTING COUNT DATA

Traffic counts will be conducted on Tuesday, Wednesday, or Thursday while local schools are in session and operating on normal bell schedules. Traffic counts will not be conducted if any unusual traffic conditions would affect the accuracy of counts, such as lane blockage, diverted traffic, or roadway construction. Traffic counts will be conducted after the scoping agreement has been approved. Traffic counts will be collected during the hours of 7-9 AM and 3-6 PM for the morning and evening peak periods.

CUMULATIVE TRAFFIC

Future year traffic forecasts for Opening Year Cumulative (2021) and Interim Year (2023) traffic conditions include future cumulative development traffic, project traffic, in conjunction with the application of an ambient growth factor on existing baseline traffic counts. Cumulative development project traffic will be added to account for traffic associated with approved/pending projects in the area that are likely to contribute traffic to study area intersections. Ambient growth covers additional growth that may not be reflected in the addition of traffic from other known projects.

AMBIENT GROWTH

Future year traffic forecasts will be based upon background (ambient) growth of 1.6% per year, compounded over 2 years for 2021 traffic conditions and compounded over 4 years for 2023 traffic conditions. The total ambient growth factor is 3.23 for 2021 traffic conditions (growth of 1.6% per year, compounded over 2 years) and 6.56 for2023 traffic conditions (growth of 1.6% per year, compounded over 4 years). The ambient growth factor is intended to approximate regional traffic growth. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects.

CUMULATIVE DEVELOPMENT PROJECTS

Traffic generated by the development of future projects that have been proposed/approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies are also included for Opening Year Cumulative and Interim Year traffic conditions. A request will be made to the City's Planning Department to provide a list of cumulative projects for the inclusion in the traffic impact analysis. For any new cumulative projects, it is requested that information necessary to determine trip generation and trip distribution patterns for each project be provided (e.g., location, land use, quantity, etc.). Requests will be made to the adjacent cities of Jurupa Valley, Ontario, and Chino to obtain their respective cumulative lists. The traffic impact study will provide trip generation, trip distributions, and locations of each applicable cumulative project in the study area. Exhibit 7 and Table 5 provides a summary of the cumulative project information we currently have. This list will be updated with information provided by each agency.

SPECIAL ISSUES

The following special issue will also be addressed as part of the traffic study:

1. Truck turning templates will be used to address how Project truck traffic (e.g., large trucks such as a WB-67) would enter and exit applicable Project driveways.

If you have any questions, please contact me directly at (949) 336-5982.

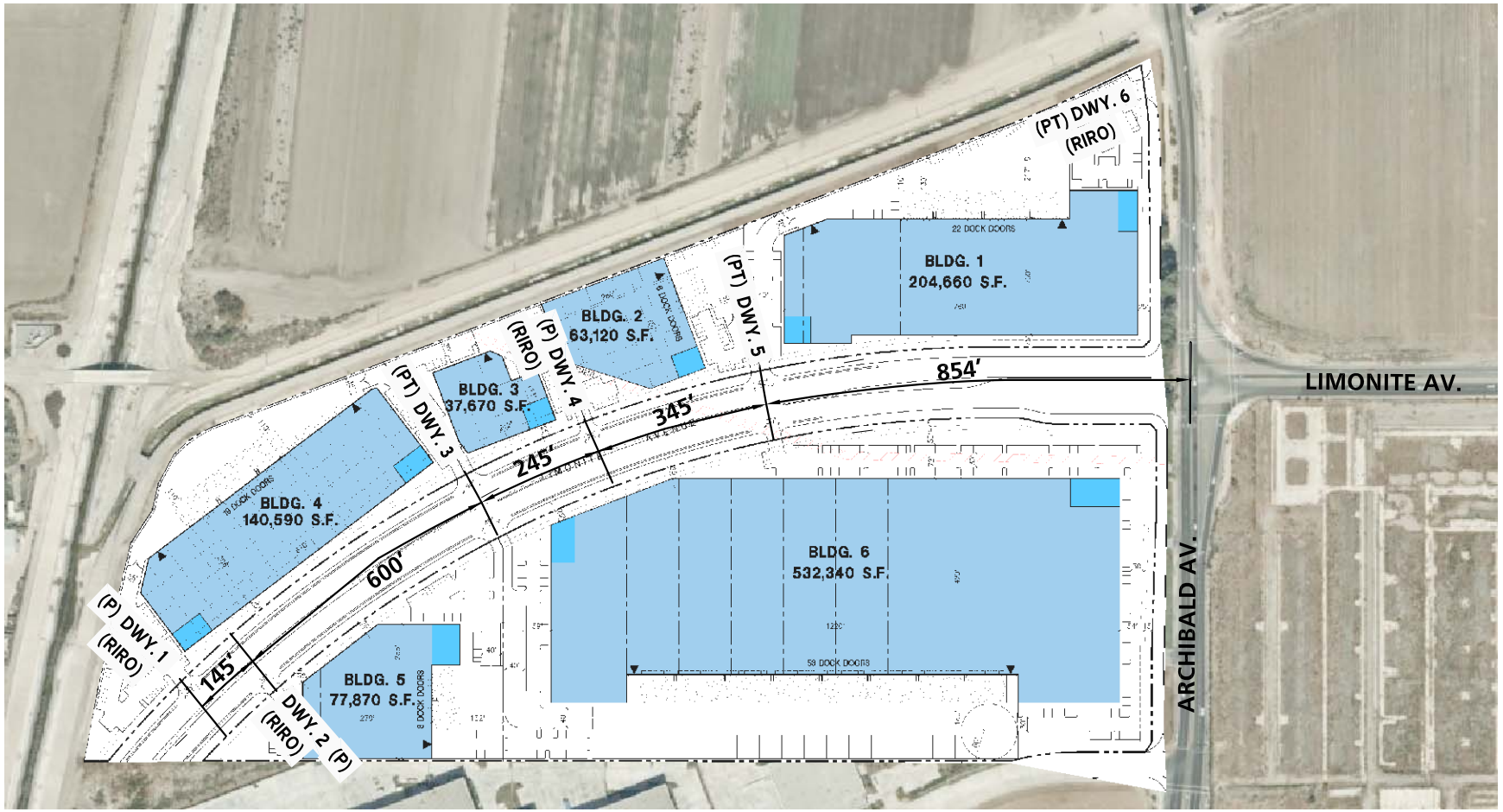
Respectfully submitted,

URBAN CROSSROADS, INC.

Charlene So

Senior Associate

EXHIBIT 1: PRELIMINARY SITE PLAN



LEGEND:

RIRO = RIGHT-IN/RIGHT-OUT ONLY ACCESS
P = PASSENGER CARS ONLY
T = TRUCKS ONLY
PT = PASSENGER CARS AND TRUCKS

NOTE: UNLESS NOTED, ALL DRIVEWAYS ARE ASSUMED TO BE FULL ACCESS.

N

11963 - siteplan.dwg

URBAN CROSSROADS

1.1-18

EXHIBIT 2: LOCATION MAP

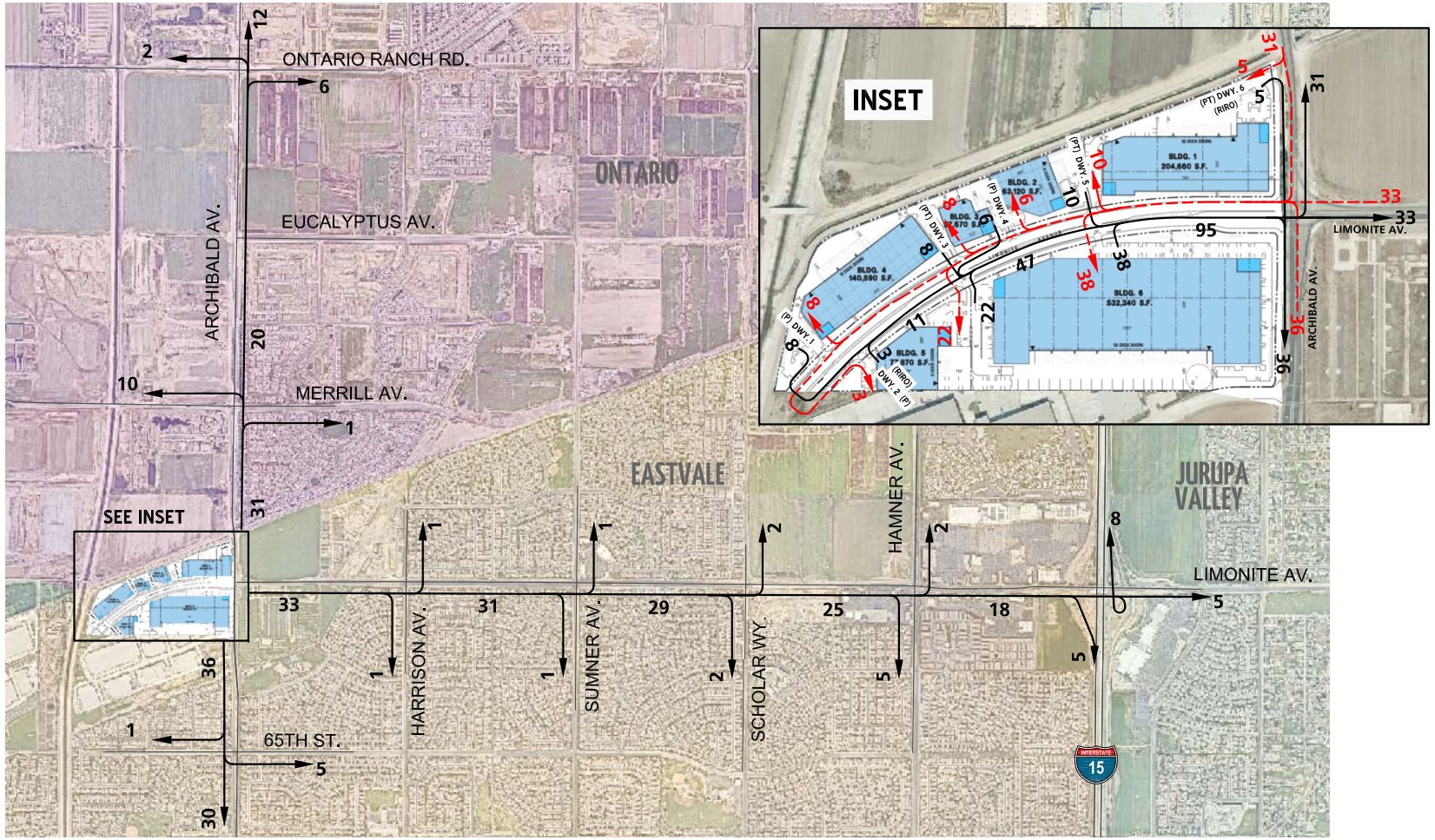


LEGEND:

- 0 = EXISTING INTERSECTION ANALYSIS LOCATION
- (0) = FUTURE INTERSECTION ANALYSIS LOCATION
- 0 = RIVERSIDE COUNTY CMP INTERSECTIONS
- 00 = ROADWAY SEGMENT ANALYSIS LOCATION

N

EXHIBIT 3: PROJECT (E+P AND OPENING YEAR CUMULATIVE PASSENGER CAR) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

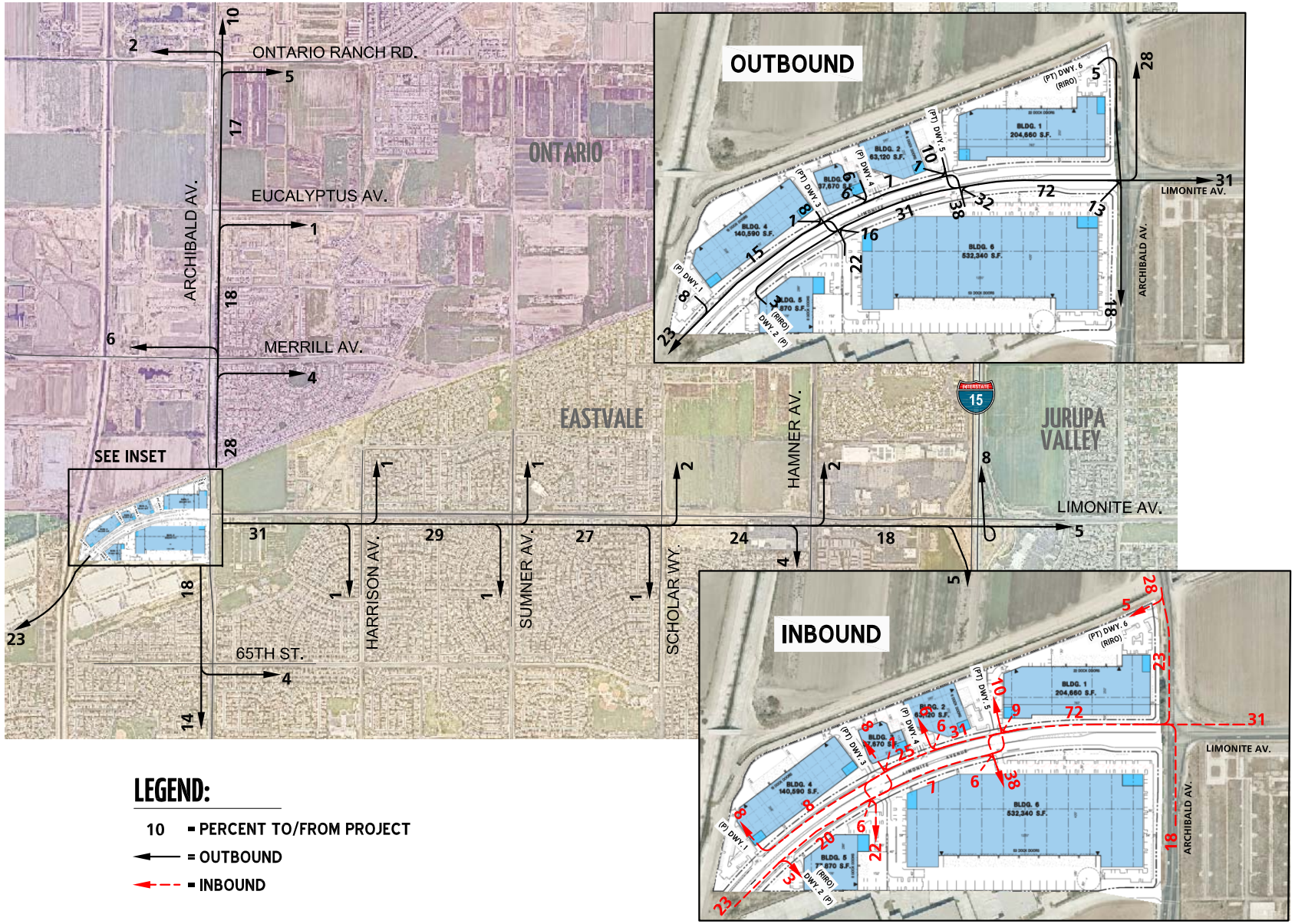
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◄- - - = INBOUND

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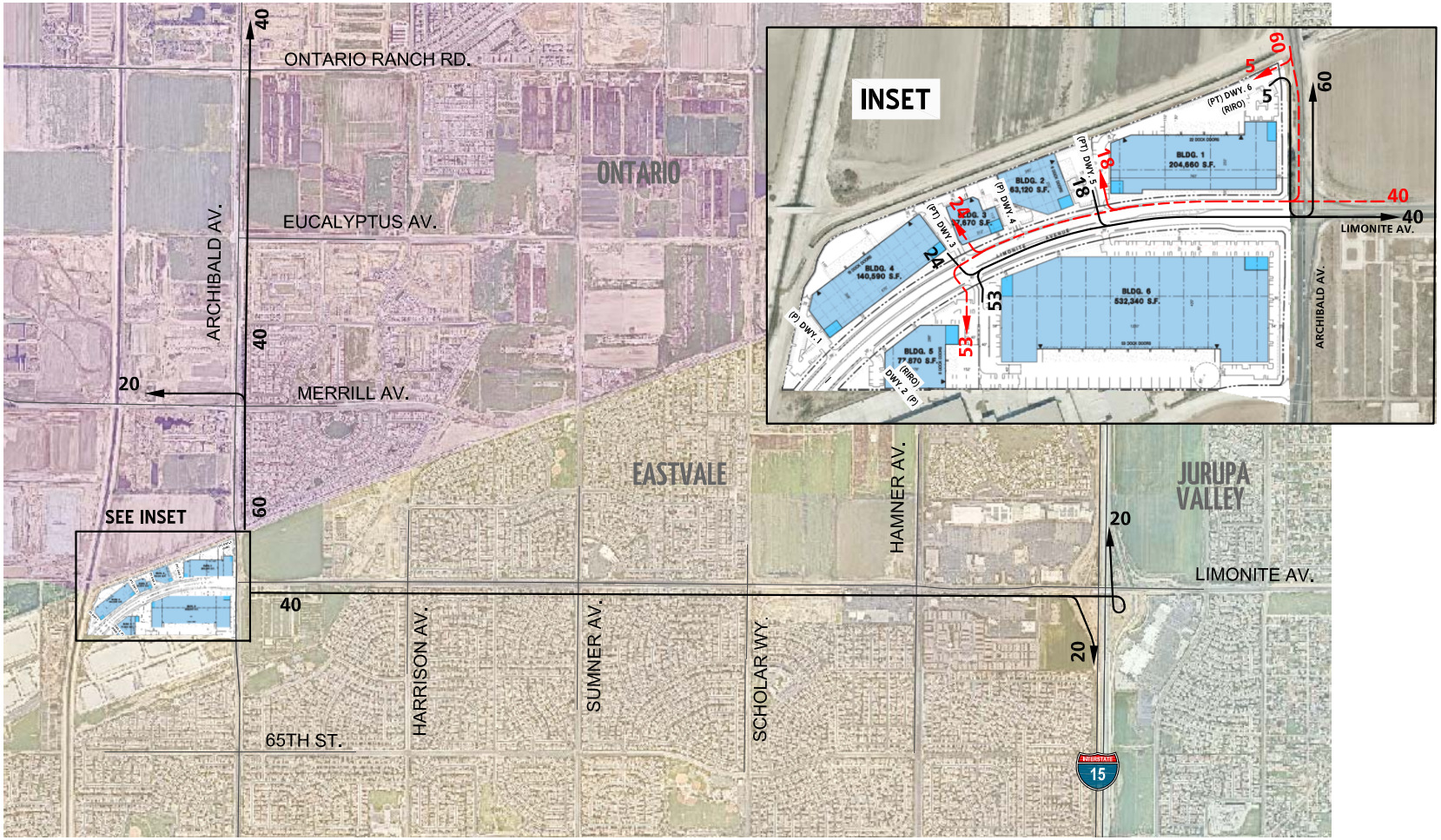
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EXHIBIT 4: PROJECT (INTERIM YEAR AND HORIZON YEAR WITH LIMONITE AVENUE EXTENSION PASSENGER CAR) TRIP DISTRIBUTION



URBAN CROSSROADS

EXHIBIT 5: PROJECT (E+P AND OPENING YEAR CUMULATIVE TRUCK) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

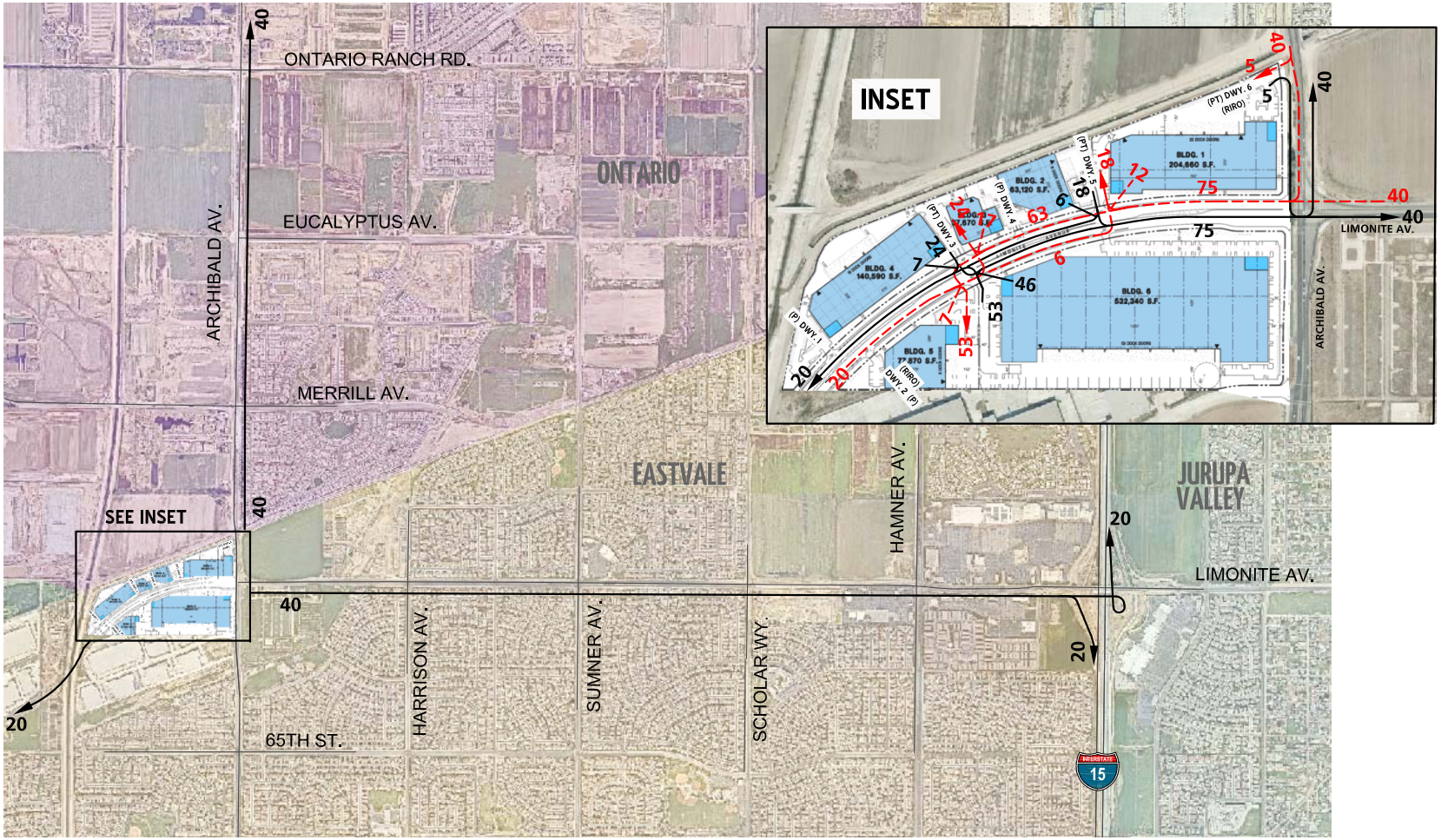
◄ = OUTBOUND

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N

URBAN CROSSROADS

EXHIBIT 6: PROJECT (INTERIM YEAR AND HORIZON YEAR TRUCK) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

◄ = OUTBOUND

◄- - - = INBOUND

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URBAN CROSSROADS

EXHIBIT 7: CUMULATIVE DEVELOPMENT LOCATION MAP

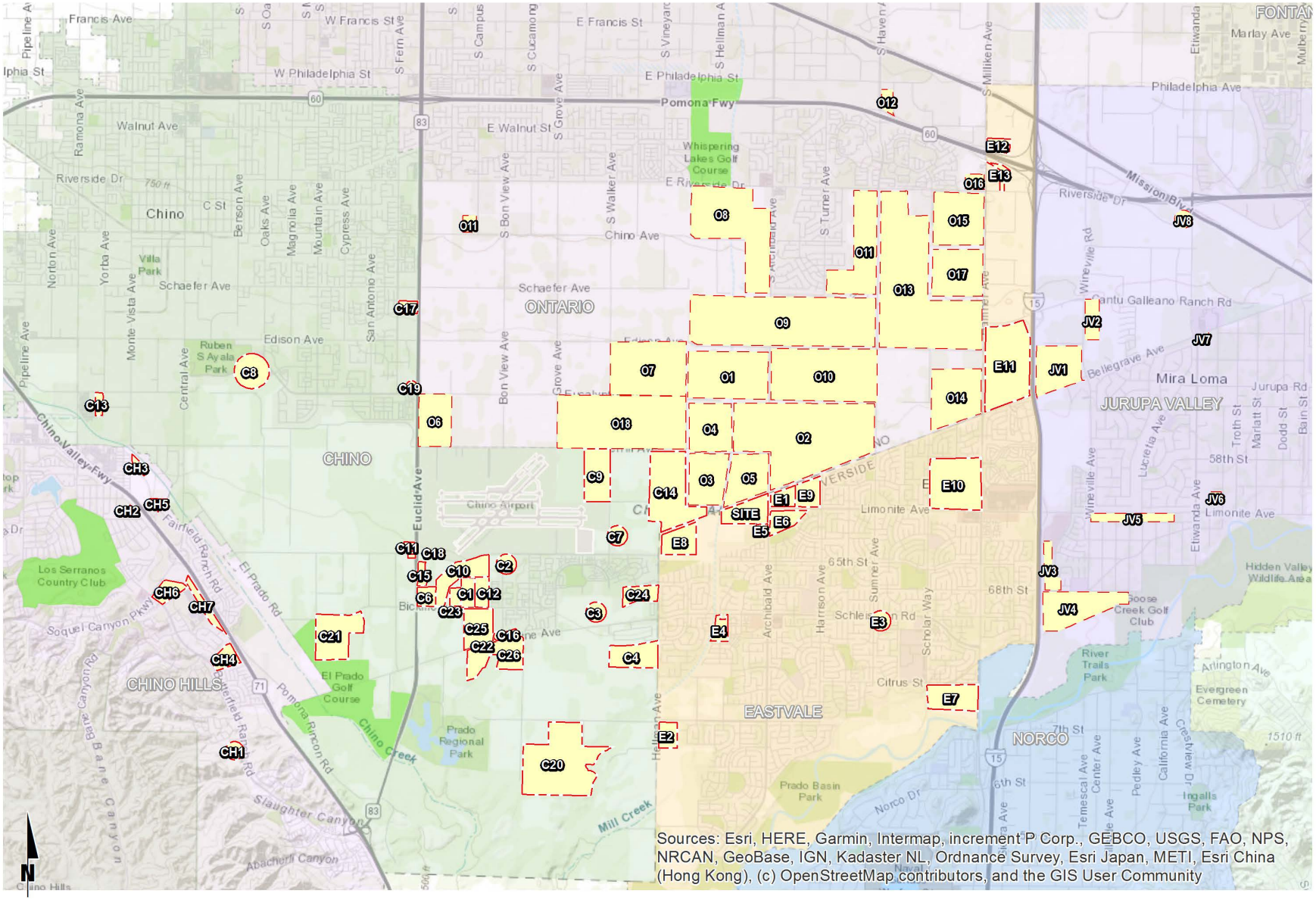


Table 1

List of Study Area Intersections

#	Intersection	Jurisdiction
1	Driveway 1 & Limonite Av. - Future Intersection	Eastvale
2	Driveway 2 & Limonite Av. - Future Intersection	Eastvale
3	Driveway 3 & Limonite Av. - Future Intersection	Eastvale
4	Driveway 4 & Limonite Av. - Future Intersection	Eastvale
5	Driveway 5 & Limonite Av. - Future Intersection	Eastvale
6	Archibald Av. & Ontario Ranch Rd.	Ontario
7	Archibald Av. & Eucalyptus Av.	Ontario
8	Archibald Av. & Merrill Av.	Ontario
9	Archibald Av. & Driveway 6 - Future Intersection	Eastvale
10	Archibald Av. & Limonite Av.	Eastvale
11	Archibald Av. & 65th St.	Eastvale
12	Harrison Av. & Limonite Av.	Eastvale
13	Sumner Av. & Limonite Av.	Eastvale
14	Scholar Way & Limonite Av.	Eastvale
15	Hamner Av. & Limonite Av.	Eastvale
16	I-15 SB Ramps & Limonite Av.	Caltrans, Eastvale
17	I-15 NB Ramps & Limonite Av.	Caltrans, Eastvale

Table 2

Project Trip Generation Rates

Land Use[1,3]	Units[2]	ITE LU Code	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicle Trip Generation Rates									
High-Cube Fulfillment Center Warehouse[3]	TSF	--	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2-4 Axle Trucks			0.006	0.002	0.008	0.003	0.008	0.011	0.162
5+-Axle Trucks			0.008	0.003	0.011	0.003	0.007	0.010	0.217
Warehousing[4]	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars (80.0%)			0.105	0.031	0.136	0.041	0.111	0.152	1.392
2-Axle Trucks (3.34%)			0.004	0.001	0.006	0.002	0.005	0.006	0.058
3-Axle Trucks (4.14%)			0.005	0.002	0.007	0.002	0.006	0.008	0.072
4+-Axle Trucks (12.52%)			0.016	0.005	0.021	0.006	0.017	0.024	0.218
High-Cube Transload and Short-Term Storage Warehouse (Without Cold Storage)[4]	TSF	154	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars (AM-69.2%; PM-78.3%; Daily-67.8%)			0.043	0.013	0.055	0.022	0.056	0.078	0.949
2-Axle Trucks (AM-5.14%; PM-3.62%; Daily-5.38%)			0.003	0.001	0.004	0.001	0.003	0.004	0.075
3-Axle Trucks (AM-6.38%; PM-4.49%; Daily-6.67%)			0.004	0.001	0.005	0.001	0.003	0.004	0.093
4-Axle+ Trucks (AM-19.25%; PM-13.56%; Daily-20.13%)			0.012	0.004	0.015	0.004	0.010	0.014	0.282
Passenger Car Equivalent (PCE) Trip Generation Rates[5]									
High-Cube Fulfillment Center Warehouse[3]	TSF	--	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2-4 Axle Trucks (PCE = 2.0)			0.012	0.004	0.016	0.006	0.016	0.022	0.324
5+-Axle Trucks (PCE = 3.0)			0.025	0.008	0.033	0.008	0.022	0.030	0.651
Warehousing[4]	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars (80.0%)			0.105	0.031	0.136	0.041	0.111	0.152	1.392
2-Axle Trucks (3.34%) (PCE = 1.5)			0.007	0.002	0.009	0.003	0.007	0.010	0.087
3-Axle Trucks (4.14%) (PCE = 2.0)			0.011	0.003	0.014	0.004	0.011	0.016	0.144
4+-Axle Trucks (12.52%) (PCE = 3.0)			0.049	0.015	0.064	0.019	0.052	0.071	0.654
High-Cube Transload and Short-Term Storage Warehouse (Without Cold Storage)[4]	TSF	154	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars (AM-69.2%; PM-78.3%; Daily-67.8%)			0.043	0.013	0.055	0.022	0.056	0.078	0.949
2-Axle Trucks (AM-5.14%; PM-3.62%; Daily-5.38%) (PCE = 1.5)			0.005	0.001	0.006	0.002	0.004	0.005	0.113
3-Axle Trucks (AM-6.38%; PM-4.49%; Daily-6.67%) (PCE = 2.0)			0.008	0.002	0.010	0.003	0.006	0.009	0.187
-Axle+ Trucks (AM-19.25%; PM-13.56%; Daily-20.13%) (PCE = 3.0)			0.036	0.011	0.046	0.011	0.029	0.041	0.845

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

[2] TSF = thousand square feet

[3] Vehicle Mix Source: TUMF High Cube Warehouse Trip Generation Study, WSP, November January 29, 2019.
Inbound and outbound split source: High Cube Warehouse Vehicle Trip Generation Analysis, October 2016, ITE.

[4] Vehicle Mix Source is ITE Trip Generation Handbook (3rd Edition, 2017).
Truck Mix Source: South Coast Air Quality Management District (SCAQMD) Warehouse Truck Trip Study Data Results and Usage (2014).
Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks. PCE rates are per SBCTA.
Truck mix (by axle type) source from City of Fontana Truck Trip Generation Study (August 2003). PCE rates are per SBCTA.

[5] PCE factors have been applied to 2-axle, 3-axle, and 4+-axle trucks for each of the proposed land uses.

Table 3

Project Trip Generation Summary (Actual)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Building 1: High-Cube Transload and Short-Term Storage Warehouse	204.660	TSF							
Passenger Cars:			9	2	11	4	12	16	194
Truck Trips:									
2-axle:			1	0	1	0	1	1	16
3-axle:			1	0	1	0	1	1	20
4+-axle:			2	1	3	1	2	3	58
- Net Truck Trips			4	1	5	1	4	5	94
BUILDING 1 TOTAL NET TRIPS (Actual Vehicles) [2]			**13**	**3**	**16**	**5**	**16**	**21**	**288**
Building 2: Warehouse	63.120	TSF							
Passenger Cars:			7	2	9	3	7	10	88
Truck Trips:									
2-axle:			0	0	0	0	0	0	4
3-axle:			0	0	0	0	0	0	6
4+-axle:			1	0	1	0	2	2	14
- Net Truck Trips			1	0	1	0	2	2	24
BUILDING 2 TOTAL NET TRIPS (Actual Vehicles) [2]			**8**	**2**	**10**	**3**	**9**	**12**	**112**
Building 3: Warehouse	37.670	TSF							
Passenger Cars:			4	1	5	2	4	6	52
Truck Trips:									
2-axle:			0	0	0	0	0	0	2
3-axle:			0	0	0	0	0	0	4
4+-axle:			1	0	1	0	1	1	8
- Net Truck Trips			1	0	1	0	1	1	14
BUILDING 3 TOTAL NET TRIPS (Actual Vehicles) [2]			**5**	**1**	**6**	**2**	**5**	**7**	**66**
Building 4: Warehouse	140.590	TSF							
Passenger Cars:			15	4	19	6	15	21	196
Truck Trips:									
2-axle:			1	0	1	0	1	1	8
3-axle:			1	0	1	0	1	1	10
4+-axle:			2	1	3	1	2	3	32
- Net Truck Trips			4	1	5	1	4	5	50
BUILDING 4 TOTAL NET TRIPS (Actual Vehicles) [2]			**19**	**5**	**24**	**7**	**19**	**26**	**246**
Building 5: Warehouse	77.870	TSF							
Passenger Cars:			8	3	11	3	9	12	108
Truck Trips:									
2-axle:			0	0	0	0	0	0	6
3-axle:			0	1	1	0	1	1	6
4+-axle:			1	1	2	1	1	2	18
- Net Truck Trips			1	2	3	1	2	3	30
BUILDING 5 TOTAL NET TRIPS (Actual Vehicles) [2]			**9**	**5**	**14**	**4**	**11**	**15**	**138**

Table 3

Project Trip Generation Summary (Actual)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Builidng 6: High-Cube Fulfillment Center Warehouse	532.340	TSF							
Passenger Cars:			42	13	55	21	56	77	932
Truck Trips:									
2-4 axle:			3	1	4	2	4	6	86
5+-axle:			5	1	6	1	4	5	116
- Net Truck Trips			8	2	10	3	8	11	202
BUILDING 6 TOTAL NET TRIPS (Actual Vehicles) [2]			**50**	**15**	**65**	**24**	**64**	**88**	**1,134**
PROJECT TOTAL (Actual Vehicles)			**104**	**31**	**135**	**45**	**124**	**169**	**1,984**

[1] TSF = thousand square feet

[2] TOTAL NET TRIPS = Passenger Cars + Net Truck Trips.

Table 4

Project Trip Generation Summary (PCE)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Building 1: High-Cube Transload and Short-Term Storage Warehouse	204.660	TSF							
Passenger Cars:			9	2	11	4	12	16	194
Truck Trips:									
2-axle:			1	0	1	0	1	1	24
3-axle:			2	0	2	1	1	2	38
4+-axle:			7	2	9	2	6	8	174
- Net Truck Trips			10	2	12	3	8	11	236
BUILDING 1 TOTAL NET TRIPS (PCE) [2]			**19**	**4**	**23**	**7**	**20**	**27**	**430**
Building 2: Warehouse	63.120	TSF							
Passenger Cars:			7	2	9	3	7	10	88
Truck Trips:									
2-axle:			0	1	1	0	1	1	6
3-axle:			1	0	1	0	1	1	10
4+-axle:			3	1	4	1	4	5	42
- Net Truck Trips			4	2	6	1	6	7	58
BUILDING 2 TOTAL NET TRIPS (PCE) [2]			**11**	**4**	**15**	**4**	**13**	**17**	**146**
Building 3: Warehouse	37.670	TSF							
Passenger Cars:			4	1	5	2	4	6	52
Truck Trips:									
2-axle:			0	0	0	0	0	0	4
3-axle:			0	1	1	0	1	1	6
4+-axle:			2	0	2	1	2	3	26
- Net Truck Trips			2	1	3	1	3	4	36
BUILDING 3 TOTAL NET TRIPS (PCE) [2]			**6**	**2**	**8**	**3**	**7**	**10**	**88**
Building 4: Warehouse	140.590	TSF							
Passenger Cars (03%)			15	4	19	6	15	21	196
Truck Trips:									
2-axle:			1	0	1	0	1	1	12
3-axle:			2	0	2	1	1	2	20
4+-axle:			7	2	9	3	7	10	92
- Net Truck Trips			10	2	12	4	9	13	124
BUILDING 4 TOTAL NET TRIPS (PCE) [2]			**25**	**6**	**31**	**10**	**24**	**34**	**320**
Building 5: Warehouse	77.870	TSF							
Passenger Cars:			8	3	11	3	9	12	108
Truck Trips:									
2-axle:			1	0	1	0	1	1	8
3-axle:			1	0	1	0	1	1	12
4+-axle:			4	1	5	2	4	6	52
- Net Truck Trips			6	1	7	2	6	8	72
BUILDING 5 TOTAL NET TRIPS (PCE) [2]			**14**	**4**	**18**	**5**	**15**	**20**	**180**

Table 4

Project Trip Generation Summary (PCE)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Building 6: High-Cube Fulfillment Center Warehouse	532.340	TSF							
Passenger Cars:			42	13	55	21	56	77	932
Truck Trips:									
2-4 axle:			7	2	9	3	9	12	172
5+-axle:			14	4	18	4	12	16	348
- Net Truck Trips			21	6	27	7	21	28	520
BUILDING 6 TOTAL NET TRIPS (PCE) [2]			**63**	**19**	**82**	**28**	**77**	**105**	**1,452**
TOTAL PROJECT (PCE)			**138**	**39**	**177**	**57**	**156**	**213**	**2,616**

[1] TSF = thousand square feet

[2] TOTAL NET TRIPS = Passenger Cars + Net Truck Trips.

Table 5

Cumulative Development Land Use Summary

#	Project/Location	Land Use[1]	Quantity	Units[2]
City of Ontario				
O1	Parkside	SFDR	437	DU
		Multi-Family Attached (Apartments)	1,510	DU
		Shopping Center	115.000	TSF
O2	Subarea 29 & Amendment (40% complete)	SFDR	2,149	DU
		Shopping Center	87.000	TSF
O3	Colony Commerce West	High-Cube Warehouse	2213.360	TSF
		Manufacturing	737.786	TSF
O4	West Ontario Commerce Center SP	High-Cube Warehouse	1976.535	TSF
		Manufacturing	658.845	TSF
		Business Park	548.856	TSF
O5	Colony Commerce East	High-Cube Warehouse	998.680	TSF
		Manufacturing	233.129	TSF
		Warehousing	699.387	TSF
O6	Ontario Ranch Commerce Center	High-Cube Cold Storage Warehouse	1159.200	TSF
		Warehousing	337.600	TSF
		Business Park	290.200	TSF
O7	Parente Home Ranch SP	SFDR	270	DU
		Condo/Townhouse	1,872	DU
		General Office	462.281	TSF
		Shopping Center	194.278	TSF
O8	Countryside	SFDR	819	DU
	Armstrong Ranch	SFDR	994	DU
O9	The Avenue	SFDR	2,020	DU
		Multi-Family Attached (Apartments)	586	DU
		Shopping Center	250.000	TSF
O10	Grand Park	SFDR	484	DU
		Multi-Family Attached (Apartments)	843	DU
O11	West Haven	SFDR	753	DU
		Shopping Center	87.000	TSF
O12	Haven Gateway	General Light Industrial	42.160	TSF
		High-Cube Warehouse	168.640	TSF
O13	Rich Haven	SFDR	2,732	DU
		Multi-Family Attached (Condo)	1,524	DU
		Shopping Center	317.400	TSF
O14	Esperanza	SFDR	914	DU
		Multi-Family Attached (Apartments)	496	DU
O15	Edenglen	SFDR	310	DU
		Multi-Family Attached (Condo)	274	DU
		Shopping Center	217.520	TSF
		Business Park	550.000	TSF
O16	PDEV10-008 - Dry Food Storage	Mini-Warehouse	17.000	TSF
O17	Tuscana Village	SFDR	176	DU
		Shopping Center	26.000	TSF
O18	Merrill Commerce Center	High-Cube Fulfillment Warehouse	7,014.000	TSF
		Business Park	1,441.000	TSF

Table 5

Cumulative Development Land Use Summary

#	Project/Location	Land Use[1]	Quantity	Units[2]
City of Chino				
C1	Bickmore Street Residential (TM 18858) (30% complete)	SFDR	185	DU
C2	TM17574 (80% complete)	Condo/Townhouse	108	DU
C3	Falloncrest at the Preserve	SFDR	210	DU
		Condo/Townhouse	786	DU
		Apartments	412	DU
		Shopping Center	77.597	TSF
		General Office	77.597	TSF
C4	Tract 19980 (Homecoming Phase 4)	Apartments	454	DU
	TTM No. 20166 & 20167	SFDR	148	DU
	Brio & TTM No. 21065 & 20168 (Orchards)	SFDR	239	DU
C5	Farmer Boys	Fast-food w/ Drive-Thru	3.218	TSF
		Shopping Center	2.300	TSF
C6	Euclid & Bickmore Warehouse	Warehousing	205.820	TSF
		General Light Industrial	51.030	TSF
		Business Park	110.620	TSF
C7	Kimball Business Park	Business Park	146.550	TSF
C8	Chaffey College Expansion	Junior/Community College	93.50	AC
	College Park Commercial	Shopping Center	7.50	AC
C9	Chino Parcel Delivery	Parcel Delivery Facility	765.274	TSF
C10	Altitude Business Centre	Warehousing	715.000	TSF
		Light Industrial	255.000	TSF
		Business Park	233.000	TSF
		Self-Storage	110.000	TSF
C11	Majestic Gateway	Specialty Retail	25.000	TSF
		Pharmacy/Drugstore with Drive-Thru	13.000	TSF
		Fast-Food with Drive-Thru	8.600	TSF
C12	Bouma Residential	SFDR	106	DU
		Condo/Townhouse	94	DU
C13	Fairfield Inn & Suites (PL 17-0060 & PL 17-0061)	Hotel	111	RM
C14	Watson Industrial Park (40% complete)	High-Cube Warehouse	3,889.900	TSF
C15	Chino Business Park	General Light Industrial	165.500	TSF
		Business Park	21.500	TSF
C16	Flores Site	Shopping Center	4.000	TSF
		Gas Station w/ convenience store	16	VFP
		Express Car Wash	5.000	TSF
C17	Brewart Residential (Stonebrook - TM 18923)	SFDR	127	DU
C18	Archibald's (PL 17-0037)	Fast-Food with Drive-Thru	3.147	TSF
C19	TM 18972 (80% complete)	SFDR	147	DU
C20	Rancho Miramonte	SFDR	691	DU
		Condo/Townhouse	132	DU
		Neighborhood Retail	21.780	TSF
		Church	400	SEAT
C21	Majestic Chino Heritage	High-Cube Fulfillment Warehouse	1982.700	TSF
		High-Cube Cold Storage Warehouse	100.000	TSF
C22	Church	Church	47.979	TSF
		Daycare	190	STU

Cumulative Development Land Use Summary

#	Project/Location	Land Use[1]	Quantity	Units[2]
C23	Appesetche Residential	SFDR	60	DU
		Condo/Townhouse	160	DU
C24	Tract 19951, 19952, 19953, 19935 & 18479	SFDR	151	DU
		Condo/Townhouse	150	DU
C25	Ag. Buffer, Bungalow, Lic. Product, Liberty Deluxe, Lyon 2 & 3	SFDR	474	DU
C26	Pines Community	SFDR	552	DU
		Public Park	3.0	Acres
		Self Storage & RV Storage	120.000	TSF
		Sports Park	41.8	Acres
City of Eastvale				
E1	The Merge	Warehousing	336.501	TSF
		Shopping Center	4.750	TSF
		Supermarket	30.000	TSF
		Gas Station w/ convenience store	16	VFP
		Pharmacy/Drugstore with Drive-Thru	14.600	TSF
		Fast-Food with Drive-Thru	6.000	TSF
		Automated Car Wash	4.000	TSF
		Fast-Food Without Drive-Thru	7.750	TSF
		Coffee/Donut Shop With Drive-Thru	2.500	TSF
E2	TR29997	SFDR	122	DU
E3	13-0632 - Sumner Residential (Stratham Homes)	SFDR	129	DU
E4	TR35751	Condo/Townhouse	243	DU
E5	PP23219 (PM35865) (50% complete)	General Light Industrial	738.430	TSF
E6	Eastvale Shopping Center	Free-Standing Discount Superstore	192.000	TSF
		Specialty Retail	9.200	TSF
		Fast-Food Without Drive-Thru	7.200	TSF
		Coffee/Donut Shop w/ Drive Thru	2.000	TSF
		Fast-Food with Drive-Thru	3.500	TSF
		Gas Station w/ convenience store and car wash	16	VFP
E7	Van Leeuwen	SFDR	224	DU
E8	SP00358 - The Ranch at Eastvale	Shopping Center	267.200	TSF
		General Light Industrial	801.500	TSF
		Business Park	1,121.100	TSF
E9	SC Limonite, LLC	SFDR	330	TSF
E10	Leal Master Plan	Lifestyle Center (Commercial)	1,300.000	TSF
		General Commercial	225.000	TSF
		Office	920.000	TSF
		Hotel	450	RM
		High Density Residential	500-660	DU
E11	Eastvale Commerce Center	Shopping Center	650.000	TSF
E12	S. Milliken Warehouse	High-Cube Warehouse	280.000	TSF
E13	15-1508 - Industrial Warehouse	Warehousing	155.000	TSF
City of Chino Hills				
CH1	Vila Borba Specific Plan (TR 16414)	SFDR	172	DU
CH2	Country Club Villas	Condo/Townhouse	46	DU
CH3	Crossings at Chino Hills	Apartments	346	DU
CH4	The Goddard School	Daycare	10.587	TSF

Table 5

Cumulative Development Land Use Summary

#	Project/Location	Land Use[1]	Quantity	Units[2]
CH5	Indus Light Industrial	General Light Industrial	100.330	TSF
CH6	The Santa Barbara	Condo/Townhouse - Low Rise	138	DU
		Condo/Townhouse - Mid Rise	186	DU
		Shopping Center	15.700	TSF
CH7	Heritage Professional Center	Hospital	55.000	TSF
		Medical Office Building	86.952	TSF
		Hotel	120	RM
		Shopping Center	38.848	TSF
		Restaurant	7.200	TSF
City of Jurupa Valley				
JV1	Thoroughbred Farms	General Light Industrial	42.6	AC
		Business Park	35.5	AC
		Commercial	19.1	AC
JV2	Harmony Trails	SFDR	176	DU
JV3	Vernola Marketplace Apartments	Apartments	397	DU
JV4	Riverbend (70% complete)	Residential	466	DU
JV5	Wineville Marketplace	Commercial	37.657	TSF
JV6	Express Car Wash	Car Wash	4.702	TSF
JV7	Shops @ Bellegrave	Commercial	10.000	TSF
JV8	Flying J Travel Center	Diesel Pumps	12	VFP
		Passenger Car Pumps	8	VFP

[1] SFDR = Single Family Detached Residential

[2] TSF = Thousand Square Feet; DU = Dwelling Unit; VFP = Vehicle Fueling Position ; AC = Acres

[3] Source: Altfillisch Residential Project TIA Memorandum, LSA Associates, Inc., July 25, 2011.

APPENDIX 1.2:

SITE ADJACENT QUEUES

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Intersection: 2: Driveway 1 & Limonite Av.

Movement	NB	SB
Directions Served	R	R
Maximum Queue (ft)	30	24
Average Queue (ft)	3	2
95th Queue (ft)	17	13
Link Distance (ft)	138	208
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Driveway 2 & Limonite Av.

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LT	LTR	LTR
Maximum Queue (ft)	87	42	48	25	24
Average Queue (ft)	22	1	2	4	2
95th Queue (ft)	65	22	19	21	16
Link Distance (ft)	640	640	688	235	240
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 4: Driveway 3 & Limonite Av.

Movement	NB	SB
Directions Served	R	R
Maximum Queue (ft)	32	26
Average Queue (ft)	9	6
95th Queue (ft)	28	23
Link Distance (ft)	194	388
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Providence Wy. & Driveway 5

Movement	SB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	3
95th Queue (ft)	17
Link Distance (ft)	150
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: Archibald Av. & Driveway 4

Movement	EB	SB	SB
Directions Served	R	T	TR
Maximum Queue (ft)	60	480	481
Average Queue (ft)	21	480	479
95th Queue (ft)	69	483	484
Link Distance (ft)	315	465	465
Upstream Blk Time (%)		73	38
Queuing Penalty (veh)		0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: Archibald Av. & Limonite Av.

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	226	272	293	319	250	150	522	522	445	150	656	620
Average Queue (ft)	93	112	198	215	80	149	522	484	202	142	382	373
95th Queue (ft)	166	192	267	292	215	150	522	586	407	174	596	580
Link Distance (ft)			770	770			507	507			750	750
Upstream Blk Time (%)							94	3			0	0
Queuing Penalty (veh)							0	0			0	0
Storage Bay Dist (ft)	300	300			200	100			350	100		
Storage Blk Time (%)	0	0	0	13		92	13	5	0	73	30	
Queuing Penalty (veh)	0	1	0	15		412	48	38	1	342	43	

Intersection: 12: Archibald Av. & Limonite Av.

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	TR
Maximum Queue (ft)	480	203	295	340	612	571	547
Average Queue (ft)	288	92	294	339	607	212	232
95th Queue (ft)	451	174	297	339	611	410	414
Link Distance (ft)	750	750			601	601	601
Upstream Blk Time (%)					66	0	0
Queuing Penalty (veh)					415	2	1
Storage Bay Dist (ft)			250	250			
Storage Blk Time (%)			72	97	0		
Queuing Penalty (veh)			278	373	0		

Intersection: 13: Archibald Av. & Providence Wy.

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	105	57	110	78	222	846	890	129	325	335
Average Queue (ft)	40	10	42	33	46	380	412	47	110	129
95th Queue (ft)	82	38	86	64	141	738	777	104	255	276
Link Distance (ft)		199	239	239		890	890	750	750	750
Upstream Blk Time (%)						0	1			
Queuing Penalty (veh)						0	0			
Storage Bay Dist (ft)	100				150					
Storage Blk Time (%)	1					24				
Queuing Penalty (veh)	0					9				

Network Summary

Network wide Queuing Penalty: 1978

Intersection: 2: Driveway 1 & Limonite Av.

Movement	NB	SB
Directions Served	R	R
Maximum Queue (ft)	30	36
Average Queue (ft)	6	11
95th Queue (ft)	25	35
Link Distance (ft)	138	208
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Driveway 2 & Limonite Av.

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LT	LTR	LTR
Maximum Queue (ft)	91	24	21	38	40
Average Queue (ft)	20	1	1	11	9
95th Queue (ft)	62	15	8	37	32
Link Distance (ft)	640	640	688	235	240
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 4: Driveway 3 & Limonite Av.

Movement	NB	SB
Directions Served	R	R
Maximum Queue (ft)	82	37
Average Queue (ft)	22	15
95th Queue (ft)	52	35
Link Distance (ft)	194	388
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Providence Wy. & Driveway 5

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	642	162
Average Queue (ft)	364	111
95th Queue (ft)	710	193
Link Distance (ft)	627	150
Upstream Blk Time (%)	14	54
Queuing Penalty (veh)	0	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Archibald Av. & Driveway 4

Movement	EB	SB	SB
Directions Served	R	T	TR
Maximum Queue (ft)	69	480	481
Average Queue (ft)	15	480	480
95th Queue (ft)	57	482	480
Link Distance (ft)	315	465	465
Upstream Blk Time (%)		31	54
Queuing Penalty (veh)		0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: Archibald Av. & Limonite Av.

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	197	211	308	325	250	150	522	522	321	150	651	664
Average Queue (ft)	108	122	188	211	84	149	522	346	100	133	452	466
95th Queue (ft)	170	188	263	284	207	150	522	669	218	176	729	733
Link Distance (ft)			770	770			507	507			750	750
Upstream Blk Time (%)							97	1			0	0
Queuing Penalty (veh)							0	0			2	2
Storage Bay Dist (ft)	300	300			200	100			350	100		
Storage Blk Time (%)			0	8		99	5	0		60	46	
Queuing Penalty (veh)			1	11		491	24	4		352	62	

Intersection: 12: Archibald Av. & Limonite Av.

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	TR
Maximum Queue (ft)	648	443	282	340	645	644	634
Average Queue (ft)	451	98	162	268	612	609	610
95th Queue (ft)	723	245	263	414	645	640	632
Link Distance (ft)	750	750			601	601	601
Upstream Blk Time (%)	0	0			33	25	27
Queuing Penalty (veh)	2	0			297	222	241
Storage Bay Dist (ft)			250	250			
Storage Blk Time (%)			2	4	28		
Queuing Penalty (veh)			10	23	122		

Intersection: 13: Archibald Av. & Providence Wy.

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	150	244	118	143	224	905	905	137	460	467
Average Queue (ft)	148	218	45	72	46	903	905	55	216	242
95th Queue (ft)	156	277	94	126	161	924	905	108	449	470
Link Distance (ft)		199	241	241		890	890	750	750	750
Upstream Blk Time (%)		75				43	64			
Queuing Penalty (veh)		233				0	0			
Storage Bay Dist (ft)	100				150					
Storage Blk Time (%)	86					49				
Queuing Penalty (veh)	32					14				

Network Summary

Network wide Queuing Penalty: 2144

APPENDIX 3.1:

EXISTING TRAFFIC COUNTS – MAY 2019

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INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 23, 19

LOCATION: Eastvale
NORTH & SOUTH: Archibald
EAST & WEST: Edison

PROJECT #: SC2210
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W E ►
S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Edison			WESTBOUND Edison			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 2	ET 2	ER 1	WL 2	WT 1	WR 1	TOTAL
AM	7:00 AM	35	214	79	18	77	17	6	33	6	66	89	33	673
	7:15 AM	34	228	80	12	73	19	5	37	9	64	98	36	695
	7:30 AM	38	225	75	10	74	26	4	37	7	52	107	31	686
	7:45 AM	31	227	72	16	86	22	6	41	11	65	93	32	702
	8:00 AM	36	188	65	11	91	21	6	33	9	53	77	28	618
	8:15 AM	32	181	76	14	82	15	5	28	13	41	73	29	589
	8:30 AM	29	165	83	14	73	19	6	36	10	44	65	28	572
	8:45 AM	21	159	69	13	75	16	5	27	11	40	58	28	522
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	256	1,587	599	108	631	155	43	272	76	425	660	245	5,057
	APPROACH %	10%	65%	25%	12%	71%	17%	11%	70%	19%	32%	50%	18%	
	APP/DEPART	2,442	/	1,878	894	/	1,132	391	/	976	1,330	/	1,071	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	138	894	306	56	310	84	21	148	33	247	387	132	2,756
	APPROACH %	10%	67%	23%	12%	69%	19%	10%	73%	16%	32%	51%	17%	
	PEAK HR FACTOR		0.978			0.907			0.871			0.967		0.981
	APP/DEPART	1,338	/	1,049	450	/	590	202	/	508	766	/	609	0
PM	03:00 PM	9	98	51	24	157	10	9	123	21	38	36	13	589
	3:15 PM	12	89	57	25	153	15	11	125	19	41	38	18	603
	3:30 PM	8	99	53	29	165	11	12	131	22	50	36	17	633
	3:45 PM	11	105	59	25	161	13	10	128	25	44	39	16	636
	4:00 PM	13	81	58	27	164	11	12	136	24	47	41	16	630
	4:15 PM	10	99	59	25	173	16	13	129	26	52	44	18	664
	4:30 PM	9	102	56	30	168	17	17	132	30	68	43	26	698
	4:45 PM	10	88	67	33	220	18	14	137	25	66	49	25	752
	5:00 PM	14	105	58	29	211	15	18	131	22	61	34	22	720
	5:15 PM	13	103	56	27	238	16	14	128	28	55	47	19	744
	5:30 PM	12	98	45	31	212	16	17	120	29	67	44	13	704
	5:45 PM	12	96	49	35	177	15	21	124	33	50	42	15	669
	VOLUMES	133	1,163	668	340	2,199	173	168	1,544	304	639	493	218	8,042
	APPROACH %	7%	59%	34%	13%	81%	6%	8%	77%	15%	47%	37%	16%	
	APP/DEPART	1,964	/	1,553	2,712	/	3,142	2,016	/	2,548	1,350	/	799	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	49	394	226	120	881	65	63	516	104	249	174	79	2,920
	APPROACH %	7%	59%	34%	11%	83%	6%	9%	76%	15%	50%	35%	16%	
	PEAK HR FACTOR		0.945			0.948			0.970			0.896		0.971
	APP/DEPART	669	/	537	1,066	/	1,234	683	/	861	502	/	288	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	3	0	0	3
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	4	0	0	4

RTOR

NRR	SRR	ERR	WRR
X	0	X	0
0	6	0	10
0	7	0	11
0	6	0	8
0	7	0	12
0	8	0	10
0	6	0	13
0	5	0	10
0	4	0	9
0	0	0	0
0	0	0	0
0	0	0	0
0	49	0	83
0	2	0	5
0	4	0	7
0	2	0	8
0	3	0	6
0	3	0	9
0	4	0	9
0	3	0	11
0	5	0	9
0	4	0	10
0	3	0	8
0	4	0	6
0	3	0	7
0	40	0	95
0	16	0	33

Archibald

NORTH SIDE

Edison WEST SIDE EAST SIDE **Edison**

SOUTH SIDE

Archibald

		ALL PED AND BIKE				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	0	0
	7:45 AM	1	0	0	0	1
	8:00 AM	0	0	0	0	0
	8:15 AM	0	1	0	0	1
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	1	1	0	0	2
PM	3:00 PM	0	0	0	0	0
	3:15 PM	0	1	0	0	1
	3:30 PM	0	0	0	0	0
	3:45 PM	0	0	0	0	0
	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	0	0	0
	4:45 PM	0	1	0	0	1
	5:00 PM	0	1	0	0	1
	5:15 PM	1	1	0	0	2
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
	TOTAL	1	4	0	0	5

PEDESTRIAN CROSSINGS

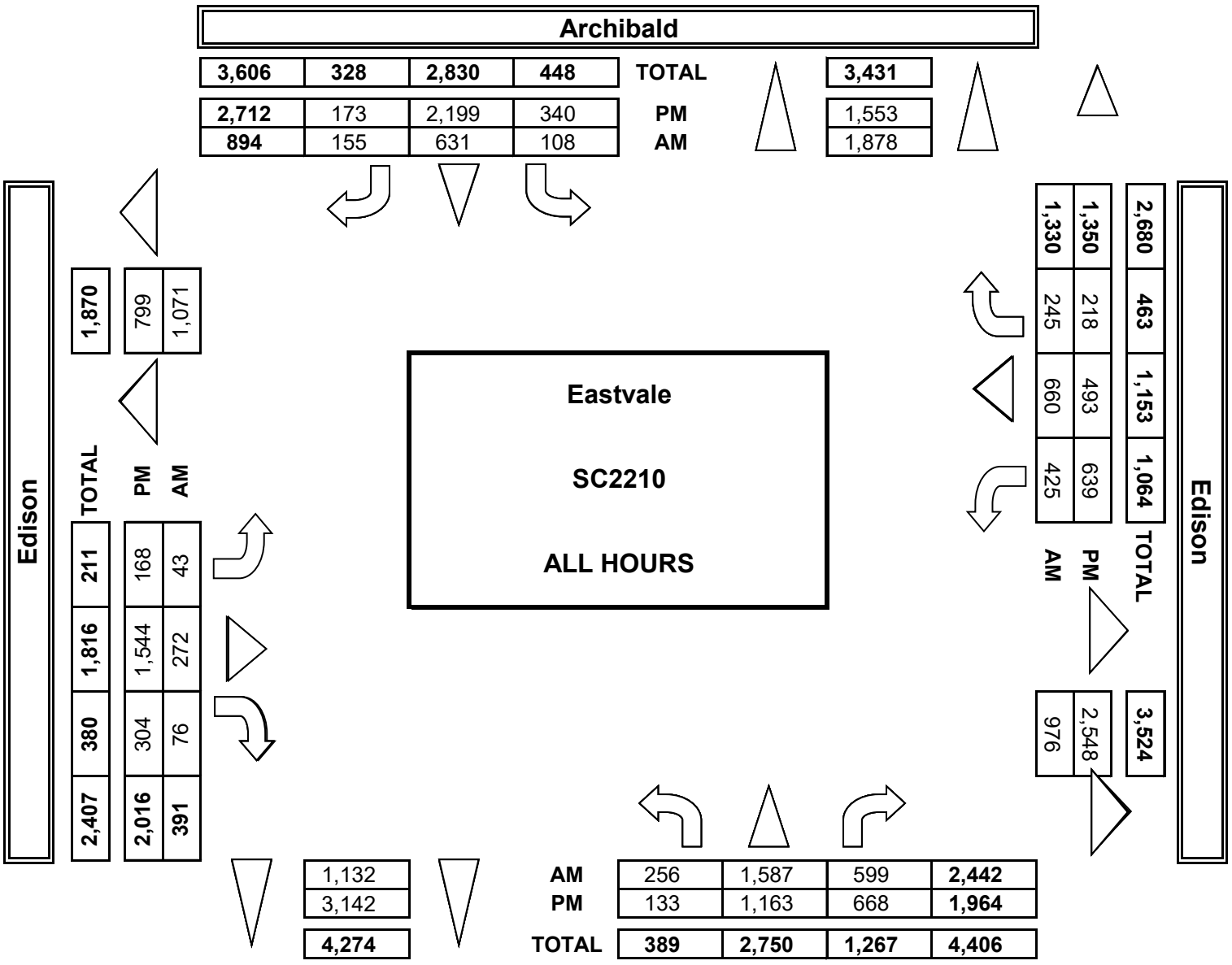
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	1	0	0	2
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
1	2	0	0	3

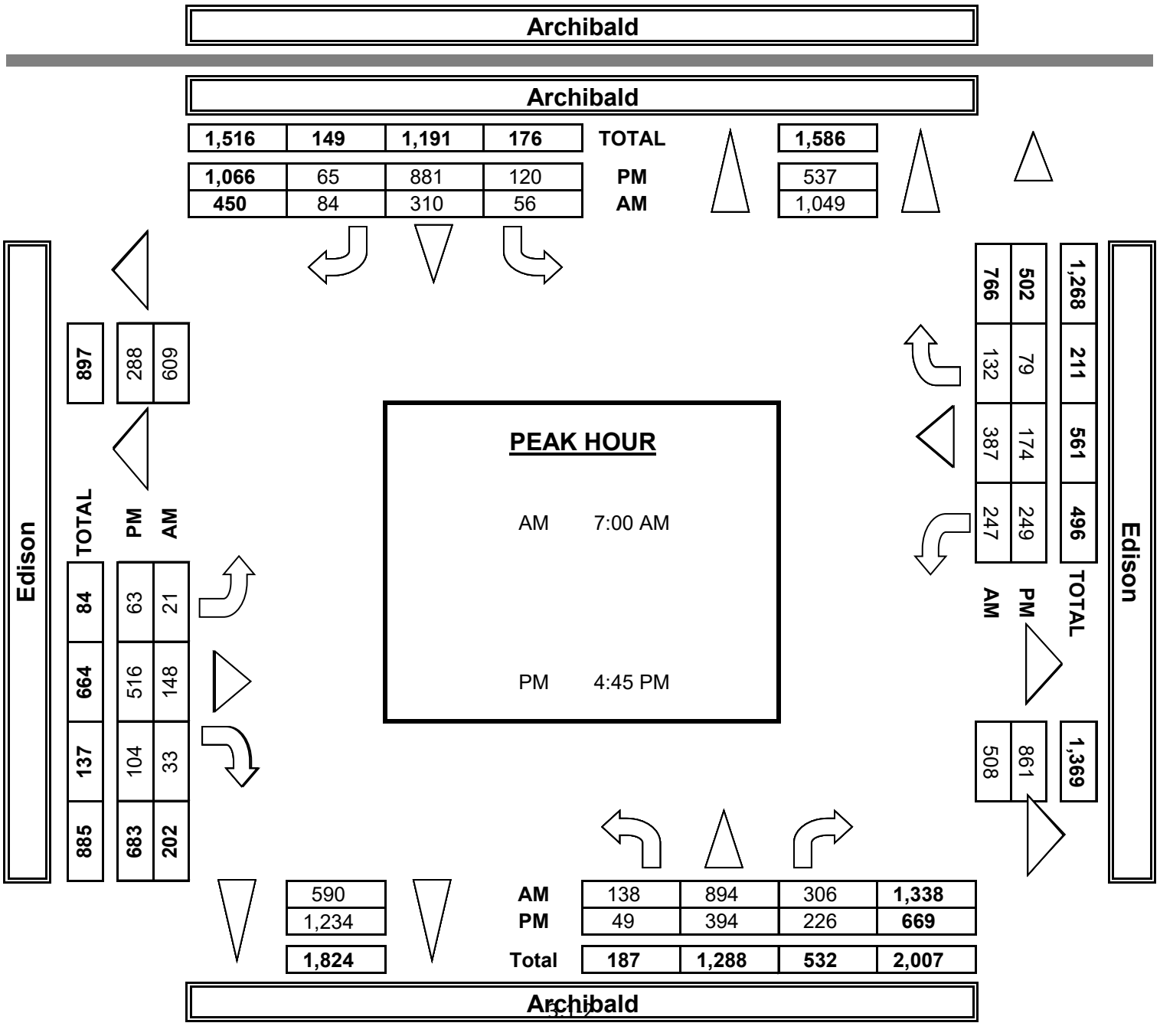
BICYCLE CROSSINGS

ES	WS	SS	NS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	2	0	0	2

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	6
	EAST & WEST:	Edison	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

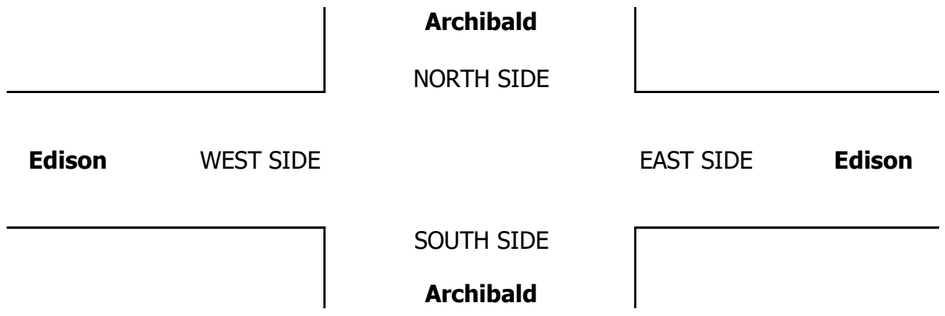
	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Edison			WESTBOUND Edison			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 2	ET 2	ER 1	WL 2	WT 1	WR 1	TOTAL
7:00 AM	34	207	76	16	71	16	6	27	4	56	81	28	622
7:15 AM	34	218	76	11	65	15	4	31	8	53	87	30	632
7:30 AM	36	215	69	6	65	24	4	29	5	42	97	25	617
7:45 AM	29	218	63	14	78	19	6	34	8	49	81	23	622
8:00 AM	35	177	55	7	86	19	5	23	7	44	64	21	543
8:15 AM	31	173	66	11	75	13	5	23	8	31	63	22	521
8:30 AM	27	156	74	12	65	18	5	26	9	35	53	21	501
8:45 AM	21	150	61	10	67	14	3	19	8	30	48	23	454
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	247	1,514	540	87	572	138	38	212	57	340	574	193	4,512
APPROACH %	11%	66%	23%	11%	72%	17%	12%	69%	19%	31%	52%	17%	
APP/DEPART	2,301	/	1,748	797	/	969	307	/	836	1,107	/	959	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	133	858	284	45	279	74	20	121	25	200	346	106	2,493
APPROACH %	10%	67%	22%	11%	70%	19%	12%	73%	15%	31%	53%	16%	
PEAK HR FACTOR		0.972			0.901			0.865			0.959		0.986
APP/DEPART	1,275	/	986	400	/	504	166	/	450	652	/	553	0
03:00 PM	9	95	49	24	154	9	9	116	20	36	31	13	565
3:15 PM	11	87	55	24	149	13	9	119	18	40	35	17	577
3:30 PM	7	97	51	28	163	10	10	125	21	48	30	17	607
3:45 PM	11	100	57	24	156	12	8	122	24	42	33	16	605
4:00 PM	13	75	56	26	159	11	11	124	24	45	33	15	592
4:15 PM	9	97	55	24	167	14	10	119	24	49	35	17	620
4:30 PM	7	97	51	29	164	14	16	120	29	66	34	25	652
4:45 PM	8	84	63	32	215	15	11	128	24	63	42	24	709
5:00 PM	13	101	53	26	206	11	17	119	21	59	30	17	673
5:15 PM	13	98	53	25	231	13	12	122	27	53	43	19	709
5:30 PM	11	92	43	29	207	13	15	112	28	63	42	13	668
5:45 PM	11	93	48	34	173	15	21	119	33	49	40	12	648
VOLUMES	123	1,116	634	325	2,144	150	149	1,445	293	613	428	205	7,625
APPROACH %	7%	60%	34%	12%	82%	6%	8%	77%	16%	49%	34%	16%	
APP/DEPART	1,873	/	1,474	2,619	/	3,050	1,887	/	2,400	1,246	/	701	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	45	375	212	111	859	52	55	481	100	238	157	73	2,759
APPROACH %	7%	59%	34%	11%	84%	5%	9%	76%	16%	51%	34%	16%	
PEAK HR FACTOR		0.946			0.951			0.975			0.907		0.973
APP/DEPART	632	/	504	1,023	/	1,197	636	/	804	468	/	254	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	3	0	0	3
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	4	0	0	4

RTOR

NRR	SRR	ERR	WRR
X	0	X	0
0	6	0	9
0	6	0	8
0	5	0	5
0	7	0	9
0	7	0	7
0	5	0	12
0	5	0	7
0	4	0	7
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	45	0	64
0	24	0	31
0	2	0	5
0	3	0	6
0	2	0	8
0	3	0	6
0	3	0	9
0	3	0	8
0	3	0	11
0	4	0	8
0	3	0	8
0	3	0	8
0	3	0	6
0	3	0	7
0	35	0	90
0	13	0	30



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	6
THURSDAY	EAST & WEST:	Edison	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Edison			WESTBOUND Edison			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	1	1	2	1	2	2	1	2	1	1	
AM	7:00 AM	1	6	2	2	4	0	0	2	1	6	5	3	32
AM	7:15 AM	0	4	3	1	4	2	1	2	1	6	6	4	34
AM	7:30 AM	0	4	3	3	5	1	0	2	1	4	3	2	28
AM	7:45 AM	1	5	7	2	5	1	0	3	2	9	6	5	46
AM	8:00 AM	0	7	7	3	3	1	0	5	1	7	8	5	47
AM	8:15 AM	0	5	6	2	4	2	0	3	2	4	8	4	40
AM	8:30 AM	1	5	5	1	3	0	0	6	1	5	7	5	39
AM	8:45 AM	0	6	6	3	5	1	1	5	2	6	8	4	47
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	3	42	39	17	33	8	2	28	11	47	51	32	313
AM	APPROACH %	4%	50%	46%	29%	57%	14%	5%	68%	27%	36%	39%	25%	
AM	APP/DEPART	84	/	76	58	/	91	41	/	84	130	/	62	0
AM	BEGIN PEAK HR		8:00 AM											
AM	VOLUMES	1	23	24	9	15	4	1	19	6	22	31	18	173
AM	APPROACH %	2%	48%	50%	32%	54%	14%	4%	73%	23%	31%	44%	25%	
AM	PEAK HR FACTOR		0.857			0.778			0.813			0.888		0.920
AM	APP/DEPART	48	/	42	28	/	43	26	/	52	71	/	36	0
PM	03:00 PM	0	1	1	0	2	0	0	4	1	1	1	0	11
PM	3:15 PM	1	2	2	1	1	2	1	5	1	1	1	1	19
PM	3:30 PM	1	1	1	1	1	0	1	3	1	1	2	0	13
PM	3:45 PM	0	3	2	1	2	1	2	4	1	2	3	0	21
PM	4:00 PM	0	4	1	1	2	0	1	7	0	2	1	0	19
PM	4:15 PM	1	2	2	1	2	2	2	6	2	1	2	1	24
PM	4:30 PM	1	4	3	1	2	2	1	8	1	1	4	1	29
PM	4:45 PM	2	3	2	1	4	1	2	5	1	2	3	1	27
PM	5:00 PM	1	3	3	2	4	2	1	8	1	1	1	3	30
PM	5:15 PM	0	3	1	1	5	2	1	4	1	1	2	0	21
PM	5:30 PM	1	4	1	2	3	3	1	6	1	2	2	0	26
PM	5:45 PM	1	2	1	1	4	0	0	5	0	0	2	3	19
PM	VOLUMES	9	32	20	13	32	15	13	65	11	15	24	10	259
PM	APPROACH %	15%	52%	33%	22%	53%	25%	15%	73%	12%	31%	49%	20%	
PM	APP/DEPART	61	/	55	60	/	58	89	/	98	49	/	48	0
PM	BEGIN PEAK HR		4:15 PM											
PM	VOLUMES	5	12	10	5	12	7	6	27	5	5	10	6	110
PM	APPROACH %	19%	44%	37%	21%	50%	29%	16%	71%	13%	24%	48%	29%	
PM	PEAK HR FACTOR		0.844			0.750			0.950			0.875		0.917
PM	APP/DEPART	27	/	24	24	/	22	38	/	42	21	/	22	0

		U-TURNS					RTOR			
		NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
	LANES:						X	0	X	0
AM	7:00 AM	0	0	0	0	0	0	0	0	1
AM	7:15 AM	0	0	0	0	0	0	1	0	2
AM	7:30 AM	0	0	0	0	0	0	0	0	1
AM	7:45 AM	0	0	0	0	0	0	0	0	2
AM	8:00 AM	0	0	0	0	0	0	1	0	2
AM	8:15 AM	0	0	0	0	0	0	1	0	1
AM	8:30 AM	0	0	0	0	0	0	0	0	2
AM	8:45 AM	0	0	0	0	0	0	0	0	2
AM	9:00 AM	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	0	0	0	0	0	3	0	13
AM	PEAK HR VOLUMES						0	2	0	7
PM	03:00 PM	0	0	0	0	0	0	0	0	0
PM	3:15 PM	0	0	0	0	0	0	1	0	1
PM	3:30 PM	0	0	0	0	0	0	0	0	0
PM	3:45 PM	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	0	0	1	0	1
PM	4:30 PM	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	1
PM	5:00 PM	0	0	0	0	0	0	1	0	1
PM	5:15 PM	0	0	0	0	0	0	0	0	0
PM	5:30 PM	0	0	0	0	0	0	1	0	0
PM	5:45 PM	0	0	0	0	0	0	0	0	0
PM	VOLUMES	0	0	0	0	0	0	4	0	4
PM	PEAK HR VOLUMES						0	2	0	3

Archibald

NORTH SIDE

Edison WEST SIDE

EAST SIDE **Edison**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:			
5/23/19	LOCATION: Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH: Archibald	LOCATION #:	6
	EAST & WEST: Edison	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Edison			WESTBOUND Edison			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	2	2	1	2	1	1	
AM 7:00 AM	0	0	1	0	1	0	0	1	1	2	1	0	7
7:15 AM	0	2	0	0	2	1	0	1	0	1	2	0	9
7:30 AM	1	1	0	0	2	0	0	1	0	1	2	1	9
7:45 AM	1	2	1	0	2	1	0	1	0	3	1	0	12
8:00 AM	1	2	2	0	1	0	1	2	0	0	2	1	12
8:15 AM	1	1	1	0	1	0	0	1	1	1	1	0	8
8:30 AM	0	2	1	0	2	1	0	1	0	1	3	0	11
8:45 AM	0	2	0	0	1	0	0	0	0	1	1	0	5
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	4	12	6	0	12	3	1	8	2	10	13	2	73
APPROACH %	18%	55%	27%	0%	80%	20%	9%	73%	18%	40%	52%	8%	
APP/DEPART	22	/	15	15	/	24	11	/	14	25	/	20	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	3	7	5	0	6	2	1	5	1	5	7	1	43
APPROACH %	20%	47%	33%	0%	75%	25%	14%	71%	14%	38%	54%	8%	
PEAK HR FACTOR		0.750			0.667			0.583			0.813		0.896
APP/DEPART	15	/	9	8	/	12	7	/	10	13	/	12	0
PM 03:00 PM	0	1	0	0	0	0	0	1	0	0	2	0	4
3:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
3:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
3:45 PM	0	1	0	0	1	0	0	1	0	0	1	0	4
4:00 PM	0	2	0	0	1	0	0	2	0	0	2	0	7
4:15 PM	0	0	0	0	1	0	0	1	0	0	3	0	5
4:30 PM	1	0	0	0	0	0	0	2	0	0	1	0	4
4:45 PM	0	0	0	0	0	1	0	0	0	0	2	0	3
5:00 PM	0	0	1	0	0	0	0	1	0	0	0	1	3
5:15 PM	0	0	1	0	1	0	0	0	0	1	1	0	4
5:30 PM	0	1	0	0	1	0	0	0	0	1	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	5	2	0	6	1	0	9	0	2	14	1	41
APPROACH %	13%	63%	25%	0%	86%	14%	0%	100%	0%	12%	82%	6%	
APP/DEPART	8	/	6	7	/	8	9	/	11	17	/	16	0
BEGIN PEAK HR		3:45 PM											
VOLUMES	1	3	0	0	3	0	0	6	0	0	7	0	20
APPROACH %	25%	75%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.500			0.750			0.750			0.583		0.714
APP/DEPART	4	/	3	3	/	3	6	/	6	7	/	8	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
	X	0	X	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Archibald

NORTH SIDE

Edison WEST SIDE

EAST SIDE **Edison**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	6
THURSDAY	EAST & WEST:	Edison	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Edison			WESTBOUND Edison			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	1	1	2	1	2	2	1	2	1	1	
AM	7:00 AM	0	1	0	0	1	1	0	3	0	2	2	2	12
AM	7:15 AM	0	2	1	0	2	1	0	3	0	4	3	2	18
AM	7:30 AM	1	5	3	1	2	1	0	4	1	5	5	3	31
AM	7:45 AM	0	2	1	0	1	1	0	3	1	4	5	4	22
AM	8:00 AM	0	2	1	1	1	1	0	3	1	2	3	1	16
AM	8:15 AM	0	2	3	1	2	0	0	1	2	5	1	3	20
AM	8:30 AM	1	2	3	1	3	0	1	3	0	3	2	2	21
AM	8:45 AM	0	1	2	0	2	1	1	3	1	3	1	1	16
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	2	17	14	4	14	6	2	23	6	28	22	18	156
AM	APPROACH %	6%	52%	42%	17%	58%	25%	6%	74%	19%	41%	32%	26%	
AM	APP/DEPART	33	/	37	24	/	48	31	/	41	68	/	30	0
AM	BEGIN PEAK HR		7:30 AM											
AM	VOLUMES	1	11	8	3	6	3	0	11	5	16	14	11	89
AM	APPROACH %	5%	55%	40%	25%	50%	25%	0%	69%	31%	39%	34%	27%	
AM	PEAK HR FACTOR		0.556			0.750			0.800			0.788		0.718
AM	APP/DEPART	20	/	22	12	/	27	16	/	22	41	/	18	0
PM	03:00 PM	0	1	1	0	1	1	0	2	0	1	2	0	9
PM	3:15 PM	0	0	0	0	2	0	1	1	0	0	1	0	5
PM	3:30 PM	0	1	1	0	1	1	1	2	0	1	3	0	11
PM	3:45 PM	0	1	0	0	2	0	0	1	0	0	2	0	6
PM	4:00 PM	0	0	1	0	1	0	0	3	0	0	5	1	11
PM	4:15 PM	0	0	2	0	1	0	1	3	0	2	4	0	13
PM	4:30 PM	0	1	2	0	2	1	0	2	0	1	3	0	12
PM	4:45 PM	0	1	2	0	1	1	1	4	0	1	2	0	13
PM	5:00 PM	0	1	1	1	1	2	0	3	0	1	3	1	14
PM	5:15 PM	0	2	1	1	1	1	1	2	0	0	1	0	10
PM	5:30 PM	0	1	1	0	1	0	1	2	0	1	0	0	7
PM	5:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	2
PM	VOLUMES	0	10	12	2	14	7	6	25	0	9	26	2	113
PM	APPROACH %	0%	45%	55%	9%	61%	30%	19%	81%	0%	24%	70%	5%	
PM	APP/DEPART	22	/	18	23	/	23	31	/	39	37	/	33	0
PM	BEGIN PEAK HR		4:15 PM											
PM	VOLUMES	0	3	7	1	5	4	2	12	0	5	12	1	52
PM	APPROACH %	0%	30%	70%	10%	50%	40%	14%	86%	0%	28%	67%	6%	
PM	PEAK HR FACTOR		0.833			0.625			0.700			0.750		0.929
PM	APP/DEPART	10	/	6	10	/	10	14	/	20	18	/	16	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						X	0	X	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	1	0	2
7:45 AM	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	1	0	6
PEAK HR VOLUMES						0	1	0	4
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	1	0	0
5:00 PM	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	1	0	1
PEAK HR VOLUMES						0	1	0	1

Archibald

NORTH SIDE

Edison WEST SIDE EAST SIDE **Edison**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	6
	EAST & WEST:	Edison	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Edison			WESTBOUND Edison			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	2	2	1	2	1	1	
AM 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0
BEGIN PEAK HR		3:30 PM											
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						X	0	X	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0

Archibald

NORTH SIDE

Edison WEST SIDE

EAST SIDE **Edison**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	6
THURSDAY	EAST & WEST:	Edison	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼
BUSES			

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Edison			WESTBOUND Edison			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	2	2	1	2	1	1	
AM													
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	0	0	0	0	0	1	0	0	0	0	2
APPROACH %	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
APP/DEPART	1	/	1	0	/	0	1	/	1	0	/	0	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	1	0	0	0	0	0	1	0	0	0	0	2
APPROACH %	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
PEAK HR FACTOR		0.250			0.000			0.250			0.000		0.500
APP/DEPART	1	/	1	0	/	0	1	/	1	0	/	0	0
PM													
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	2	0	0	0	0	0	1	0	3
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	
APP/DEPART	0	/	0	2	/	2	0	/	0	1	/	1	0
BEGIN PEAK HR		3:45 PM											
VOLUMES	0	0	0	0	2	0	0	0	0	0	1	0	3
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.500			0.000			0.250		0.750
APP/DEPART	0	/	0	2	/	2	0	/	0	1	/	1	0

U-TURNS / **RTOR**

	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
						X	0	X	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0

Archibald

NORTH SIDE

Edison WEST SIDE

EAST SIDE **Edison**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 23, 19

LOCATION: Eastvale
NORTH & SOUTH: Archibald
EAST & WEST: Eucalyptus

PROJECT #: SC2210
LOCATION #: 7
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

◄ W E ► ▲ N S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL X	ET X	ER X	WL 2	WT X	WR 2	TOTAL
AM	7:00 AM	0	314	4	8	142	0	0	0	0	1	0	15	484
	7:15 AM	0	369	1	2	140	0	0	0	0	2	0	16	530
	7:30 AM	0	323	0	4	132	0	0	0	0	0	0	11	470
	7:45 AM	0	333	3	4	154	0	0	0	0	2	0	13	509
	8:00 AM	0	294	2	1	142	0	0	0	0	1	0	10	450
	8:15 AM	0	267	2	5	124	0	0	0	0	1	0	8	407
	8:30 AM	0	252	1	2	125	0	0	0	0	1	0	7	388
	8:45 AM	0	227	2	2	129	0	0	0	0	0	0	6	366
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2,379	15	28	1,088	0	0	0	0	8	0	86	3,604
	APPROACH %	0%	99%	1%	3%	97%	0%	0%	0%	0%	9%	0%	91%	
	APP/DEPART	2,394	/	2,467	1,116	/	1,096	0	/	41	94	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	1,339	8	18	568	0	0	0	0	5	0	55	1,993
	APPROACH %	0%	99%	1%	3%	97%	0%	0%	0%	0%	8%	0%	92%	
	PEAK HR FACTOR		0.910			0.927			0.000			0.833		0.940
	APP/DEPART	1,347	/	1,396	586	/	573	0	/	24	60	/	0	0
PM	03:00 PM	0	158	1	8	200	0	0	0	0	1	0	1	369
	3:15 PM	0	154	0	11	222	0	0	0	0	1	0	2	390
	3:30 PM	0	172	1	8	206	0	0	0	0	0	0	4	391
	3:45 PM	0	158	1	10	231	0	0	0	0	1	0	2	403
	4:00 PM	0	142	0	12	194	0	0	0	0	2	0	4	354
	4:15 PM	0	172	1	10	244	0	0	0	0	0	0	7	434
	4:30 PM	0	179	2	10	245	0	0	0	0	2	0	2	440
	4:45 PM	0	163	0	10	290	0	0	0	0	1	0	6	470
	5:00 PM	0	150	1	12	303	0	0	0	0	1	0	3	470
	5:15 PM	0	164	3	15	293	0	0	0	0	1	0	3	479
	5:30 PM	0	170	2	13	300	0	0	0	0	0	0	6	491
	5:45 PM	0	150	2	16	277	0	0	0	0	0	0	11	456
	VOLUMES	0	1,932	14	135	3,005	0	0	0	0	10	0	51	5,147
	APPROACH %	0%	99%	1%	4%	96%	0%	0%	0%	0%	16%	0%	84%	
	APP/DEPART	1,946	/	1,984	3,140	/	3,015	0	/	148	61	/	0	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	647	6	50	1,186	0	0	0	0	3	0	18	1,910
	APPROACH %	0%	99%	1%	4%	96%	0%	0%	0%	0%	14%	0%	86%	
	PEAK HR FACTOR		0.949			0.981			0.000			0.750		0.973
	APP/DEPART	653	/	666	1,236	/	1,189	0	/	55	21	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	
0	2	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	2	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	X	X	0
0	0	0	15
0	0	0	15
0	0	0	11
0	0	0	13
0	0	0	10
0	0	0	7
1	0	0	7
0	0	0	6
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	84
0	0	0	54
0	0	0	1
0	0	0	2
0	0	0	3
0	0	0	2
0	0	0	4
0	0	0	6
0	0	0	1
0	0	0	6
0	0	0	3
1	0	0	3
0	0	0	6
0	0	0	9
1	0	0	46
1	0	0	18

Archibald

NORTH SIDE

Eucalyptus WEST SIDE EAST SIDE **Eucalyptus**

SOUTH SIDE

Archibald

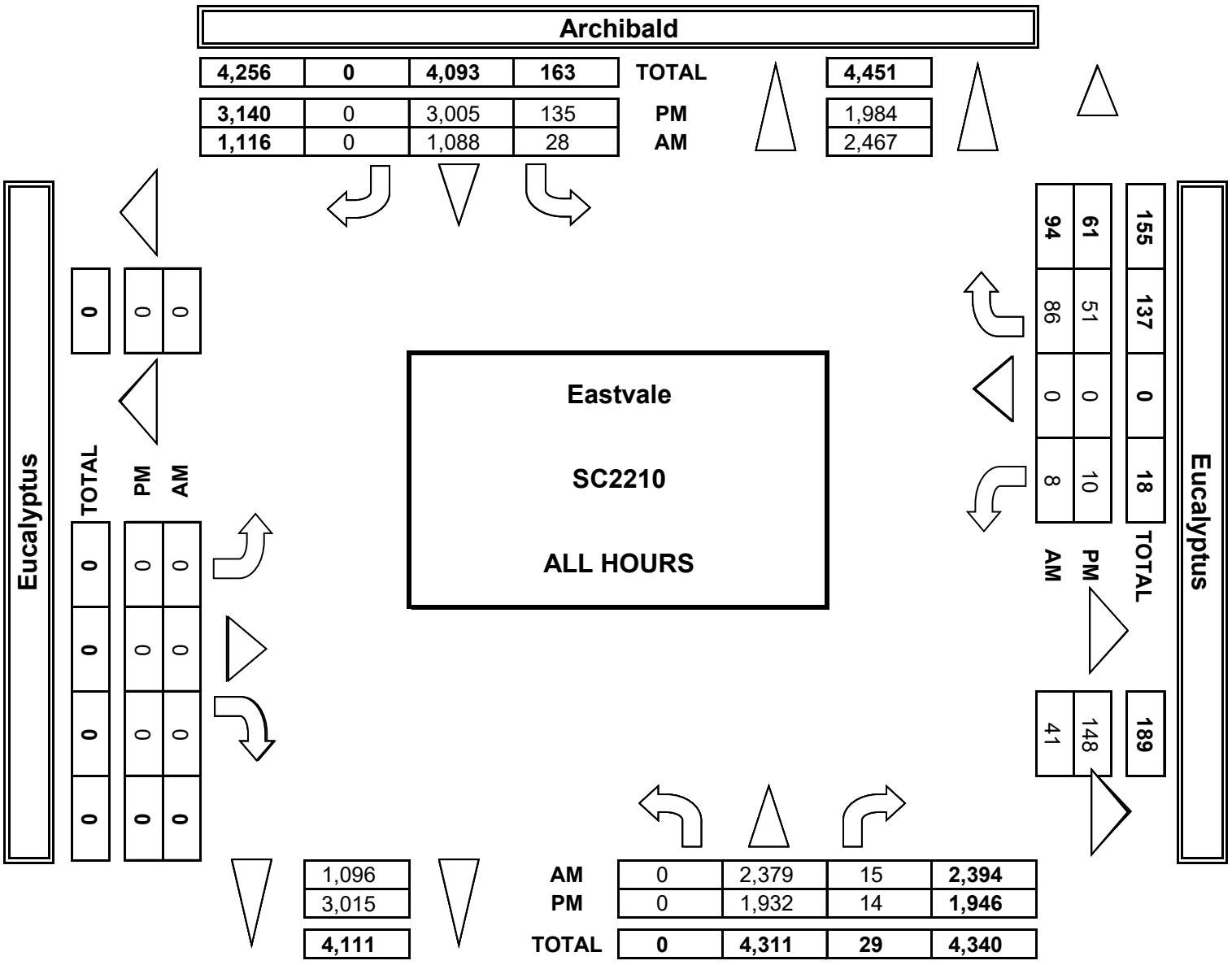
		ALL PED AND BIKE				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
AM	7:00 AM	1	0	0	0	1
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	0	0
	8:45 AM	1	0	0	0	1
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	2	0	0	0	2
PM	3:00 PM	0	0	0	0	0
	3:15 PM	1	0	0	0	1
	3:30 PM	0	0	0	0	0
	3:45 PM	0	0	0	0	0
	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	0	0	0
	4:45 PM	0	0	0	0	0
	5:00 PM	0	0	0	0	0
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
	TOTAL	1	0	0	0	1

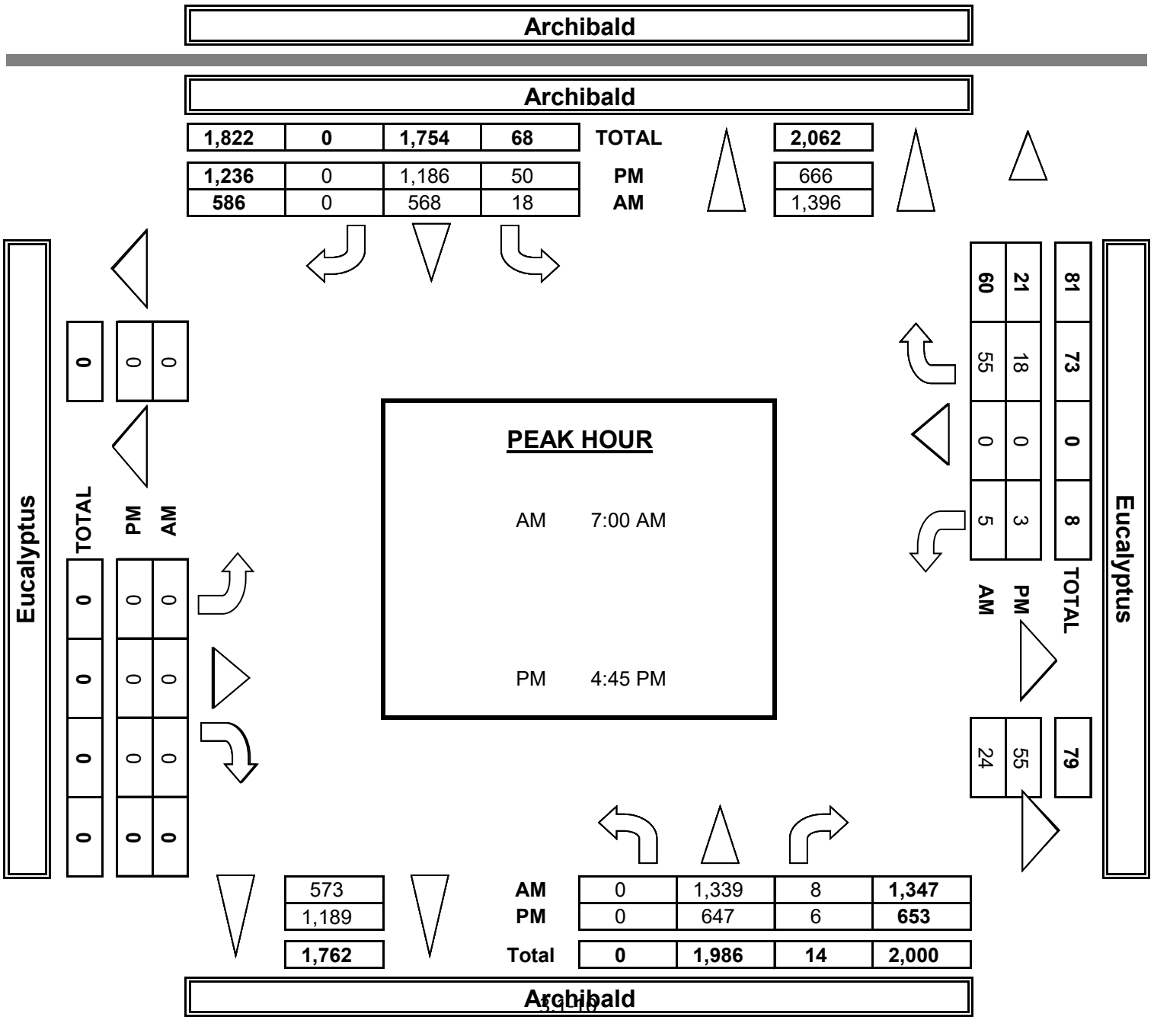
		PEDESTRIAN CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0
	3:15 PM	0	0	0	0	0
	3:30 PM	0	0	0	0	0
	3:45 PM	0	0	0	0	0
	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	0	0	0
	4:45 PM	0	0	0	0	0
	5:00 PM	0	0	0	0	0
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
	TOTAL	0	0	0	0	0

		BICYCLE CROSSINGS				
		ES	WS	SS	NS	TOTAL
AM	7:00 AM	1	0	0	0	1
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	0	0
	8:45 AM	1	0	0	0	1
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	2	0	0	0	2
PM	3:00 PM	0	0	0	0	0
	3:15 PM	1	0	0	0	1
	3:30 PM	0	0	0	0	0
	3:45 PM	0	0	0	0	0
	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	0	0	0
	4:45 PM	0	0	0	0	0
	5:00 PM	0	0	0	0	0
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
	TOTAL	1	0	0	0	1

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	7
	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 1:
PASSENGER VEHICLES

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W E ►
S ▼

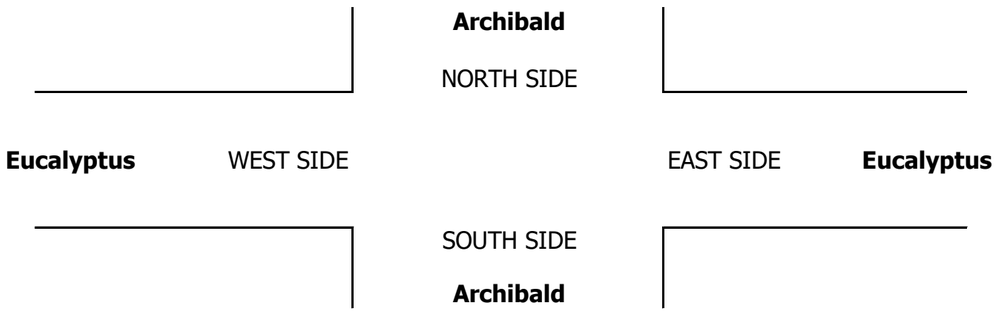
	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL X	ET X	ER X	WL 2	WT X	WR 2	TOTAL
7:00 AM	0	297	2	7	122	0	0	0	0	0	0	15	443
7:15 AM	0	358	1	1	118	0	0	0	0	1	0	16	495
7:30 AM	0	308	0	4	114	0	0	0	0	0	0	10	436
7:45 AM	0	316	2	4	132	0	0	0	0	2	0	11	467
8:00 AM	0	275	1	1	126	0	0	0	0	1	0	9	413
8:15 AM	0	247	1	4	105	0	0	0	0	1	0	7	365
8:30 AM	0	234	1	2	107	0	0	0	0	1	0	5	350
8:45 AM	0	211	2	2	106	0	0	0	0	0	0	5	326
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	2,246	10	25	930	0	0	0	0	6	0	78	3,295
APPROACH %	0%	100%	0%	3%	97%	0%	0%	0%	0%	7%	0%	93%	
APP/DEPART	2,256	/	2,325	955	/	936	0	/	34	84	/	0	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	1,279	5	15	486	0	0	0	0	3	0	52	1,841
APPROACH %	0%	100%	0%	3%	97%	0%	0%	0%	0%	5%	0%	95%	
PEAK HR FACTOR		0.894			0.923			0.000			0.809		0.930
APP/DEPART	1,284	/	1,332	502	/	489	0	/	20	55	/	0	0
03:00 PM	0	151	1	8	194	0	0	0	0	1	0	1	356
3:15 PM	0	150	0	11	214	0	0	0	0	1	0	2	378
3:30 PM	0	165	1	8	199	0	0	0	0	0	0	4	377
3:45 PM	0	153	1	10	227	0	0	0	0	1	0	2	394
4:00 PM	0	136	0	12	183	0	0	0	0	2	0	3	336
4:15 PM	0	157	1	10	232	0	0	0	0	0	0	5	405
4:30 PM	0	170	2	10	237	0	0	0	0	1	0	2	422
4:45 PM	0	159	0	10	283	0	0	0	0	1	0	6	459
5:00 PM	0	140	1	12	294	0	0	0	0	1	0	3	451
5:15 PM	0	158	2	15	285	0	0	0	0	1	0	3	464
5:30 PM	0	164	2	13	291	0	0	0	0	0	0	6	476
5:45 PM	0	141	2	16	274	0	0	0	0	0	0	11	444
VOLUMES	0	1,844	13	135	2,913	0	0	0	0	9	0	48	4,962
APPROACH %	0%	99%	1%	4%	96%	0%	0%	0%	0%	16%	0%	84%	
APP/DEPART	1,857	/	1,893	3,048	/	2,922	0	/	147	57	/	0	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	621	5	49	1,153	0	0	0	0	3	0	18	1,850
APPROACH %	0%	99%	1%	4%	96%	0%	0%	0%	0%	14%	0%	86%	
PEAK HR FACTOR		0.943			0.983			0.000			0.750		0.972
APP/DEPART	626	/	640	1,203	/	1,156	0	/	54	21	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1

RTOR

NRR 0	SRR X	ERR X	WRR 0
0	0	0	15
0	0	0	15
0	0	0	10
0	0	0	11
0	0	0	9
0	0	0	6
1	0	0	5
0	0	0	5
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	76
0	0	0	51
0	0	0	1
0	0	0	2
0	0	0	3
0	0	0	2
0	0	0	3
0	0	0	5
0	0	0	1
0	0	0	6
0	0	0	3
0	0	0	3
0	0	0	6
0	0	0	9
0	0	0	44
0	0	0	18



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	7
	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 2:	NOTES:
2-AXLE WORK VEHICLES/ TRUCKS	

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	2	0	1	2	X	X	X	X	2	X	2	
AM													
7:00 AM	0	14	1	1	14	0	0	0	0	1	0	0	31
7:15 AM	0	5	0	1	13	0	0	0	0	1	0	0	20
7:30 AM	0	5	0	0	7	0	0	0	0	0	0	0	12
7:45 AM	0	11	1	0	12	0	0	0	0	0	0	1	25
8:00 AM	0	12	1	0	12	0	0	0	0	0	0	0	25
8:15 AM	0	13	1	1	7	0	0	0	0	0	0	0	22
8:30 AM	0	10	0	0	9	0	0	0	0	0	0	1	20
8:45 AM	0	11	0	0	14	0	0	0	0	0	0	1	26
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	81	4	3	88	0	0	0	0	2	0	3	181
APPROACH %	0%	95%	5%	3%	97%	0%	0%	0%	0%	40%	0%	60%	
APP/DEPART	85	/	85	91	/	90	0	/	6	5	/	0	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	46	2	1	42	0	0	0	0	0	0	2	93
APPROACH %	0%	96%	4%	2%	98%	0%	0%	0%	0%	0%	0%	100%	
PEAK HR FACTOR		0.857			0.768			0.000			0.500		0.894
APP/DEPART	48	/	48	43	/	42	0	/	3	2	/	0	0
PM													
03:00 PM	0	4	0	0	4	0	0	0	0	0	0	0	8
3:15 PM	0	3	0	0	5	0	0	0	0	0	0	0	8
3:30 PM	0	5	0	0	4	0	0	0	0	0	0	0	9
3:45 PM	0	3	0	0	2	0	0	0	0	0	0	0	5
4:00 PM	0	3	0	0	8	0	0	0	0	0	0	0	11
4:15 PM	0	13	0	0	5	0	0	0	0	0	0	2	20
4:30 PM	0	5	0	0	5	0	0	0	0	0	0	0	10
4:45 PM	0	1	0	0	6	0	0	0	0	0	0	0	7
5:00 PM	0	6	0	0	6	0	0	0	0	0	0	0	12
5:15 PM	0	4	1	0	6	0	0	0	0	0	0	0	11
5:30 PM	0	4	0	0	4	0	0	0	0	0	0	0	8
5:45 PM	0	8	0	0	3	0	0	0	0	0	0	0	11
VOLUMES	0	59	1	0	58	0	0	0	0	0	0	2	120
APPROACH %	0%	98%	2%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
APP/DEPART	60	/	61	58	/	58	0	/	1	2	/	0	0
BEGIN PEAK HR		4:15 PM											
VOLUMES	0	25	0	0	22	0	0	0	0	0	0	2	49
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
PEAK HR FACTOR		0.481			0.917			0.000			0.250		0.613
APP/DEPART	25	/	27	22	/	22	0	/	0	2	/	0	0

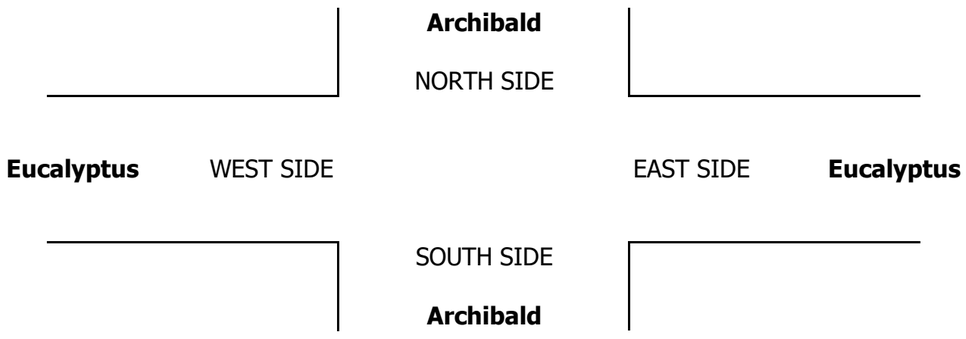
U-TURNS

NB	SB	EB	WB	TTL
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	X	X	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	3
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	1
0	0	0
0	0	0
0	0	0
1	0	0
0	0	0
0	0	0
1	0	1
0	0	1



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	7
THURSDAY	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	2	0	1	2	X	X	X	X	2	X	2	
AM	7:00 AM	0	2	1	0	3	0	0	0	0	0	0	0	6
	7:15 AM	0	1	0	0	2	0	0	0	0	0	0	0	3
	7:30 AM	0	2	0	0	2	0	0	0	0	0	0	0	4
	7:45 AM	0	4	0	0	5	0	0	0	0	0	0	1	10
	8:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	5
	8:15 AM	0	4	0	0	3	0	0	0	0	0	0	0	7
	8:30 AM	0	1	0	0	4	0	0	0	0	0	0	0	5
	8:45 AM	0	2	0	0	3	0	0	0	0	0	0	0	5
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	20	1	0	23	0	0	0	0	0	0	1	45
	APPROACH %	0%	95%	5%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	21	/	21	23	/	23	0	/	1	1	/	0	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	0	13	0	0	13	0	0	0	0	0	0	1	27
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.813			0.650			0.000			0.250		0.675
	APP/DEPART	13	/	14	13	/	13	0	/	0	1	/	0	0
PM	03:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	3:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
	4:00 PM	0	2	0	0	1	0	0	0	0	0	0	1	4
	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
	5:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
	5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	6	0	0	8	0	0	0	0	1	0	1	16
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	50%	0%	50%	
	APP/DEPART	6	/	7	8	/	9	0	/	0	2	/	0	0
	BEGIN PEAK HR		3:45 PM											
	VOLUMES	0	3	0	0	3	0	0	0	0	1	0	1	8
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	50%	0%	50%	
	PEAK HR FACTOR		0.375			0.750			0.000			0.500		0.500
	APP/DEPART	3	/	4	3	/	4	0	/	0	2	/	0	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						0	X	X	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	1
PEAK HR VOLUMES						0	0	0	1
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	1
PEAK HR VOLUMES						0	0	0	1

Archibald

NORTH SIDE

Eucalyptus WEST SIDE EAST SIDE **Eucalyptus**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	7
THURSDAY	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	2	0	1	2	X	X	X	X	2	X	2	
AM 7:00 AM	0	1	0	0	3	0	0	0	0	0	0	0	4
7:15 AM	0	3	0	0	7	0	0	0	0	0	0	0	10
7:30 AM	0	8	0	0	9	0	0	0	0	0	0	1	18
7:45 AM	0	2	0	0	5	0	0	0	0	0	0	0	7
8:00 AM	0	3	0	0	3	0	0	0	0	0	0	1	7
8:15 AM	0	3	0	0	9	0	0	0	0	0	0	1	13
8:30 AM	0	7	0	0	5	0	0	0	0	0	0	1	13
8:45 AM	0	3	0	0	6	0	0	0	0	0	0	0	9
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	30	0	0	47	0	0	0	0	0	0	4	81
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
APP/DEPART	30	/	34	47	/	47	0	/	0	4	/	0	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	0	16	0	0	26	0	0	0	0	0	0	3	45
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
PEAK HR FACTOR		0.500			0.722			0.000			0.750		0.625
APP/DEPART	16	/	19	26	/	26	0	/	0	3	/	0	0
PM 03:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
3:15 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
3:30 PM	0	2	0	0	3	0	0	0	0	0	0	0	5
3:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
4:15 PM	0	2	0	0	4	0	0	0	0	0	0	0	6
4:30 PM	0	4	0	0	3	0	0	0	0	0	0	0	7
4:45 PM	0	3	0	0	1	0	0	0	0	0	0	0	4
5:00 PM	0	2	0	0	3	0	0	0	0	0	0	0	5
5:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	2	0	0	3	0	0	0	0	0	0	0	5
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
VOLUMES	0	23	0	0	23	0	0	0	0	0	0	0	46
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	23	/	23	23	/	23	0	/	0	0	/	0	0
BEGIN PEAK HR		4:15 PM											
VOLUMES	0	11	0	0	11	0	0	0	0	0	0	0	22
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.688			0.688			0.000			0.000		0.786
APP/DEPART	11	/	11	11	/	11	0	/	0	0	/	0	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						0	X	X	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	4
PEAK HR VOLUMES						0	0	0	3
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0

Archibald

NORTH SIDE

Eucalyptus WEST SIDE

EAST SIDE **Eucalyptus**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	7
	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 5:	NOTES:
RV	

AM ▲ N
PM ◄ W E ►
MD S ▼
OTHER
OTHER

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	2	0	1	2	X	X	X	X	2	X	2	

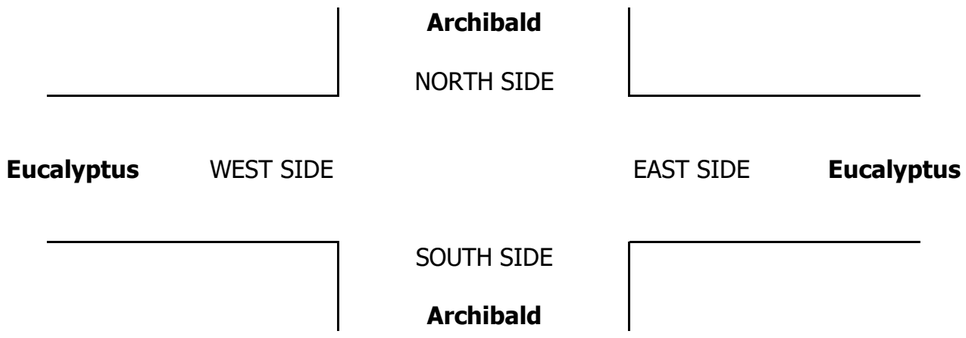
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	X	X	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%										
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1						0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%										
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250									
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0									
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%										
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0									
	BEGIN PEAK HR		3:30 PM																				
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1						0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%										
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250									
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	7
THURSDAY	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 6:	NOTES:		
BUSES		AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	2	0	1	2	X	X	X	X	2	X	2	
AM													
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
PM													
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	2	0	0	0	0	0	0	0	2
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	2	/	2	0	/	0	0	/	0	0
BEGIN PEAK HR		3:30 PM											
VOLUMES	0	0	0	0	2	0	0	0	0	0	0	0	2
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.500			0.000			0.000		0.500
APP/DEPART	0	/	0	2	/	2	0	/	0	0	/	0	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						0	X	X	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0

Archibald

NORTH SIDE

Eucalyptus WEST SIDE EAST SIDE **Eucalyptus**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 23, 19

LOCATION: Eastvale
NORTH & SOUTH: Archibald
EAST & WEST: Merrill

PROJECT #: SC2210
LOCATION #: 8
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W E ►
S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Merrill			WESTBOUND Merrill			
	LANES:	NL 1	NT 2	NR 1	SL 2	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
AM	7:00 AM	2	309	9	8	115	3	0	0	1	17	0	33	497
	7:15 AM	1	276	14	4	124	1	5	0	0	27	0	26	478
	7:30 AM	2	311	8	14	100	0	0	0	0	15	0	25	475
	7:45 AM	1	284	8	16	140	0	1	0	0	22	0	22	494
	8:00 AM	2	239	8	7	115	2	3	0	1	22	0	21	420
	8:15 AM	1	248	9	12	105	1	1	0	0	18	0	16	411
	8:30 AM	1	208	10	8	119	0	0	0	1	12	0	22	381
	8:45 AM	2	226	5	6	104	0	1	0	0	20	0	14	378
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	12	2,101	71	75	922	7	11	0	3	153	0	179	3,534
	APPROACH %	1%	96%	3%	7%	92%	1%	79%	0%	21%	46%	0%	54%	
	APP/DEPART	2,184	/	2,294	1,004	/	1,085	14	/	144	332	/	11	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	6	1,180	39	42	479	4	6	0	1	81	0	106	1,944
	APPROACH %	0%	96%	3%	8%	91%	1%	86%	0%	14%	43%	0%	57%	
	PEAK HR FACTOR		0.954			0.841			0.350			0.882		0.978
	APP/DEPART	1,225	/	1,295	525	/	565	7	/	78	187	/	6	0
PM	03:00 PM	0	143	8	11	195	0	1	0	0	11	0	6	375
	3:15 PM	1	154	6	14	203	0	1	0	0	8	0	9	396
	3:30 PM	2	153	6	16	201	0	0	0	0	10	0	7	395
	3:45 PM	0	162	7	15	207	0	0	0	0	13	0	9	413
	4:00 PM	1	154	9	18	201	0	1	0	0	11	0	10	405
	4:15 PM	2	172	5	13	203	0	1	0	0	15	0	9	420
	4:30 PM	1	146	12	17	222	0	0	0	0	17	0	13	428
	4:45 PM	1	133	6	21	269	0	0	0	0	9	0	7	446
	5:00 PM	2	132	13	21	276	0	1	0	0	18	0	6	469
	5:15 PM	1	149	8	26	261	0	0	0	0	18	0	10	473
	5:30 PM	2	155	14	27	244	0	0	0	0	13	0	12	467
	5:45 PM	1	128	16	27	240	0	1	0	0	11	0	12	436
	VOLUMES	14	1,781	110	226	2,722	0	6	0	0	154	0	110	5,123
	APPROACH %	1%	93%	6%	8%	92%	0%	100%	0%	0%	58%	0%	42%	
	APP/DEPART	1,905	/	1,897	2,948	/	2,884	6	/	337	264	/	5	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	6	569	41	95	1,050	0	1	0	0	58	0	35	1,855
	APPROACH %	1%	92%	7%	8%	92%	0%	100%	0%	0%	62%	0%	38%	
	PEAK HR FACTOR		0.901			0.964			0.250			0.830		0.980
	APP/DEPART	616	/	605	1,145	/	1,113	1	/	136	93	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	
1	1	0	0	2
1	0	0	0	1
1	1	0	0	2
1	1	0	0	2
1	0	0	0	1
1	0	0	0	1
1	0	0	0	1
1	0	0	1	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
8	3	0	1	12
0	0	0	0	0
1	0	0	0	1
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
2	0	0	1	3
0	0	0	0	0
2	0	0	0	2
1	0	0	0	1
2	0	0	0	2
0	0	0	0	0
9	0	0	1	10

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
3	0	1	18
1	0	0	15
1	0	0	17
3	0	0	15
2	0	1	12
1	1	0	12
1	0	1	19
2	0	0	12
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
14	1	3	120
8	0	1	65
2	0	0	5
2	0	0	7
1	0	0	6
3	0	0	6
1	0	0	5
2	0	0	8
5	0	0	9
2	0	0	5
5	0	0	5
2	0	0	8
1	0	0	9
4	0	0	10
30	0	0	83
10	0	0	27

Archibald

NORTH SIDE

Merrill WEST SIDE EAST SIDE **Merrill**

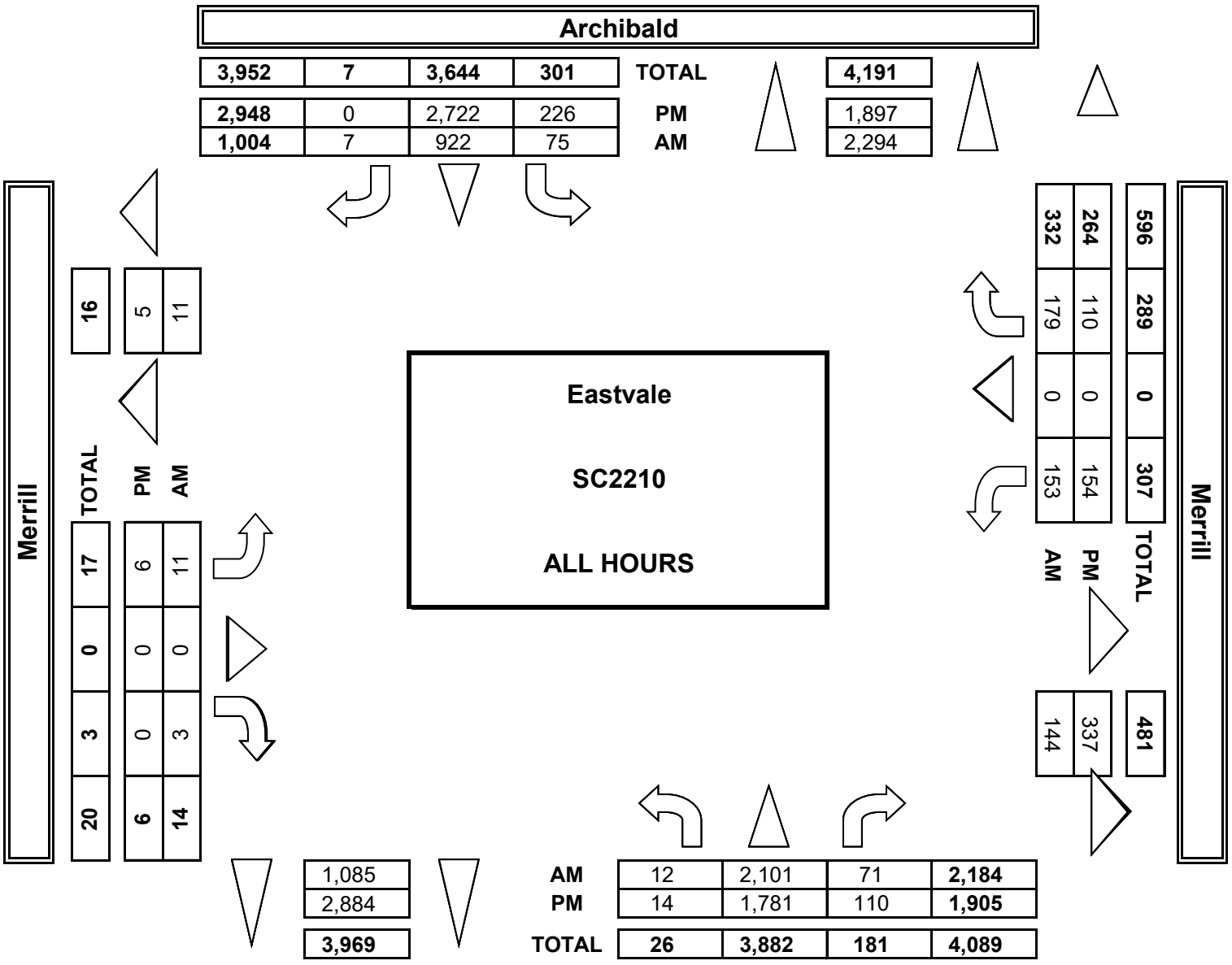
SOUTH SIDE

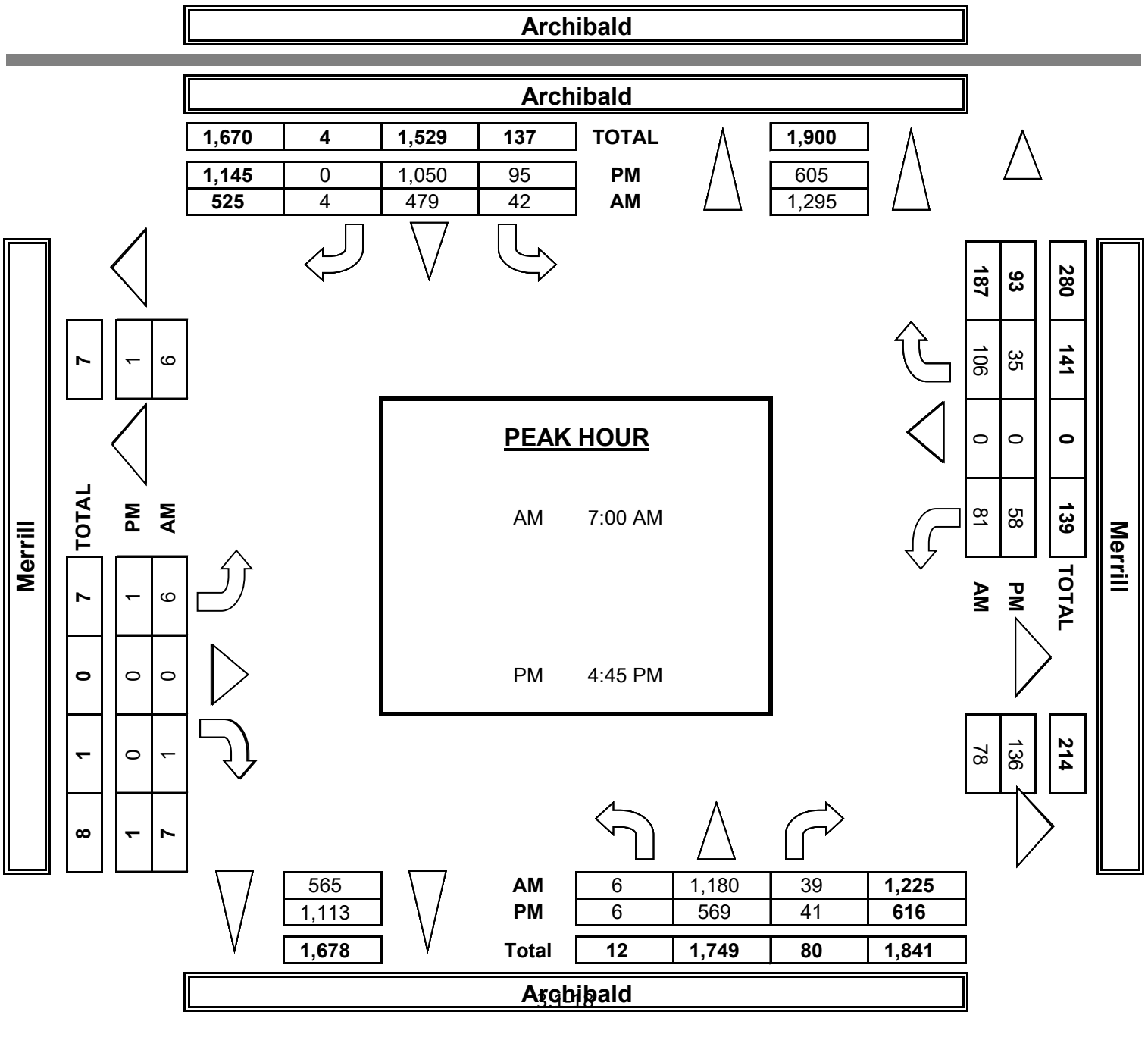
Archibald

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	8
	EAST & WEST:	Merrill	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

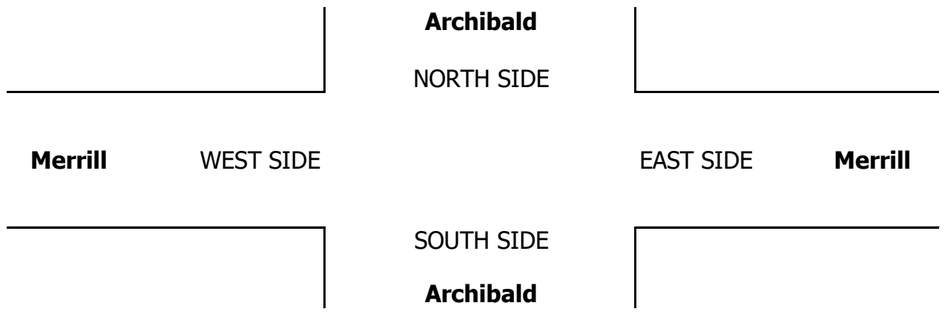
		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Merrill			WESTBOUND Merrill			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:		1	2	1	2	2	0	1	1	0	1	1	1	
AM	7:00 AM	2	294	6	7	97	2	0	0	1	17	0	31	457
	7:15 AM	0	263	9	4	105	1	5	0	0	26	0	26	439
	7:30 AM	1	297	7	14	83	0	0	0	0	11	0	25	438
	7:45 AM	1	261	7	13	122	0	0	0	0	20	0	22	446
	8:00 AM	2	226	7	7	102	2	2	0	1	21	0	18	388
	8:15 AM	1	227	7	9	94	1	1	0	0	18	0	14	372
	8:30 AM	1	193	8	6	102	0	0	0	1	11	0	20	342
	8:45 AM	2	208	5	4	82	0	1	0	0	18	0	14	334
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	10	1,969	56	64	787	6	9	0	3	142	0	170	3,216
	APPROACH %	0%	97%	3%	7%	92%	1%	75%	0%	25%	46%	0%	54%	
	APP/DEPART	2,035	/	2,150	857	/	939	12	/	118	312	/	9	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	1	1,115	29	36	407	3	5	0	1	74	0	104	1,780
	APPROACH %	0%	97%	3%	8%	91%	1%	83%	0%	17%	42%	0%	58%	
	PEAK HR FACTOR		0.941			0.830			0.300			0.856		0.974
	APP/DEPART	1,148	/	1,226	448	/	485	6	/	65	178	/	4	0
PM	03:00 PM	0	138	7	11	188	0	0	0	0	11	0	6	361
	3:15 PM	1	149	6	14	196	0	1	0	0	7	0	8	382
	3:30 PM	2	146	6	15	197	0	0	0	0	10	0	7	383
	3:45 PM	0	156	7	15	201	0	0	0	0	13	0	9	401
	4:00 PM	0	147	8	18	190	0	0	0	0	11	0	10	384
	4:15 PM	1	159	5	13	187	0	0	0	0	15	0	9	389
	4:30 PM	0	142	12	17	213	0	0	0	0	16	0	12	412
	4:45 PM	0	125	5	20	261	0	0	0	0	9	0	7	427
	5:00 PM	2	123	13	21	266	0	0	0	0	18	0	5	448
	5:15 PM	1	140	8	26	254	0	0	0	0	17	0	10	456
	5:30 PM	2	151	13	27	234	0	0	0	0	13	0	12	452
	5:45 PM	1	120	16	27	236	0	1	0	0	11	0	12	424
	VOLUMES	10	1,696	106	224	2,623	0	2	0	0	151	0	107	4,919
	APPROACH %	1%	94%	6%	8%	92%	0%	100%	0%	0%	59%	0%	41%	
	APP/DEPART	1,812	/	1,805	2,847	/	2,781	2	/	331	258	/	2	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	539	39	94	1,015	0	0	0	0	57	0	34	1,783
	APPROACH %	0%	92%	7%	8%	92%	0%	0%	0%	0%	63%	0%	37%	
	PEAK HR FACTOR		0.878			0.966			0.000			0.843		0.978
	APP/DEPART	583	/	573	1,109	/	1,077	0	/	133	91	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
1	1	0	0	2
0	0	0	0	0
1	1	0	0	2
1	0	0	0	1
1	0	0	0	1
1	0	0	0	1
1	0	0	0	1
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
7	2	0	0	9
0	0	0	0	0
1	1	0	0	2
0	0	0	0	1
0	0	0	0	1
0	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
8	0	0	1	9
1	0	0	0	1
2	0	0	0	2
0	0	0	0	0
4	0	0	0	4

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
3	0	1	18
1	0	0	15
1	0	0	17
2	0	0	15
2	0	1	10
1	1	0	10
0	0	1	17
2	0	0	12
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
12	1	3	114
7	0	1	65
1	0	0	5
2	0	0	6
1	0	0	6
3	0	0	6
0	0	0	5
2	0	0	8
5	0	0	8
1	0	0	5
5	0	0	4
2	0	0	8
1	0	0	9
4	0	0	10
27	0	0	80
9	0	0	26



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	8
	EAST & WEST:	Merrill	CONTROL:	SIGNAL

CLASS 2:	NOTES:
2-AXLE WORK VEHICLES/ TRUCKS	

AM / PM / MD / OTHER / OTHER

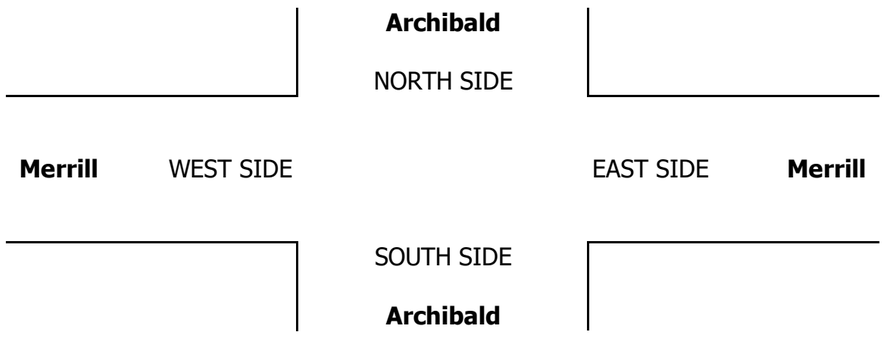
▲ N ◄ W E ► S ▼

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Merrill			WESTBOUND Merrill			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	2	2	0	1	1	0	1	1	1	

U-TURNS				
NB	SB	EB	WB	TTL

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0

		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	U-TURNS					RTOR			
															NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	12	3	0	14	1	0	0	0	0	0	1	31	0	0	0	0	0	0	0	0	0
	7:15 AM	0	5	5	0	12	0	0	0	0	1	0	0	23	0	0	0	0	0	0	0	0	0
	7:30 AM	1	9	1	0	7	0	0	0	0	2	0	0	20	0	0	0	0	0	0	0	0	0
	7:45 AM	0	16	1	2	12	0	1	0	0	1	0	0	33	0	0	0	0	0	1	0	0	0
	8:00 AM	0	8	1	0	10	0	1	0	0	1	0	1	22	0	0	0	0	0	0	0	0	1
	8:15 AM	0	14	2	1	3	0	0	0	0	0	0	2	22	0	0	0	0	0	0	0	0	2
	8:30 AM	0	11	2	2	9	0	0	0	0	1	0	1	26	0	0	0	0	0	1	0	0	1
	8:45 AM	0	11	0	2	14	0	0	0	0	1	0	0	28	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	86	15	7	81	1	2	0	0	7	0	5	205	0	0	0	0	0	2	0	0	4
	APPROACH %	1%	84%	15%	8%	91%	1%	100%	0%	0%	58%	0%	42%										
	APP/DEPART	102	/	93	89	/	88	2	/	22	12	/	2	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	1	42	10	2	45	1	1	0	0	4	0	1	107						1	0	0	0
	APPROACH %	2%	79%	19%	4%	94%	2%	100%	0%	0%	80%	0%	20%										
	PEAK HR FACTOR		0.779			0.800			0.250			0.625		0.811										
	APP/DEPART	53	/	44	48	/	49	1	/	12	5	/	2	0									
PM	03:00 PM	0	4	1	0	5	0	0	0	0	0	0	0	10	0	0	0	0	0	1	0	0	0
	3:15 PM	0	3	0	0	3	0	0	0	0	1	0	1	8	0	0	0	0	0	0	0	0	1
	3:30 PM	0	3	0	1	2	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
	3:45 PM	0	4	0	0	4	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
	4:00 PM	0	5	1	0	7	0	0	0	0	0	0	0	13	0	0	0	0	0	1	0	0	0
	4:15 PM	1	8	0	0	10	0	1	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
	4:30 PM	0	3	0	0	5	0	0	0	0	1	0	1	10	0	0	0	0	0	0	0	0	1
	4:45 PM	0	3	1	1	5	0	0	0	0	0	0	0	10	0	0	0	0	0	1	0	0	0
	5:00 PM	0	7	0	0	8	0	0	0	0	0	0	1	16	0	0	0	0	0	0	0	0	1
	5:15 PM	0	7	0	0	4	0	0	0	0	1	0	0	12	0	0	0	0	0	0	0	0	0
	5:30 PM	0	4	1	0	5	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
	5:45 PM	0	7	0	0	4	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0
	VOLUMES	1	58	4	2	62	0	1	0	0	3	0	3	134	0	0	0	0	0	3	0	0	3
	APPROACH %	2%	92%	6%	3%	97%	0%	100%	0%	0%	50%	0%	50%										
	APP/DEPART	63	/	62	64	/	65	1	/	6	6	/	1	0									
	BEGIN PEAK HR		4:15 PM																				
	VOLUMES	1	21	1	1	28	0	1	0	0	1	0	2	56						1	0	0	2
	APPROACH %	4%	91%	4%	3%	97%	0%	100%	0%	0%	33%	0%	67%										
	PEAK HR FACTOR		0.639			0.725			0.250			0.375		0.700										
	APP/DEPART	23	/	24	29	/	29	1	/	2	3	/	1	0									



INTERSECTION TURNING MOVEMENT COUNTS

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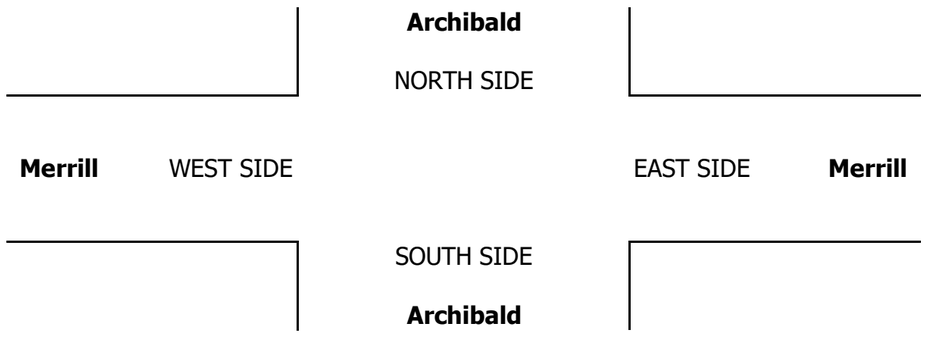
DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	8
	EAST & WEST:	Merrill	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Merrill			WESTBOUND Merrill				U-TURNS					RTOR			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:	1	2	1	2	2	0	1	1	0	1	1	1							0	0	0	0
AM																						
7:00 AM	0	1	0	1	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
7:30 AM	0	2	0	0	2	0	0	0	0	1	0	0	5	0	0	0	0	0	0	0	0	0
7:45 AM	0	5	0	1	3	0	0	0	0	0	0	0	9	0	1	0	0	1	0	0	0	0
8:00 AM	0	4	0	0	2	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	1
8:15 AM	0	3	0	2	1	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	4	0	0	0	0	0	0	1	6	0	0	0	0	0	0	0	0	1
8:45 AM	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	18	0	4	20	0	0	0	0	1	0	2	45	0	1	0	0	1	0	0	0	2
APPROACH %	0%	100%	0%	17%	83%	0%	0%	0%	0%	33%	0%	67%										
APP/DEPART	18	/	21	24	/	21	0	/	3	3	/	0	0									
BEGIN PEAK HR		7:45 AM																				
VOLUMES	0	13	0	2	10	0	0	0	0	0	0	2	28						0	0	0	2
APPROACH %	0%	100%	0%	15%	77%	0%	0%	0%	0%	0%	0%	100%										
PEAK HR FACTOR		0.650			0.813			0.000			0.500		0.778									
APP/DEPART	13	/	16	13	/	10	0	/	2	2	/	0	0									
PM																						
03:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
3:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	2	0	0	2	0	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
4:45 PM	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	2	4	0	0	11	0	3	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
APPROACH %	33%	67%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%										
APP/DEPART	6	/	7	11	/	11	3	/	0	0	/	2	0									
BEGIN PEAK HR		4:00 PM																				
VOLUMES	2	3	0	0	4	0	1	0	0	0	0	0	10						0	0	0	0
APPROACH %	40%	60%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%										
PEAK HR FACTOR		0.417			0.500			0.250			0.000		0.417									
APP/DEPART	5	/	4	4	/	4	1	/	0	0	/	2	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	8
	EAST & WEST:	Merrill	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

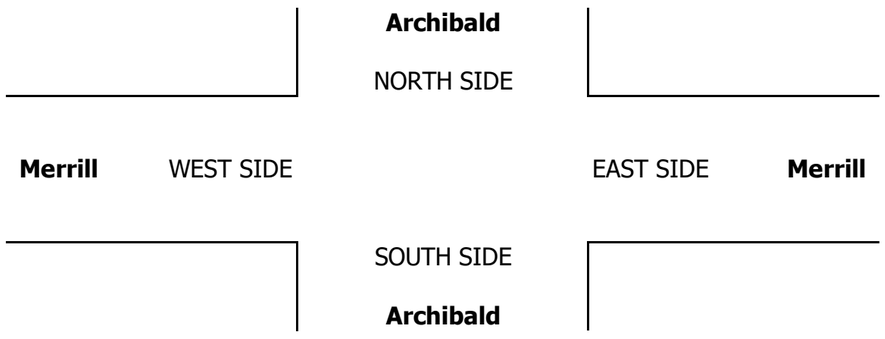
	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Merrill			WESTBOUND Merrill			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	2	2	0	1	1	0	1	1	1	
AM													
7:00 AM	0	1	0	0	2	0	0	0	0	0	0	1	4
7:15 AM	0	6	0	0	4	0	0	0	0	0	0	0	10
7:30 AM	0	3	0	0	8	0	0	0	0	1	0	0	12
7:45 AM	0	2	0	0	3	0	0	0	0	1	0	0	6
8:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	3
8:15 AM	0	4	0	0	7	0	0	0	0	0	0	0	11
8:30 AM	0	3	0	0	4	0	0	0	0	0	0	0	7
8:45 AM	0	6	0	0	5	0	0	0	0	0	0	0	11
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	26	0	0	34	0	0	0	0	2	0	2	64
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	50%	0%	50%	
APP/DEPART	26	/	28	34	/	36	0	/	0	4	/	0	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	14	0	0	17	0	0	0	0	0	0	1	32
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
PEAK HR FACTOR		0.583			0.531			0.000			0.250		0.667
APP/DEPART	14	/	15	17	/	17	0	/	0	1	/	0	0
PM													
03:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
3:15 PM	0	2	0	0	3	0	0	0	0	0	0	0	5
3:30 PM	0	3	0	0	2	0	0	0	0	0	0	0	5
3:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	5	0	0	3	0	0	0	0	0	0	0	8
4:30 PM	0	1	0	0	3	0	0	0	0	0	0	0	4
4:45 PM	0	4	0	0	3	0	0	0	0	0	0	0	7
5:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
5:15 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
VOLUMES	0	23	0	0	23	0	0	0	0	0	0	0	46
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	23	/	23	23	/	23	0	/	0	0	/	0	0
BEGIN PEAK HR		4:15 PM											
VOLUMES	0	12	0	0	11	0	0	0	0	0	0	0	23
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.600			0.917			0.000			0.000		0.719
APP/DEPART	12	/	12	11	/	11	0	/	0	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
AM	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
PM	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
AM	0	0	0	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
PM	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	8
THURSDAY	EAST & WEST:	Merrill	CONTROL:	SIGNAL

CLASS 5:	NOTES:		
RV		AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Merrill			WESTBOUND Merrill			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	1	2	2	0	1	1	0	1	1	1	
AM	7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
AM	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
AM	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
AM	BEGIN PEAK HR		7:00 AM											
AM	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
AM	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
AM	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
AM	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
PM	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0
PM	BEGIN PEAK HR		3:30 PM											
PM	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
PM	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PM	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250
PM	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Archibald

NORTH SIDE

Merrill WEST SIDE

EAST SIDE **Merrill**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	8
THURSDAY	EAST & WEST:	Merrill	CONTROL:	SIGNAL

CLASS 6: BUSES

NOTES:

AM PM MD OTHER OTHER

▲ N ◀ W E ▶ S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Merrill			WESTBOUND Merrill			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	1	2	2	0	1	1	0	1	1	1	
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
AM	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
AM	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
AM	BEGIN PEAK HR		7:00 AM											
AM	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
AM	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
AM	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
AM	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
PM	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	VOLUMES	0	0	0	0	2	0	0	0	0	0	0	0	2
PM	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	2	/	2	0	/	0	0	/	0	0
PM	BEGIN PEAK HR		3:30 PM											
PM	VOLUMES	0	0	0	0	2	0	0	0	0	0	0	0	2
PM	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PM	PEAK HR FACTOR		0.000			0.500			0.000			0.000		0.500
PM	APP/DEPART	0	/	0	2	/	2	0	/	0	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Archibald

NORTH SIDE

Merrill WEST SIDE

EAST SIDE **Merrill**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, May 23, 19	LOCATION:	Eastvale	PROJECT #:	SC2210
	NORTH & SOUTH:	Archibald	LOCATION #:	10
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Limonite			WESTBOUND Limonite				U-TURNS					RTOR			
	LANES:	NL X	NT 1	NR 1	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL	NRR 0	SRR X	ERR X	WRR 0
AM	7:00 AM	0	184	63	30	99	0	0	0	0	79	0	113	568	0	0	0	0	0	20	0	0	25
	7:15 AM	0	202	78	30	106	0	0	0	0	72	0	113	601	0	0	0	0	0	24	0	0	15
	7:30 AM	0	189	82	23	113	0	0	0	0	70	0	132	609	0	0	0	0	0	28	0	0	41
	7:45 AM	0	175	62	30	128	0	0	0	0	69	0	108	572	0	0	0	0	0	23	0	0	33
	8:00 AM	0	165	60	31	102	0	0	0	0	52	0	95	505	0	0	0	0	0	20	0	0	37
	8:15 AM	0	177	72	26	103	0	0	0	0	38	0	85	501	0	0	0	0	0	15	0	0	30
	8:30 AM	0	141	42	28	98	0	0	0	0	59	0	78	446	0	0	0	0	0	15	0	0	31
	8:45 AM	0	157	48	34	98	0	0	0	0	50	0	72	459	0	0	0	0	0	11	0	0	32
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1,390	507	232	847	0	0	0	0	489	0	796	4,261	0	0	0	0	0	156	0	0	244
	APPROACH %	0%	73%	27%	22%	78%	0%	0%	0%	0%	38%	0%	62%										
	APP/DEPART	1,897	/	2,186	1,079	/	1,336	0	/	739	1,285	/	0	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	0	750	285	113	446	0	0	0	0	290	0	466	2,350						95	0	0	114
	APPROACH %	0%	72%	28%	20%	80%	0%	0%	0%	0%	38%	0%	62%										
	PEAK HR FACTOR		0.924			0.884			0.000			0.936		0.965									
	APP/DEPART	1,035	/	1,216	559	/	736	0	/	398	756	/	0	0									
PM	03:00 PM	0	112	74	65	144	0	0	0	0	80	0	47	522	0	0	0	0	0	9	0	0	28
	3:15 PM	0	114	76	68	145	0	0	0	0	81	0	52	536	0	0	0	0	0	14	0	0	27
	3:30 PM	0	113	73	64	147	0	0	0	0	81	0	44	522	0	0	0	0	0	18	0	0	25
	3:45 PM	0	116	91	68	149	0	0	0	0	84	0	44	552	0	0	0	0	0	14	0	0	29
	4:00 PM	0	115	90	70	148	0	0	0	0	80	0	52	555	0	0	0	0	0	10	0	0	31
	4:15 PM	0	128	84	62	148	0	0	0	0	71	0	56	549	0	0	0	0	0	23	0	0	28
	4:30 PM	0	126	71	63	198	0	0	0	0	71	0	49	578	0	0	0	0	0	15	0	0	28
	4:45 PM	0	111	70	78	177	0	0	0	0	91	0	39	566	0	0	0	0	0	19	0	0	28
	5:00 PM	0	103	78	82	199	0	0	0	0	88	0	47	597	0	0	0	0	0	19	0	0	33
	5:15 PM	0	109	80	101	204	0	0	0	0	88	0	53	635	0	0	0	0	0	19	0	0	26
	5:30 PM	0	135	84	74	197	0	0	0	0	82	0	57	629	0	0	0	0	0	21	0	0	27
	5:45 PM	0	97	80	71	172	0	0	0	0	82	0	43	545	0	0	0	0	0	19	0	0	21
	VOLUMES	0	1,379	951	866	2,028	0	0	0	0	979	0	583	6,786	0	0	0	0	0	200	0	0	331
	APPROACH %	0%	59%	41%	30%	70%	0%	0%	0%	0%	63%	0%	37%										
	APP/DEPART	2,330	/	1,962	2,894	/	3,007	0	/	1,817	1,562	/	0	0									
	BEGIN PEAK HR		4:45 PM																				
	VOLUMES	0	458	312	335	777	0	0	0	0	349	0	196	2,427						78	0	0	114
	APPROACH %	0%	59%	41%	30%	70%	0%	0%	0%	0%	64%	0%	36%										
	PEAK HR FACTOR		0.879			0.911			0.000			0.966		0.956									
	APP/DEPART	770	/	654	1,112	/	1,126	0	/	647	545	/	0	0									

Archibald

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

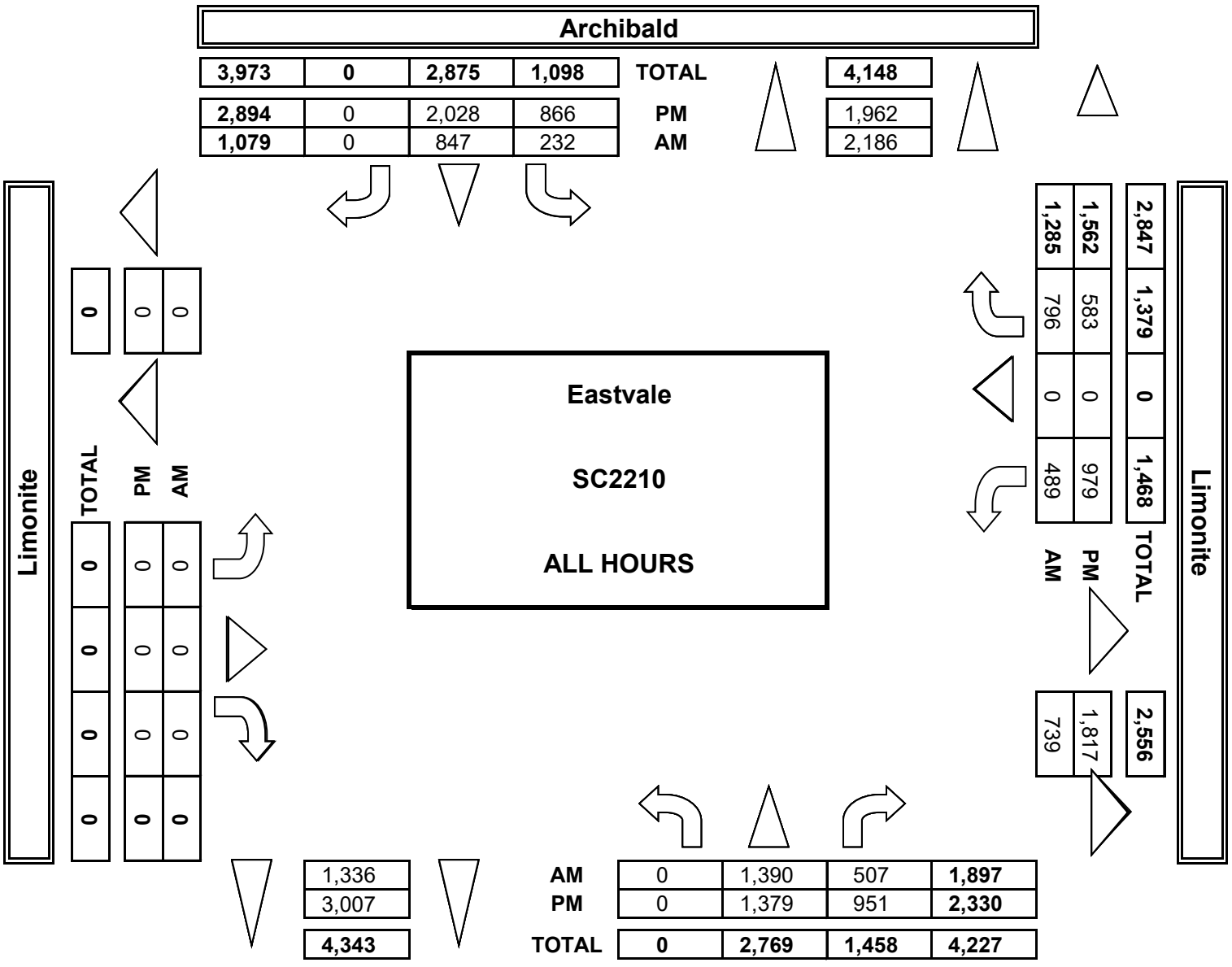
SOUTH SIDE

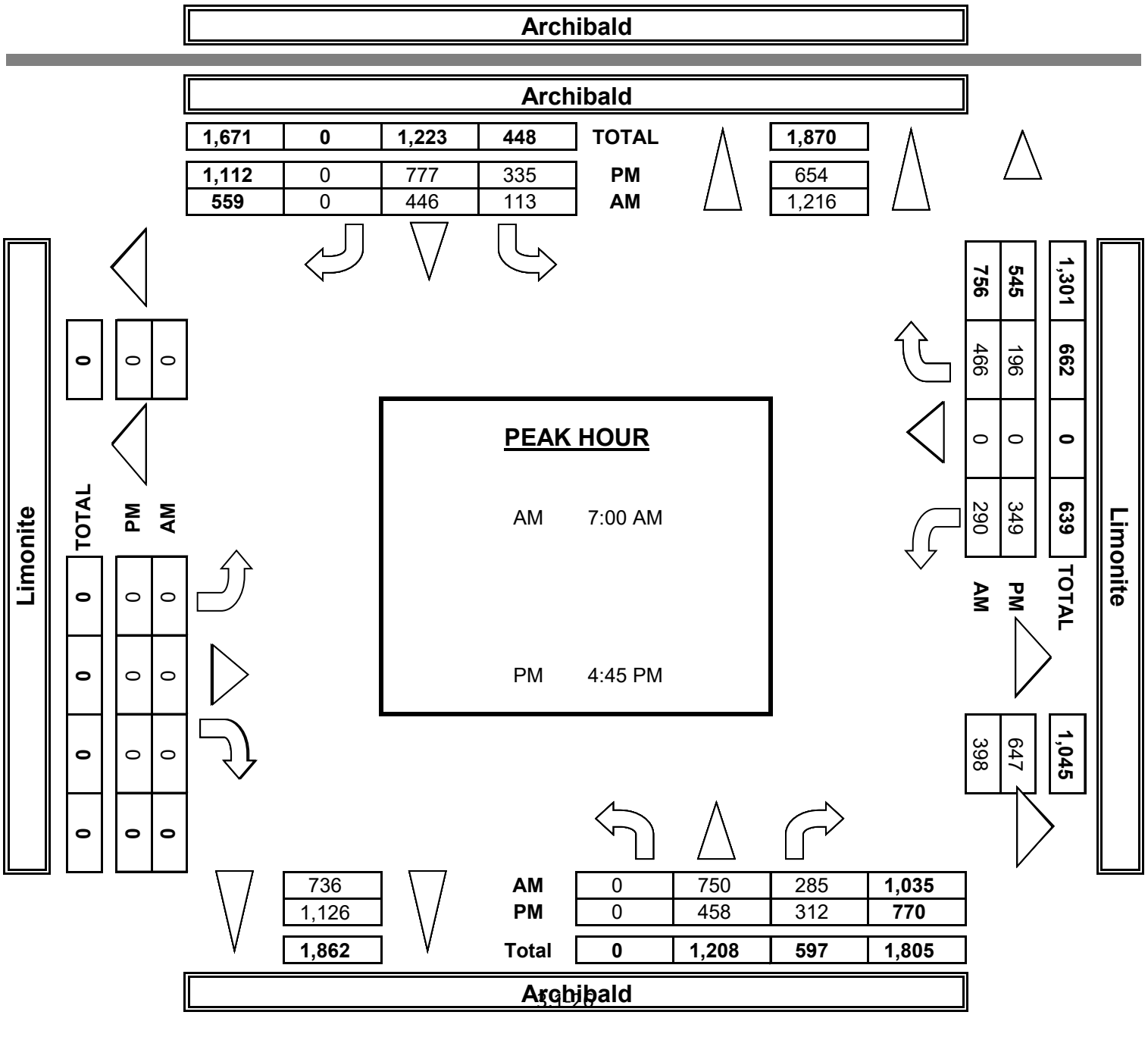
Archibald

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	7:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	4	0	0	0	4	0	0	0	0	0	4	0	0	0	4
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	10
THURSDAY	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	1	1	1	1	X	X	X	X	1	X	1	
AM													
7:00 AM	0	172	58	27	89	0	0	0	0	73	0	105	524
7:15 AM	0	186	71	28	90	0	0	0	0	68	0	112	555
7:30 AM	0	170	79	20	99	0	0	0	0	67	0	128	563
7:45 AM	0	165	59	23	114	0	0	0	0	63	0	103	527
8:00 AM	0	152	54	27	92	0	0	0	0	49	0	93	467
8:15 AM	0	164	67	26	89	0	0	0	0	31	0	79	456
8:30 AM	0	131	37	27	82	0	0	0	0	51	0	74	402
8:45 AM	0	144	42	29	85	0	0	0	0	44	0	69	413
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1,284	467	207	740	0	0	0	0	446	0	763	3,907
APPROACH %	0%	73%	27%	22%	78%	0%	0%	0%	0%	37%	0%	63%	
APP/DEPART	1,751	/	2,047	947	/	1,186	0	/	674	1,209	/	0	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	693	267	98	392	0	0	0	0	271	0	448	2,169
APPROACH %	0%	72%	28%	20%	80%	0%	0%	0%	0%	38%	0%	62%	
PEAK HR FACTOR		0.934			0.894			0.000			0.922		0.963
APP/DEPART	960	/	1,141	490	/	663	0	/	365	719	/	0	0
PM													
03:00 PM	0	108	73	64	138	0	0	0	0	79	0	46	508
3:15 PM	0	110	74	66	140	0	0	0	0	76	0	51	517
3:30 PM	0	107	71	64	140	0	0	0	0	77	0	41	500
3:45 PM	0	112	89	67	146	0	0	0	0	83	0	43	540
4:00 PM	0	106	84	64	144	0	0	0	0	78	0	51	527
4:15 PM	0	120	82	61	135	0	0	0	0	67	0	54	519
4:30 PM	0	121	65	60	191	0	0	0	0	68	0	48	553
4:45 PM	0	104	68	78	171	0	0	0	0	89	0	36	546
5:00 PM	0	96	75	82	190	0	0	0	0	87	0	45	575
5:15 PM	0	106	77	98	201	0	0	0	0	88	0	50	620
5:30 PM	0	129	80	74	189	0	0	0	0	80	0	55	607
5:45 PM	0	90	79	68	170	0	0	0	0	80	0	43	530
VOLUMES	0	1,309	917	846	1,955	0	0	0	0	952	0	563	6,542
APPROACH %	0%	59%	41%	30%	70%	0%	0%	0%	0%	63%	0%	37%	
APP/DEPART	2,226	/	1,872	2,801	/	2,907	0	/	1,763	1,515	/	0	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	435	300	332	751	0	0	0	0	344	0	186	2,348
APPROACH %	0%	59%	41%	31%	69%	0%	0%	0%	0%	65%	0%	35%	
PEAK HR FACTOR		0.879			0.906			0.000			0.960		0.947
APP/DEPART	735	/	621	1,083	/	1,095	0	/	632	530	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	0	X	X	0
7:00 AM	18	0	0	22
7:15 AM	19	0	0	15
7:30 AM	28	0	0	38
7:45 AM	23	0	0	32
8:00 AM	17	0	0	37
8:15 AM	13	0	0	27
8:30 AM	12	0	0	30
8:45 AM	8	0	0	30
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	138	0	0	231
PEAK HR VOLUMES	88	0	0	107
03:00 PM	9	0	0	28
3:15 PM	13	0	0	26
3:30 PM	18	0	0	22
3:45 PM	14	0	0	28
4:00 PM	9	0	0	30
4:15 PM	23	0	0	27
4:30 PM	13	0	0	27
4:45 PM	18	0	0	26
5:00 PM	18	0	0	31
5:15 PM	18	0	0	23
5:30 PM	20	0	0	27
5:45 PM	19	0	0	21
VOLUMES	192	0	0	316
PEAK HR VOLUMES	74	0	0	107

Archibald

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	10
THURSDAY	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 2:	NOTES:	AM
2-AXLE		PM
WORK		MD
VEHICLES/		OTHER
TRUCKS		OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Limonite			WESTBOUND Limonite		
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	1	1	1	1	X	X	X	X	1	X	1	
AM	7:00 AM	0	10	4	2	9	0	0	0	0	3	0	7	35
	7:15 AM	0	8	5	2	10	0	0	0	0	2	0	1	28
	7:30 AM	0	16	3	2	4	0	0	0	0	2	0	4	31
	7:45 AM	0	7	2	3	10	0	0	0	0	2	0	4	28
	8:00 AM	0	7	3	4	7	0	0	0	0	3	0	2	26
	8:15 AM	0	7	5	0	5	0	0	0	0	2	0	5	24
	8:30 AM	0	3	2	0	10	0	0	0	0	3	0	3	21
	8:45 AM	0	8	4	4	5	0	0	0	0	2	0	2	25
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	66	28	17	60	0	0	0	0	19	0	28	218
	APPROACH %	0%	70%	30%	22%	78%	0%	0%	0%	0%	40%	0%	60%	
	APP/DEPART	94	/	94	77	/	79	0	/	45	47	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	41	14	9	33	0	0	0	0	9	0	16	122
	APPROACH %	0%	75%	25%	21%	79%	0%	0%	0%	0%	36%	0%	64%	
	PEAK HR FACTOR		0.724			0.808			0.000			0.625		0.871
	APP/DEPART	55	/	57	42	/	42	0	/	23	25	/	0	0
PM	03:00 PM	0	2	1	0	4	0	0	0	0	1	0	1	9
	3:15 PM	0	3	1	1	3	0	0	0	0	3	0	1	12
	3:30 PM	0	3	1	0	4	0	0	0	0	3	0	2	13
	3:45 PM	0	2	2	1	2	0	0	0	0	1	0	1	9
	4:00 PM	0	6	5	4	3	0	0	0	0	0	0	1	19
	4:15 PM	0	6	0	1	5	0	0	0	0	4	0	1	17
	4:30 PM	0	2	4	2	4	0	0	0	0	2	0	1	15
	4:45 PM	0	2	2	0	4	0	0	0	0	2	0	2	12
	5:00 PM	0	5	1	0	6	0	0	0	0	1	0	2	15
	5:15 PM	0	2	3	2	2	0	0	0	0	0	0	2	11
	5:30 PM	0	6	3	0	3	0	0	0	0	1	0	2	15
	5:45 PM	0	6	1	2	2	0	0	0	0	0	0	0	11
	VOLUMES	0	45	24	13	42	0	0	0	0	18	0	16	158
	APPROACH %	0%	65%	35%	24%	76%	0%	0%	0%	0%	53%	0%	47%	
	APP/DEPART	69	/	61	55	/	60	0	/	37	34	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	16	11	7	16	0	0	0	0	8	0	5	63
	APPROACH %	0%	59%	41%	30%	70%	0%	0%	0%	0%	62%	0%	38%	
	PEAK HR FACTOR		0.614			0.821			0.000			0.650		0.829
	APP/DEPART	27	/	21	23	/	24	0	/	18	13	/	0	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						0	X	X	0
7:00 AM	0	0	0	0	0	1	0	0	3
7:15 AM	0	0	0	0	0	4	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	1	0	0	0
8:15 AM	0	0	0	0	0	2	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	2	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	10	0	0	11
PEAK HR VOLUMES						5	0	0	7
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	1	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	2
3:45 PM	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	1	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	0	1
4:45 PM	0	0	0	0	0	1	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	1	0	0	2
5:30 PM	0	0	0	0	0	1	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	6	0	0	12
PEAK HR VOLUMES						3	0	0	4

Archibald

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	10
THURSDAY	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Limonite			WESTBOUND Limonite			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	1	1	1	1	X	X	X	X	1	X	1	
AM	7:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
AM	7:15 AM	0	1	1	0	4	0	0	0	0	2	0	0	8
AM	7:30 AM	0	0	0	1	3	0	0	0	0	0	0	0	4
AM	7:45 AM	0	1	1	3	2	0	0	0	0	2	0	0	9
AM	8:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	7
AM	8:15 AM	0	4	0	0	1	0	0	0	0	1	0	0	6
AM	8:30 AM	0	4	0	1	1	0	0	0	0	2	0	0	8
AM	8:45 AM	0	1	1	1	2	0	0	0	0	2	0	1	8
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	16	4	7	14	0	0	0	0	9	0	1	51
AM	APPROACH %	0%	80%	20%	33%	67%	0%	0%	0%	0%	90%	0%	10%	
AM	APP/DEPART	20	/	17	21	/	23	0	/	11	10	/	0	0
AM	BEGIN PEAK HR		7:45 AM											
AM	VOLUMES	0	14	2	4	5	0	0	0	0	5	0	0	30
AM	APPROACH %	0%	88%	13%	44%	56%	0%	0%	0%	0%	100%	0%	0%	
AM	PEAK HR FACTOR		0.667			0.450			0.000			0.625		0.833
AM	APP/DEPART	16	/	14	9	/	10	0	/	6	5	/	0	0
PM	03:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
PM	3:15 PM	0	0	1	0	0	0	0	0	0	1	0	0	2
PM	3:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	2	1	0	1	0	0	0	0	1	0	0	5
PM	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
PM	4:30 PM	0	0	1	1	0	0	0	0	0	1	0	0	3
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	1	0	1	1	0	0	0	0	0	0	1	4
PM	5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
PM	5:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
PM	VOLUMES	0	4	3	4	5	0	0	0	0	3	0	2	21
PM	APPROACH %	0%	57%	43%	44%	56%	0%	0%	0%	0%	60%	0%	40%	
PM	APP/DEPART	7	/	6	9	/	8	0	/	7	5	/	0	0
PM	BEGIN PEAK HR		4:00 PM											
PM	VOLUMES	0	2	2	1	2	0	0	0	0	2	0	1	10
PM	APPROACH %	0%	50%	50%	33%	67%	0%	0%	0%	0%	67%	0%	33%	
PM	PEAK HR FACTOR		0.333			0.750			0.000			0.750		0.500
PM	APP/DEPART	4	/	3	3	/	4	0	/	3	3	/	0	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						0	X	X	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	2	0	0	1
PEAK HR VOLUMES						0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	1	0	0	1
PEAK HR VOLUMES						1	0	0	0

Archibald

NORTH SIDE

Limonite WEST SIDE

EAST SIDE **Limonite**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	10
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

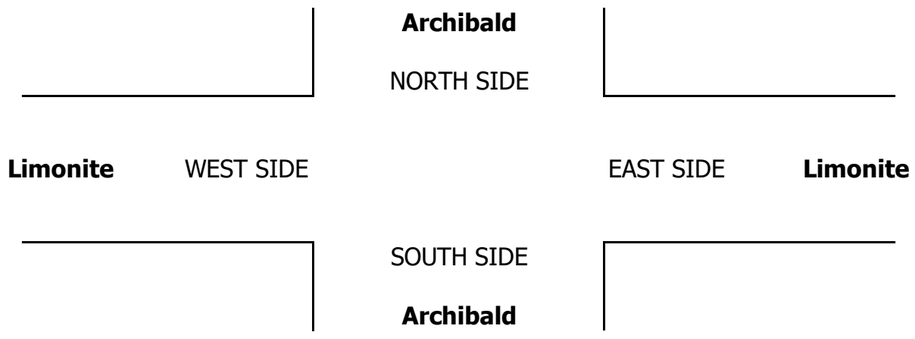
	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Limonite			WESTBOUND Limonite			
LANES:	NL X	NT 1	NR 1	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL
7:00 AM	0	1	1	0	1	0	0	0	0	2	0	1	6
7:15 AM	0	6	1	0	2	0	0	0	0	0	0	0	9
7:30 AM	0	3	0	0	7	0	0	0	0	1	0	0	11
7:45 AM	0	2	0	1	2	0	0	0	0	2	0	1	8
8:00 AM	0	1	2	0	2	0	0	0	0	0	0	0	5
8:15 AM	0	2	0	0	8	0	0	0	0	4	0	1	15
8:30 AM	0	3	3	0	5	0	0	0	0	2	0	1	14
8:45 AM	0	4	1	0	6	0	0	0	0	2	0	0	13
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	22	8	1	33	0	0	0	0	13	0	4	81
APPROACH %	0%	73%	27%	3%	97%	0%	0%	0%	0%	76%	0%	24%	
APP/DEPART	30	/	26	34	/	46	0	/	9	17	/	0	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	10	6	0	21	0	0	0	0	8	0	2	47
APPROACH %	0%	63%	38%	0%	100%	0%	0%	0%	0%	80%	0%	20%	
PEAK HR FACTOR		0.667			0.656			0.000			0.500		0.783
APP/DEPART	16	/	12	21	/	29	0	/	6	10	/	0	0
03:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
3:15 PM	0	1	0	1	2	0	0	0	0	1	0	0	5
3:30 PM	0	2	1	0	2	0	0	0	0	0	0	1	6
3:45 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
4:00 PM	0	1	0	2	0	0	0	0	0	1	0	0	4
4:15 PM	0	2	2	0	4	0	0	0	0	0	0	1	9
4:30 PM	0	3	1	0	3	0	0	0	0	0	0	0	7
4:45 PM	0	5	0	0	2	0	0	0	0	0	0	0	7
5:00 PM	0	2	2	0	3	0	0	0	0	0	0	0	7
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	1	0	4	0	0	0	0	1	0	0	6
5:45 PM	0	1	0	0	0	0	0	0	0	2	0	0	3
VOLUMES	0	21	7	3	23	0	0	0	0	5	0	2	61
APPROACH %	0%	75%	25%	12%	88%	0%	0%	0%	0%	71%	0%	29%	
APP/DEPART	28	/	23	26	/	28	0	/	10	7	/	0	0
BEGIN PEAK HR		4:15 PM											
VOLUMES	0	12	5	0	12	0	0	0	0	0	0	1	30
APPROACH %	0%	71%	29%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
PEAK HR FACTOR		0.850			0.750			0.000			0.250		0.833
APP/DEPART	17	/	13	12	/	12	0	/	5	1	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
	0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	X	X	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
2	0	0	0
0	0	0	1
3	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
6	0	0	1
5	0	0	1
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	2
1	0	0	1



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	10
THURSDAY	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Limonite			WESTBOUND Limonite			TOTAL
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	LANES:	X	1	1	1	1	X	X	X	X	1	X	1	
AM	7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	0	X	X	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Archibald

NORTH SIDE

Limonite WEST SIDE

EAST SIDE **Limonite**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	10
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 6:	NOTES:	
BUSES		AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Limonite			WESTBOUND Limonite			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	1	1	1	1	X	X	X	X	1	X	1	
AM	7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
	7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	2	0	0	3
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	
	APP/DEPART	1	/	1	0	/	2	0	/	0	2	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	1	0	0	0	0	0	0	0	1	0	0	2
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	
	PEAK HR FACTOR		0.250			0.000			0.000			0.250		0.500
	APP/DEPART	1	/	1	0	/	1	0	/	0	1	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	2	0	0	0	0	1	0	0	3
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
	APP/DEPART	0	/	0	2	/	3	0	/	0	1	/	0	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	2	0	0	0	0	1	0	0	3
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
	PEAK HR FACTOR		0.000			0.250			0.000			0.250		0.375
	APP/DEPART	0	/	0	2	/	3	0	/	0	1	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
	0	X	X	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Archibald

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 23, 19

LOCATION: Eastvale
NORTH & SOUTH: Archibald
EAST & WEST: 65th

PROJECT #: SC2210
LOCATION #: 11
CONTROL: SIGNAL

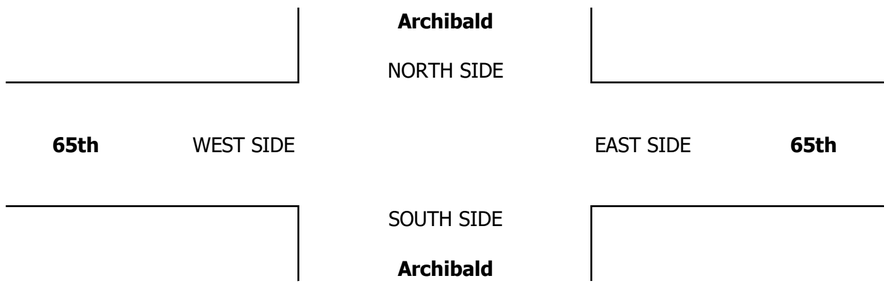
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

☑ Add U-Turns to Left Turns

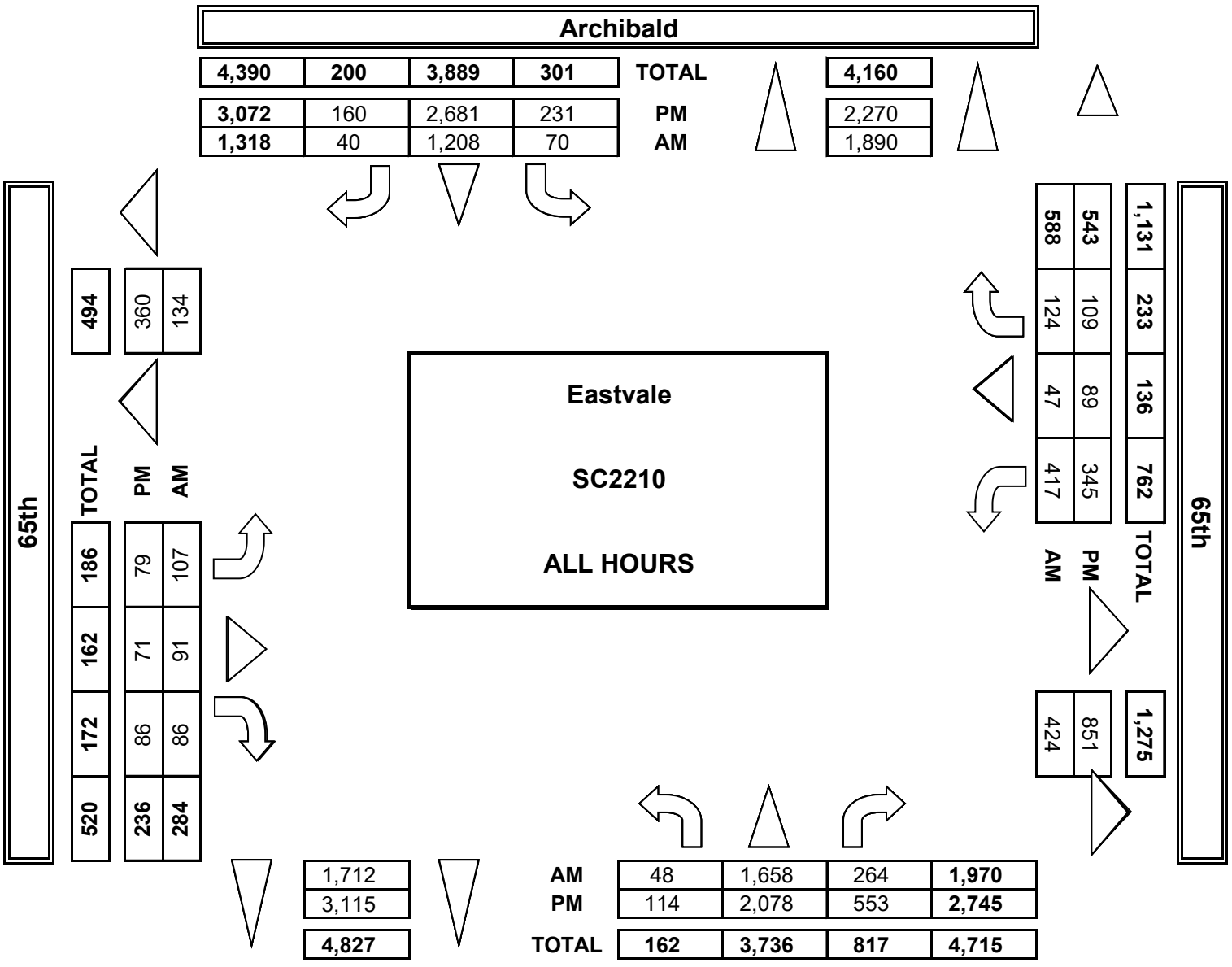
		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND 65th			WESTBOUND 65th				U-TURNS					RTOR			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL	NRR 0	SRR 0	ERR 0	WRR 0
AM	7:00 AM	0	239	17	8	157	7	14	14	9	47	2	18	532	0	0	0	0	0	7	3	5	13
	7:15 AM	5	216	21	10	157	4	19	16	20	48	3	13	532	0	0	0	0	0	9	1	10	9
	7:30 AM	7	262	48	7	182	2	11	5	17	54	11	11	617	0	0	0	0	0	8	1	15	8
	7:45 AM	5	201	48	9	172	7	10	10	8	72	10	16	568	0	1	0	0	1	9	3	2	7
	8:00 AM	7	204	50	11	144	3	13	21	13	49	1	15	531	0	0	0	0	0	12	1	8	10
	8:15 AM	17	213	32	13	128	5	14	13	5	62	6	15	523	0	0	0	0	0	7	2	3	11
	8:30 AM	4	147	26	8	136	8	11	7	6	50	12	16	431	1	0	0	0	1	10	2	3	4
	8:45 AM	3	176	22	4	132	4	15	5	8	35	2	20	426	0	0	0	0	0	6	1	4	9
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	48	1,658	264	70	1,208	40	107	91	86	417	47	124	4,160	1	1	0	0	2	68	14	50	71
	APPROACH %	2%	84%	13%	5%	92%	3%	38%	32%	30%	71%	8%	21%										
	APP/DEPART	1,970	/	1,890	1,318	/	1,712	284	/	424	588	/	134	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	17	918	134	34	668	20	54	45	54	221	26	58	2,249						33	8	32	37
	APPROACH %	2%	86%	13%	5%	93%	3%	35%	29%	35%	72%	9%	19%										
	PEAK HR FACTOR		0.843			0.945			0.695			0.778		0.911									
	APP/DEPART	1,069	/	1,031	722	/	943	153	/	212	305	/	63	0									
PM	03:00 PM	7	171	38	15	201	9	4	5	6	22	6	8	492	0	1	0	0	1	7	2	5	5
	3:15 PM	10	180	43	14	199	8	8	4	9	25	4	9	513	1	0	0	0	1	4	3	5	4
	3:30 PM	8	175	40	16	203	8	6	9	4	27	8	13	517	0	0	0	0	0	3	1	4	7
	3:45 PM	12	177	42	13	216	9	7	5	9	29	7	10	536	1	0	0	0	1	7	4	7	5
	4:00 PM	9	188	43	21	231	11	5	4	5	30	5	10	562	1	0	0	0	1	9	1	5	6
	4:15 PM	10	200	47	12	202	8	4	3	7	36	5	10	544	0	1	0	0	1	5	5	7	6
	4:30 PM	6	154	37	17	229	15	5	10	2	25	10	12	522	0	0	0	0	0	2	3	1	6
	4:45 PM	7	163	44	26	233	11	5	3	8	25	6	6	537	0	1	0	0	1	6	6	5	6
	5:00 PM	9	151	55	20	248	20	11	8	8	30	5	8	573	0	1	0	0	1	13	5	3	6
	5:15 PM	12	176	50	21	251	21	7	5	10	33	14	9	609	0	0	0	0	0	7	4	7	3
	5:30 PM	14	184	64	25	248	21	8	8	10	29	4	6	621	0	0	0	0	0	17	3	6	4
	5:45 PM	10	159	50	31	220	19	9	7	8	34	15	8	570	0	0	0	0	0	14	3	6	5
	VOLUMES	114	2,078	553	231	2,681	160	79	71	86	345	89	109	6,596	3	4	0	0	7	94	40	61	63
	APPROACH %	4%	76%	20%	8%	87%	5%	33%	30%	36%	64%	16%	20%										
	APP/DEPART	2,745	/	2,270	3,072	/	3,115	236	/	851	543	/	360	0									
	BEGIN PEAK HR		5:00 PM																				
	VOLUMES	45	670	219	97	967	81	35	28	36	126	38	31	2,373						51	15	22	18
	APPROACH %	5%	72%	23%	8%	84%	7%	35%	28%	36%	65%	19%	16%										
	PEAK HR FACTOR		0.891			0.974			0.917			0.855		0.955									
	APP/DEPART	934	/	737	1,145	/	1,129	99	/	343	195	/	164	0									

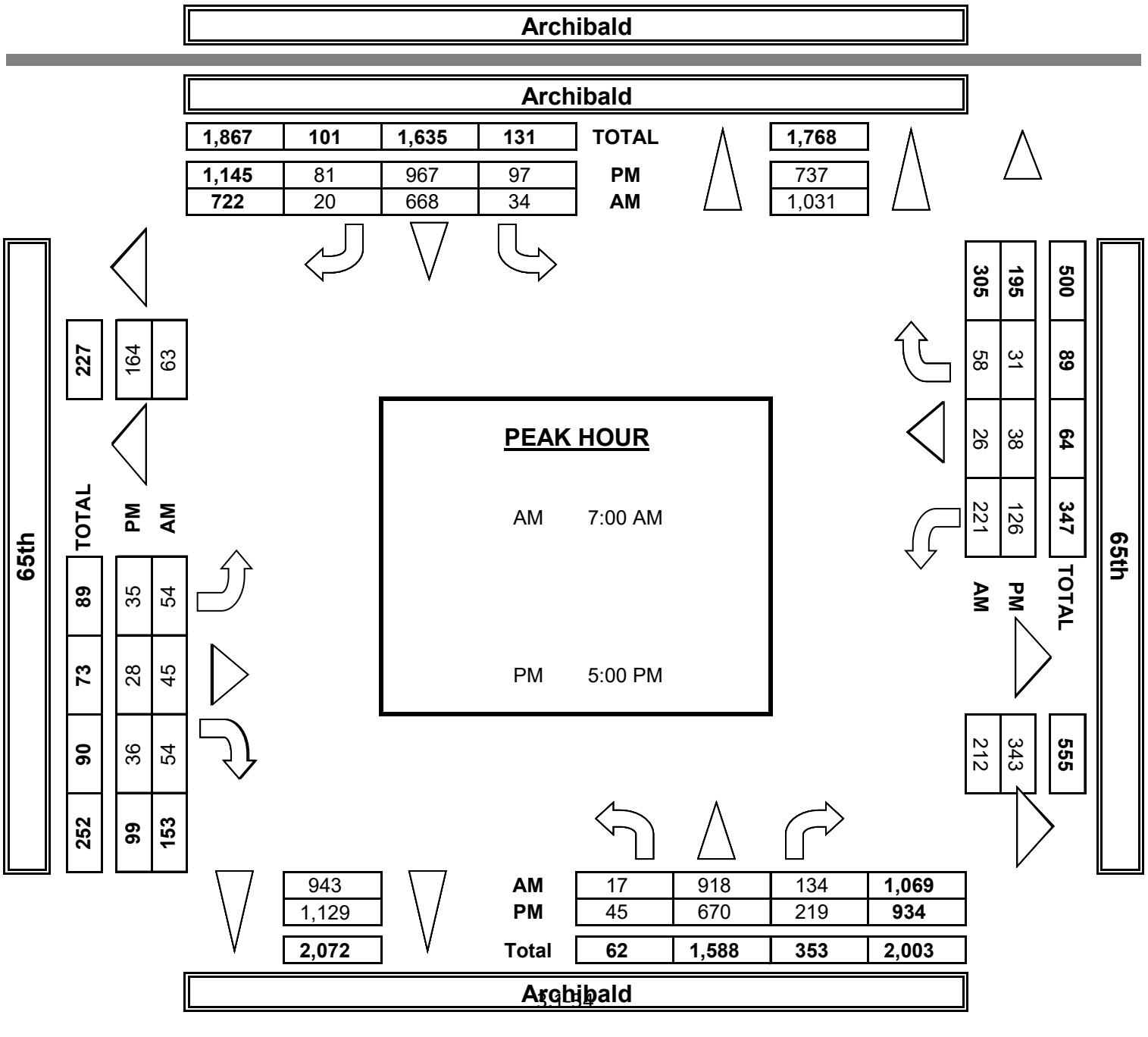


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	1	0	1	0	2	0	0	1	0	1	1	0	0	0	1
	7:15 AM	0	0	1	1	2	0	0	1	0	1	0	0	0	1	1
	7:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	1	2	1	6	0	1	2	0	3	2	0	0	1	3
PM	3:00 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	3:15 PM	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	5:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	5:45 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	TOTAL	5	0	4	0	9	3	0	3	0	6	2	0	1	0	3

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	11
	EAST & WEST:	65th	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND 65th			WESTBOUND 65th			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	3	0	1	2	0	1	1	1	

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1

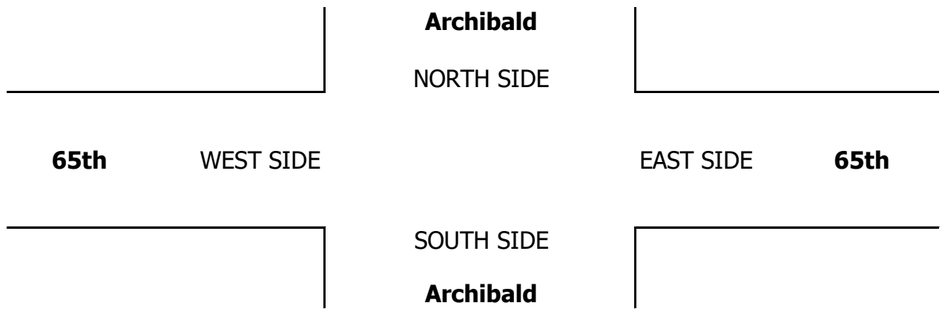
RTOR

NRR	SRR	ERR	WRR
0	0	0	0
7	3	5	13
9	0	10	9
8	1	15	8
9	3	1	7
12	1	8	9
7	1	3	11
10	2	3	4
5	1	4	9
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
67	12	49	70

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND 65th			WESTBOUND 65th			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
AM	7:00 AM	0	224	17	7	145	7	13	12	9	44	2	18	498
	7:15 AM	5	199	21	10	143	3	18	14	20	47	2	13	495
	7:30 AM	7	245	48	7	167	1	11	5	17	53	11	11	583
	7:45 AM	5	186	45	9	155	6	10	10	6	69	9	16	526
	8:00 AM	7	186	49	11	135	3	13	21	13	48	1	14	501
	8:15 AM	17	195	32	13	112	4	14	13	5	58	5	15	483
	8:30 AM	3	131	26	7	117	8	10	6	6	46	11	16	387
	8:45 AM	3	162	21	2	116	3	15	5	8	33	2	20	390
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	47	1,528	259	66	1,090	35	104	86	84	398	43	123	3,863
	APPROACH %	3%	83%	14%	6%	92%	3%	38%	31%	31%	71%	8%	22%	
	APP/DEPART	1,834	/	1,756	1,191	/	1,572	274	/	410	564	/	125	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	24	816	163	36	600	13	52	50	56	217	23	54	2,105
	APPROACH %	2%	81%	16%	6%	92%	2%	33%	32%	35%	74%	8%	18%	
	PEAK HR FACTOR		0.836			0.929			0.760			0.782		0.903
	APP/DEPART	1,003	/	923	650	/	873	158	/	249	294	/	60	0
PM	03:00 PM	7	167	36	14	196	9	3	5	6	20	6	8	477
	3:15 PM	10	174	42	13	194	8	8	4	9	25	4	8	499
	3:30 PM	8	171	40	16	196	8	6	9	4	27	8	13	506
	3:45 PM	12	168	42	13	211	9	7	5	9	29	7	10	522
	4:00 PM	9	173	43	21	217	11	5	4	5	30	5	10	533
	4:15 PM	9	191	47	12	186	8	4	3	7	34	5	10	516
	4:30 PM	6	148	36	16	223	15	4	10	2	24	10	12	506
	4:45 PM	7	153	43	24	228	11	5	3	8	24	6	6	518
	5:00 PM	9	140	54	19	240	20	11	8	8	30	5	7	551
	5:15 PM	11	168	49	21	245	21	7	5	10	33	14	9	593
	5:30 PM	14	177	63	23	241	21	8	8	10	28	4	5	602
	5:45 PM	10	150	50	30	218	19	9	7	7	34	15	7	556
	VOLUMES	112	1,980	545	222	2,595	160	77	71	85	338	89	105	6,379
	APPROACH %	4%	75%	21%	7%	87%	5%	33%	30%	36%	64%	17%	20%	
	APP/DEPART	2,637	/	2,165	2,977	/	3,021	233	/	835	532	/	358	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	44	635	216	92	944	81	35	28	35	125	38	28	2,302
	APPROACH %	5%	71%	24%	8%	84%	7%	36%	29%	36%	65%	20%	15%	
	PEAK HR FACTOR		0.881			0.974			0.907			0.853		0.956
	APP/DEPART	895	/	699	1,118	/	1,104	98	/	336	191	/	163	0

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
1	0	0	0	1
0	0	0	0	0
1	0	0	0	1
1	0	0	0	1
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
3	3	0	0	6

NRR	SRR	ERR	WRR
6	2	5	5
4	3	5	3
3	1	4	7
7	4	7	5
9	1	5	6
5	5	7	6
1	3	1	6
6	6	5	6
13	5	3	5
7	4	7	3
17	3	6	3
14	3	6	4
92	40	61	59
51	15	22	15



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	11
	EAST & WEST:	65th	CONTROL:	SIGNAL

CLASS 2:	NOTES:
2-AXLE WORK VEHICLES/ TRUCKS	

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

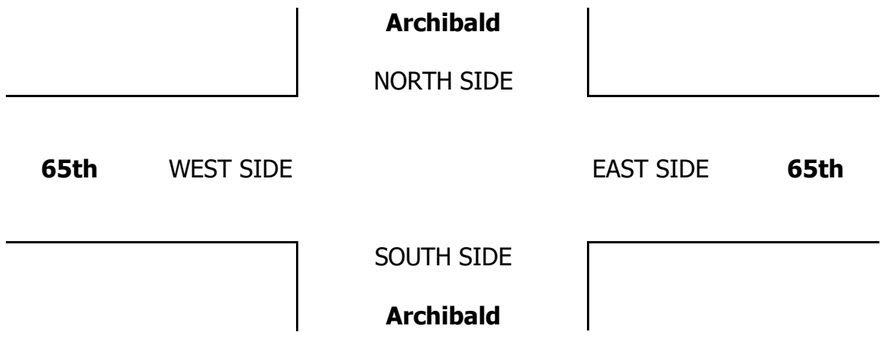
	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND 65th			WESTBOUND 65th			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL
7:00 AM	0	10	0	1	10	0	1	1	0	1	0	0	24
7:15 AM	0	11	0	0	8	0	0	0	0	0	1	0	20
7:30 AM	0	12	0	0	6	0	0	0	0	0	0	0	18
7:45 AM	0	8	0	0	12	1	0	0	1	2	0	0	24
8:00 AM	0	10	0	0	8	0	0	0	0	1	0	0	19
8:15 AM	0	13	0	0	7	0	0	0	0	3	1	0	24
8:30 AM	1	9	0	1	12	0	1	0	0	3	0	0	27
8:45 AM	0	8	1	2	6	0	0	0	0	1	0	0	18
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	81	1	4	69	1	2	1	1	11	2	0	174
APPROACH %	1%	98%	1%	5%	93%	1%	50%	25%	25%	85%	15%	0%	
APP/DEPART	83	/	83	74	/	82	4	/	6	13	/	3	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	0	40	0	1	39	1	1	0	1	9	1	0	94
APPROACH %	0%	98%	0%	2%	95%	2%	50%	0%	50%	90%	10%	0%	
PEAK HR FACTOR		0.788			0.788			0.500			0.625		0.870
APP/DEPART	41	/	41	41	/	50	2	/	1	10	/	2	0
03:00 PM	0	2	2	1	2	0	1	0	0	2	0	0	10
3:15 PM	0	3	1	1	3	0	0	0	0	0	0	1	9
3:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
3:45 PM	0	6	0	0	4	0	0	0	0	0	0	0	10
4:00 PM	0	11	0	0	10	0	0	0	0	0	0	0	21
4:15 PM	1	7	0	0	8	0	0	0	0	1	0	0	17
4:30 PM	0	2	1	1	3	0	1	0	0	0	0	0	8
4:45 PM	0	5	1	1	4	0	0	0	0	1	0	0	12
5:00 PM	0	8	1	1	5	0	0	0	0	0	0	1	16
5:15 PM	1	7	1	0	3	0	0	0	0	0	0	0	12
5:30 PM	0	5	1	2	4	0	0	0	0	1	0	1	14
5:45 PM	0	7	0	1	0	0	0	0	1	0	0	1	10
VOLUMES	2	65	8	8	48	0	2	0	1	5	0	4	143
APPROACH %	3%	87%	11%	14%	86%	0%	67%	0%	33%	56%	0%	44%	
APP/DEPART	75	/	71	56	/	54	3	/	16	9	/	2	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	1	25	2	2	25	0	1	0	0	2	0	0	58
APPROACH %	4%	89%	7%	7%	93%	0%	100%	0%	0%	100%	0%	0%	
PEAK HR FACTOR		0.636			0.675			0.250			0.500		0.690
APP/DEPART	28	/	26	27	/	27	1	/	4	2	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	1
0	0	0	1
2	0	0	4
1	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	11
	EAST & WEST:	65th	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

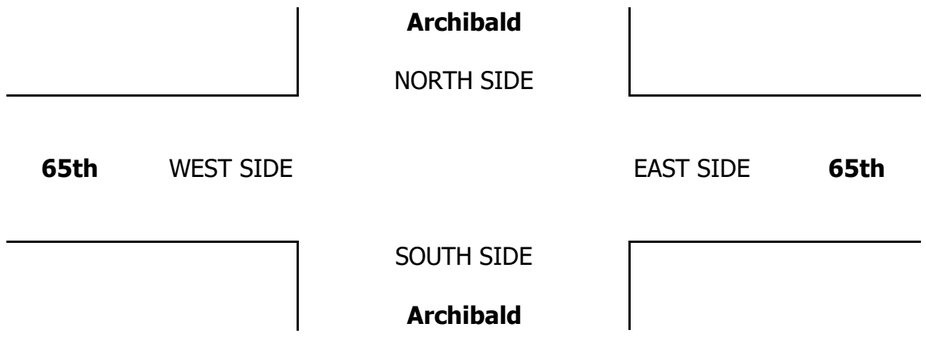
	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND 65th			WESTBOUND 65th			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	3	0	1	2	0	1	1	1	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	3	0	1	0	0	0	0	0	4
7:30 AM	0	1	0	0	1	1	0	0	0	0	0	0	3
7:45 AM	0	3	0	0	3	0	0	0	0	1	0	0	7
8:00 AM	0	4	0	0	0	0	0	0	0	0	0	1	5
8:15 AM	0	3	0	0	1	1	0	0	0	0	0	0	5
8:30 AM	0	4	0	0	3	0	0	1	0	0	1	0	9
8:45 AM	0	1	0	0	4	1	0	0	0	1	0	0	7
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	17	0	0	15	3	1	1	0	2	1	1	41
APPROACH %	0%	100%	0%	0%	83%	17%	50%	50%	0%	50%	25%	25%	
APP/DEPART	17	/	19	18	/	17	2	/	1	4	/	4	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	0	12	0	0	8	2	0	1	0	1	1	1	26
APPROACH %	0%	100%	0%	0%	80%	20%	0%	100%	0%	33%	33%	33%	
PEAK HR FACTOR		0.750			0.500			0.250			0.750		0.722
APP/DEPART	12	/	13	10	/	9	1	/	1	3	/	3	0
03:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
3:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	1	0	0	0	0	1	0	0	3
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
VOLUMES	0	7	0	0	9	0	0	0	0	1	0	0	17
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
APP/DEPART	7	/	7	9	/	10	0	/	0	1	/	0	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	0	4	0	0	4	0	0	0	0	1	0	0	9
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
PEAK HR FACTOR		0.500			0.500			0.000			0.250		0.563
APP/DEPART	4	/	4	4	/	5	0	/	0	1	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	1
0	1	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Archibald	LOCATION #:	11
	EAST & WEST:	65th	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

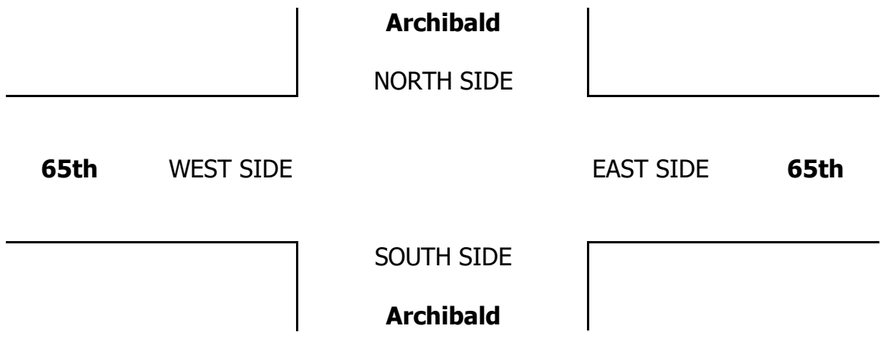
	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND 65th			WESTBOUND 65th			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	3	0	1	2	0	1	1	1	
7:00 AM	0	3	0	0	2	0	0	0	0	1	0	0	6
7:15 AM	0	5	0	0	3	0	0	0	0	0	0	0	8
7:30 AM	0	4	0	0	8	0	0	0	0	0	0	0	12
7:45 AM	0	4	0	0	2	0	0	0	0	0	0	0	6
8:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	5
8:15 AM	0	2	0	0	8	0	0	0	0	0	0	0	10
8:30 AM	0	3	0	0	3	0	0	0	0	0	0	0	6
8:45 AM	0	5	0	0	6	0	0	0	0	0	0	0	11
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	30	0	0	33	0	0	0	0	1	0	0	64
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
APP/DEPART	30	/	30	33	/	34	0	/	0	1	/	0	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	0	14	0	0	19	0	0	0	0	0	0	0	33
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.875			0.594			0.000			0.000		0.688
APP/DEPART	14	/	14	19	/	19	0	/	0	0	/	0	0
03:00 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
3:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
3:30 PM	0	2	0	0	3	0	0	0	0	0	0	0	5
3:45 PM	0	3	0	0	1	0	0	0	0	0	0	0	4
4:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
4:15 PM	0	2	0	0	4	0	0	0	0	0	0	0	6
4:30 PM	0	3	0	0	2	0	0	0	0	0	0	0	5
4:45 PM	0	4	0	1	1	0	0	0	0	0	0	0	6
5:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	6
5:15 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
5:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
VOLUMES	0	26	0	1	25	0	0	0	0	0	0	0	52
APPROACH %	0%	100%	0%	4%	96%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	26	/	27	26	/	25	0	/	0	0	/	0	0
BEGIN PEAK HR		4:15 PM											
VOLUMES	0	12	0	0	10	0	0	0	0	0	0	0	23
APPROACH %	0%	100%	0%	0%	91%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.750			0.688			0.000			0.000		0.958
APP/DEPART	12	/	13	11	/	10	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	11
THURSDAY	EAST & WEST:	65th	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM PM MD OTHER OTHER

▲ N ◀ W E ▶ S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND 65th			WESTBOUND 65th			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	1	1	3	0	1	2	0	1	1	1	
AM	7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
						0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0

Archibald

NORTH SIDE

65th WEST SIDE EAST SIDE **65th**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Archibald	LOCATION #:	11
THURSDAY	EAST & WEST:	65th	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER	N ▲ ◄ W E ► S ▼
BUSES			

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND 65th			WESTBOUND 65th			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	3	0	1	2	0	1	1	1	
AM 7:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	2
7:15 AM	0	1	0	0	0	1	0	2	0	1	0	0	5
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
7:45 AM	0	0	3	0	0	0	0	0	1	0	1	0	5
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
8:30 AM	0	0	0	0	1	0	0	0	0	1	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	4	0	1	1	0	3	1	5	1	0	17
APPROACH %	0%	20%	80%	0%	50%	50%	0%	75%	25%	83%	17%	0%	
APP/DEPART	5	/	1	2	/	7	4	/	7	6	/	2	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	1	3	0	0	1	0	3	1	3	1	0	13
APPROACH %	0%	25%	75%	0%	0%	100%	0%	75%	25%	75%	25%	0%	
PEAK HR FACTOR		0.333			0.250			0.500			1.000		0.650
APP/DEPART	4	/	1	1	/	4	4	/	6	4	/	2	0
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	2	0	0	0	0	1	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	3	0	0	0	0	1	0	0	4
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
APP/DEPART	0	/	0	3	/	4	0	/	0	1	/	0	0
BEGIN PEAK HR		3:30 PM											
VOLUMES	0	0	0	0	3	0	0	0	0	1	0	0	4
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
PEAK HR FACTOR		0.000			0.375			0.000			0.250		0.333
APP/DEPART	0	/	0	3	/	4	0	/	0	1	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	1	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	1	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	1	1	0
PEAK HR VOLUMES	0	1	1	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Archibald

NORTH SIDE

65th WEST SIDE EAST SIDE **65th**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 23, 19

LOCATION: Eastvale
NORTH & SOUTH: Harrison
EAST & WEST: Limonite

PROJECT #: SC2210
LOCATION #: 12
CONTROL: SIGNAL

NOTES:

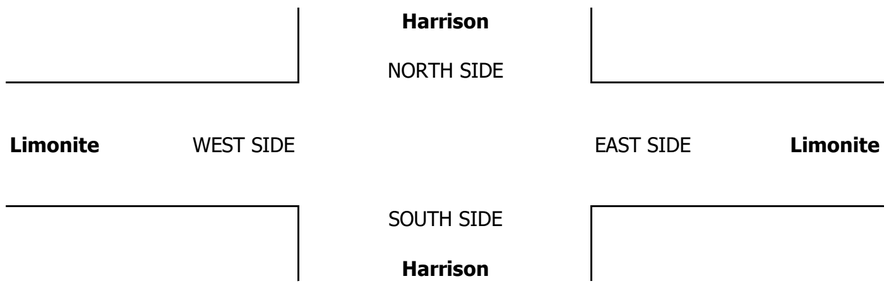
AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Harrison			SOUTHBOUND Harrison			EASTBOUND Limonite			WESTBOUND Limonite			
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 3	ER 0	WL 1	WT 2	WR 1	TOTAL
AM	7:00 AM	31	8	48	7	31	14	7	83	4	18	139	6	396
	7:15 AM	24	25	59	6	33	11	9	88	2	38	148	1	444
	7:30 AM	38	27	57	4	23	14	9	82	4	41	147	2	448
	7:45 AM	23	21	48	3	25	9	7	79	1	35	140	1	392
	8:00 AM	22	29	46	5	35	12	12	74	2	42	123	1	403
	8:15 AM	18	19	38	3	13	10	11	79	1	19	100	3	314
	8:30 AM	15	12	31	2	9	17	7	64	5	18	110	0	290
	8:45 AM	13	8	28	3	5	9	4	77	0	23	92	1	263
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	184	149	355	33	174	96	66	626	19	234	999	15	2,950
	APPROACH %	27%	22%	52%	11%	57%	32%	9%	88%	3%	19%	80%	1%	
	APP/DEPART	688	/	228	303	/	409	711	/	1,032	1,248	/	1,281	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	107	102	210	18	116	46	37	323	9	156	558	5	1,687
	APPROACH %	26%	24%	50%	10%	64%	26%	10%	88%	2%	22%	78%	1%	
	PEAK HR FACTOR		0.859			0.865			0.932			0.946		0.941
	APP/DEPART	419	/	144	180	/	275	369	/	557	719	/	711	0
PM	03:00 PM	6	12	34	6	11	3	14	128	6	39	111	0	370
	3:15 PM	7	11	34	4	9	3	11	131	6	51	119	2	388
	3:30 PM	8	12	36	1	8	5	8	129	7	55	116	1	386
	3:45 PM	5	14	41	3	10	9	10	124	5	48	121	1	391
	4:00 PM	7	15	38	6	14	5	15	149	9	42	112	1	413
	4:15 PM	8	7	35	5	7	6	12	115	4	55	122	0	376
	4:30 PM	11	14	43	2	9	5	11	127	4	47	106	1	380
	4:45 PM	4	17	37	1	8	8	5	127	8	57	123	0	395
	5:00 PM	7	10	48	5	17	7	9	130	10	33	126	3	405
	5:15 PM	12	13	46	3	13	8	13	166	10	72	111	3	470
	5:30 PM	11	12	45	3	19	7	14	122	9	57	112	4	415
	5:45 PM	9	16	41	4	23	4	22	114	8	68	115	4	428
	VOLUMES	95	153	478	43	148	70	144	1,562	86	624	1,394	20	4,817
	APPROACH %	13%	21%	66%	16%	57%	27%	8%	87%	5%	31%	68%	1%	
	APP/DEPART	726	/	319	261	/	841	1,792	/	2,098	2,038	/	1,559	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	39	51	180	15	72	26	58	532	37	230	464	14	1,718
	APPROACH %	14%	19%	67%	13%	64%	23%	9%	85%	6%	32%	66%	2%	
	PEAK HR FACTOR		0.951			0.911			0.829			0.947		0.914
	APP/DEPART	270	/	123	113	/	336	627	/	730	708	/	529	0

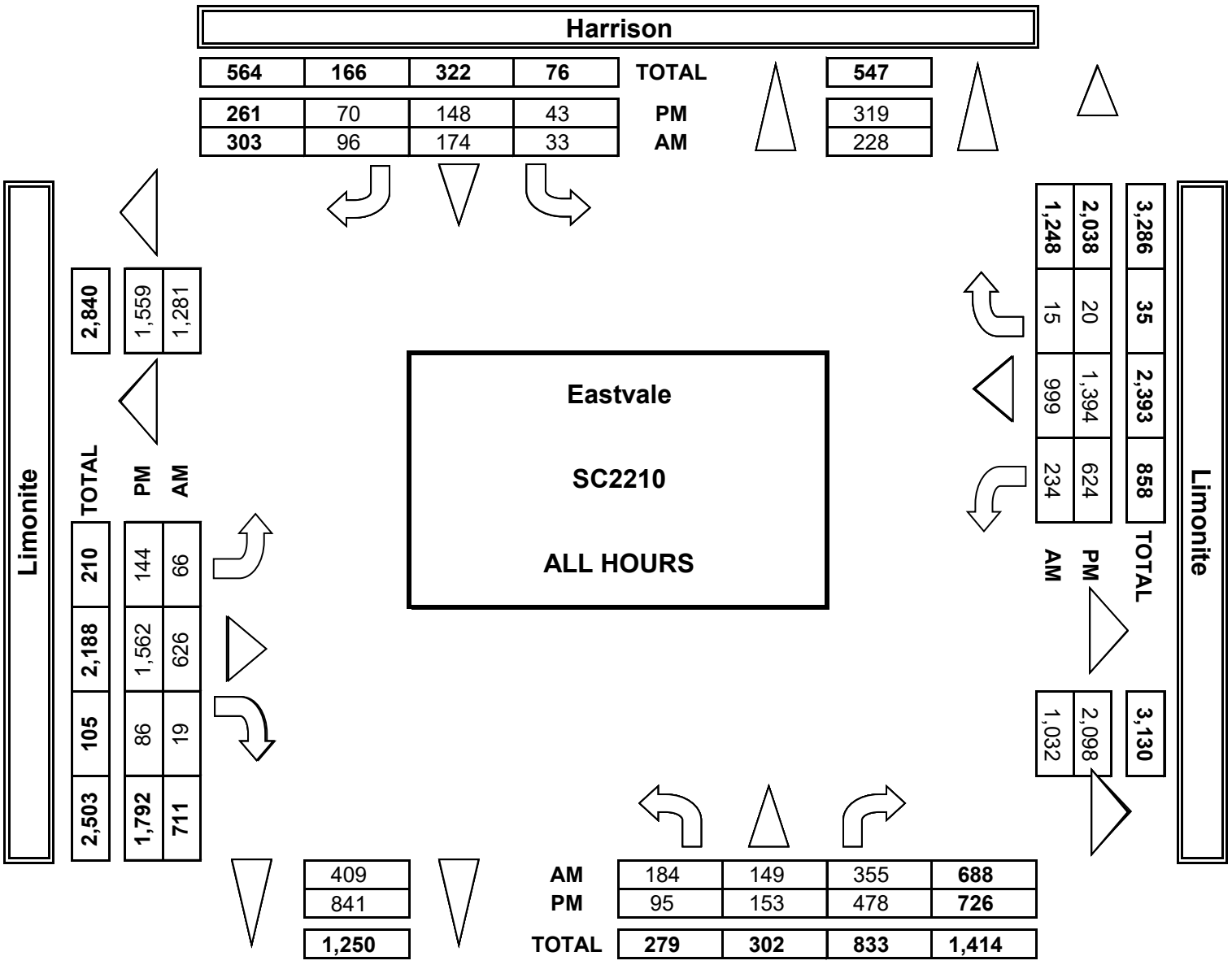
U-TURNS					RTOR			
NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
0	0	0	0		0	0	0	0
0	0	0	2	2	8	3	2	3
0	0	0	0	0	26	4	2	0
0	0	0	0	0	18	6	0	1
0	0	0	4	4	20	4	0	1
0	0	0	2	2	23	2	1	0
0	0	0	5	5	10	1	0	0
0	0	1	4	5	12	6	0	0
0	0	1	1	2	11	3	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	2	18	20	128	29	5	5
					87	16	3	2
0	1	0	1	2	13	1	0	0
0	0	0	2	2	12	1	1	0
0	0	0	3	3	10	2	1	0
0	0	0	1	1	16	4	0	0
0	0	0	1	1	15	2	1	0
0	1	0	0	1	14	2	0	0
0	0	0	4	4	13	3	0	0
0	0	0	2	2	13	2	1	0
0	0	0	1	1	15	6	2	0
0	0	0	2	2	12	5	1	1
0	0	0	0	0	20	4	4	2
0	0	0	0	0	20	2	2	0
0	2	0	17	19	173	34	13	3
					67	17	9	3

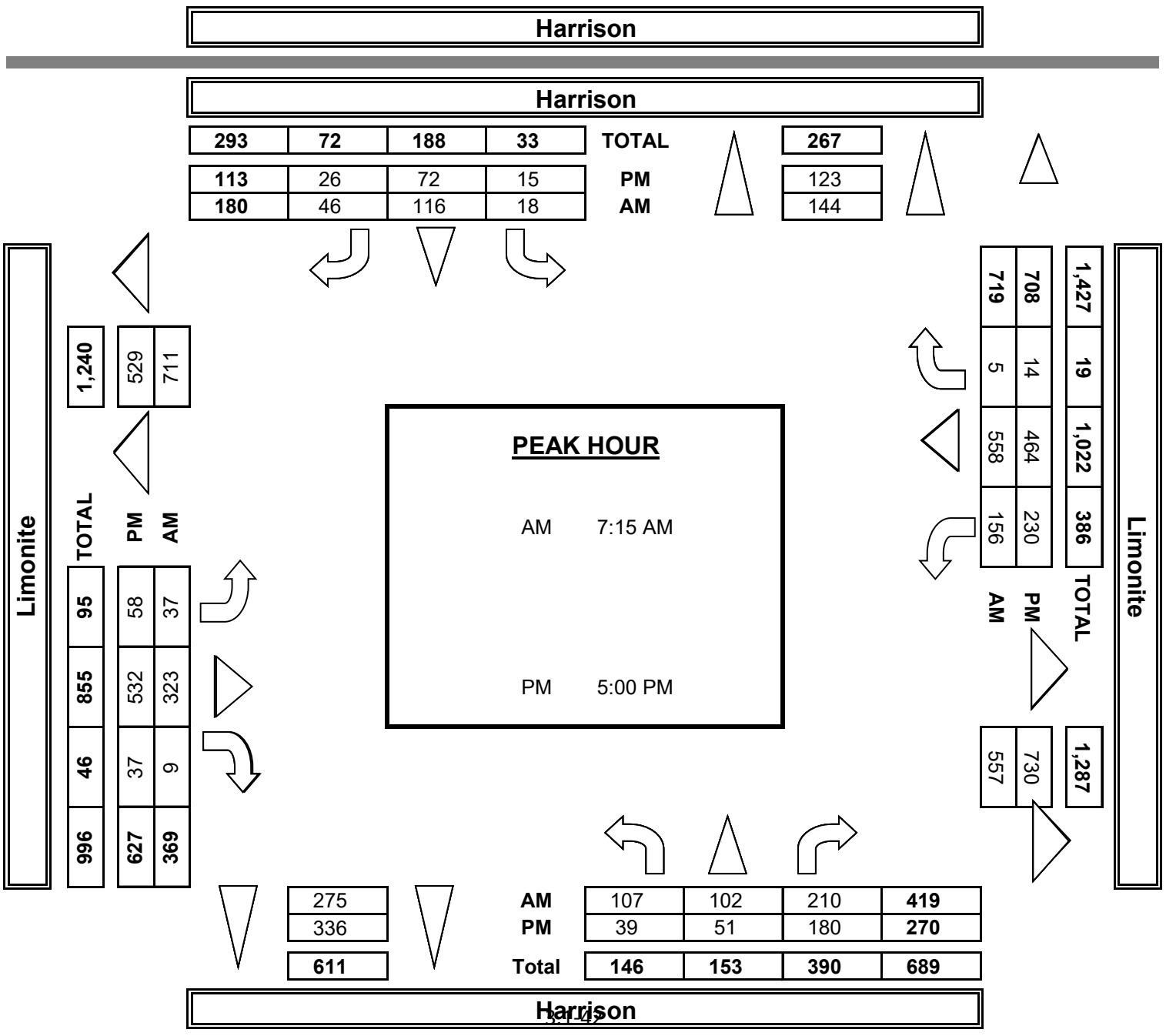


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	9	3	0	0	12	1	3	0	0	4	8	0	0	0	8
	7:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	7:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	1	2	1	4	0	1	2	0	3	0	0	0	1	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	11	4	2	1	18	2	4	2	0	8	9	0	0	1	10
PM	3:00 PM	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1
	3:15 PM	0	3	0	0	3	0	2	0	0	2	0	1	0	0	1
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	4:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	4:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	4:45 PM	0	1	1	1	3	0	0	0	0	0	0	1	1	1	3
	5:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:30 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	5:45 PM	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0
	TOTAL	0	8	5	3	16	0	5	2	2	9	0	3	3	1	7

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Harrison	LOCATION #:	12
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Harrison			SOUTHBOUND Harrison			EASTBOUND Limonite			WESTBOUND Limonite			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 3	ER 0	WL 1	WT 2	WR 1	TOTAL
7:00 AM	31	7	44	7	30	14	7	77	4	18	126	5	370
7:15 AM	24	25	58	4	33	11	8	79	1	38	142	1	424
7:30 AM	38	27	56	4	23	13	7	79	4	40	137	2	430
7:45 AM	23	20	47	2	25	9	7	71	1	33	134	1	373
8:00 AM	22	28	44	5	35	12	11	66	2	40	115	1	381
8:15 AM	18	18	38	2	12	9	10	76	1	15	87	3	289
8:30 AM	14	12	31	2	9	15	7	56	5	15	103	0	269
8:45 AM	13	8	28	3	4	9	4	72	0	21	84	1	247
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	183	145	346	29	171	92	61	576	18	220	928	14	2,783
APPROACH %	27%	22%	51%	10%	59%	32%	9%	88%	3%	19%	80%	1%	
APP/DEPART	674	/	218	292	/	401	655	/	959	1,162	/	1,205	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	107	100	205	15	116	45	33	295	8	149	528	5	1,608
APPROACH %	26%	24%	50%	9%	66%	26%	10%	88%	2%	22%	77%	1%	
PEAK HR FACTOR		0.851			0.846			0.933			0.945		0.935
APP/DEPART	412	/	138	176	/	273	336	/	517	684	/	680	0
03:00 PM	6	11	34	6	11	3	14	125	6	39	107	0	362
3:15 PM	7	11	34	4	7	3	11	129	6	51	111	2	376
3:30 PM	8	12	36	1	8	4	8	125	7	55	113	1	378
3:45 PM	5	14	40	3	10	9	10	122	5	48	120	1	387
4:00 PM	7	15	38	6	12	4	14	136	9	41	108	1	391
4:15 PM	8	7	35	5	7	6	10	112	4	54	116	0	364
4:30 PM	11	13	41	2	9	5	11	120	4	44	104	1	365
4:45 PM	4	17	36	1	8	8	5	125	8	57	120	0	389
5:00 PM	7	10	46	5	17	7	9	124	10	32	123	3	393
5:15 PM	12	13	45	3	13	8	13	164	10	70	109	3	463
5:30 PM	11	11	45	3	19	6	14	118	9	57	109	3	405
5:45 PM	9	16	40	3	22	4	21	113	8	68	113	3	420
VOLUMES	95	150	470	42	143	67	140	1,513	86	616	1,353	18	4,693
APPROACH %	13%	21%	66%	17%	57%	27%	8%	87%	5%	31%	68%	1%	
APP/DEPART	715	/	310	252	/	834	1,739	/	2,034	1,987	/	1,515	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	39	50	176	14	71	25	57	519	37	226	454	12	1,681
APPROACH %	15%	19%	66%	13%	65%	23%	9%	85%	6%	33%	66%	2%	
PEAK HR FACTOR		0.946			0.948			0.820			0.942		0.908
APP/DEPART	265	/	119	110	/	334	613	/	710	693	/	518	0

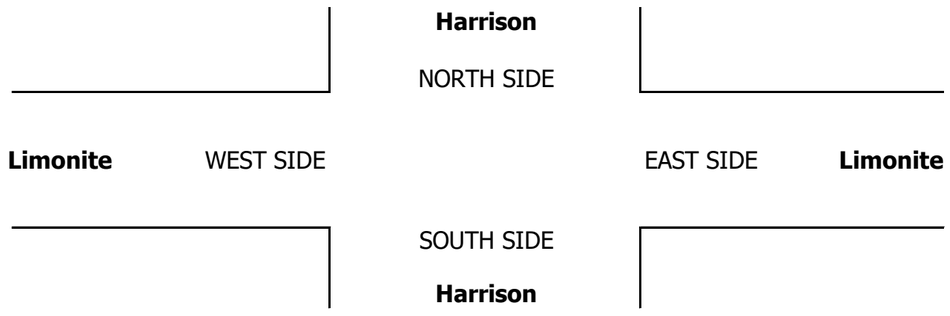
U-TURNS

NB	SB	EB	WB	TTL
0	0	0	2	2
0	0	0	0	0
0	0	0	0	0
0	0	0	2	2
0	0	0	0	0
0	0	0	3	3
0	0	1	1	2
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	2	8	10
0	1	0	1	2
0	0	0	2	2
0	0	0	3	3
0	0	0	1	1
0	0	0	0	0
0	1	0	0	1
0	0	0	1	1
0	0	0	2	2
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	2	0	11	13

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
7	3	2	2
26	4	1	0
18	6	0	1
20	4	0	1
22	2	1	0
10	1	0	0
12	6	0	0
11	3	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
126	29	4	4
13	1	0	0
12	1	1	0
10	2	1	0
15	4	0	0
15	2	1	0
14	2	0	0
12	3	0	0
13	2	1	0
13	6	2	0
12	5	1	1
20	4	4	2
19	2	2	0
168	34	13	3

86	16	2	2
64	17	9	3



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Harrison	LOCATION #:	12
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 2:	NOTES:
2-AXLE WORK VEHICLES/ TRUCKS	

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Harrison			SOUTHBOUND Harrison			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	0	1	3	0	1	2	1	

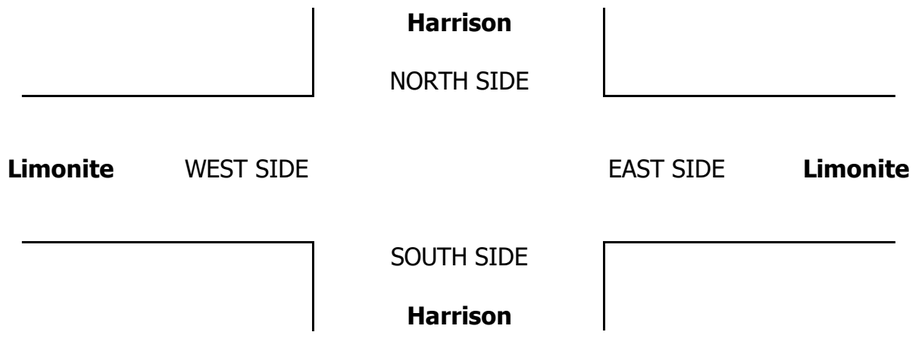
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	1	4	0	0	0	0	5	0	0	9	1	20	0	0	0	0	0	1	0	0	1
	7:15 AM	0	0	1	1	0	0	1	9	1	0	5	0	18	0	0	0	0	0	0	0	1	0
	7:30 AM	0	0	1	0	0	1	2	2	0	0	4	0	10	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	3	0	1	5	0	9	0	0	0	1	1	0	0	0	0
	8:00 AM	0	0	1	0	0	0	1	5	0	2	4	0	13	0	0	0	2	2	1	0	0	0
	8:15 AM	0	1	0	1	0	1	1	3	0	4	6	0	17	0	0	0	2	2	0	0	0	0
	8:30 AM	1	0	0	0	0	2	0	4	0	2	3	0	12	0	0	0	2	2	0	0	0	0
	8:45 AM	0	0	0	0	1	0	0	3	0	2	4	0	10	0	0	0	1	1	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	2	7	2	1	4	5	34	1	11	40	1	109	0	0	0	8	8	2	0	1	1
	APPROACH %	10%	20%	70%	29%	14%	57%	13%	85%	3%	21%	77%	2%										
	APP/DEPART	10	/	8	7	/	5	40	/	51	52	/	45	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	0	1	6	1	0	1	3	19	1	0	23	1	57						1	0	1	1
	APPROACH %	0%	14%	86%	50%	0%	50%	13%	83%	4%	0%	92%	4%										
	PEAK HR FACTOR		0.350			0.500			0.523			0.625		0.713									
	APP/DEPART	7	/	5	2	/	1	23	/	27	25	/	24	0									
PM	03:00 PM	0	1	0	0	0	0	0	1	0	0	3	0	5	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	1	0	0	1	0	0	5	0	7	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	1	0	3	0	0	3	0	7	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	1	0	0	0	0	2	0	0	1	0	4	0	0	0	0	0	1	0	0	0
	4:00 PM	0	0	0	0	1	1	1	10	0	0	3	0	16	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	2	0	0	1	3	0	6	0	0	0	0	0	0	0	0	0
	4:30 PM	0	1	2	0	0	0	0	5	0	0	2	0	10	0	0	0	0	0	1	0	0	0
	4:45 PM	0	0	1	0	0	0	0	2	0	0	2	0	5	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	2	0	0	0	0	4	0	0	3	0	9	0	0	0	0	0	2	0	0	0
	5:15 PM	0	0	1	0	0	0	0	2	0	1	1	0	5	0	0	0	0	0	0	0	0	0
	5:30 PM	0	1	0	0	0	1	0	2	0	0	0	1	5	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	1	1	0	1	1	0	0	0	1	5	0	0	0	0	0	0	0	0	0
	VOLUMES	0	3	7	1	3	3	4	33	0	2	26	2	84	0	0	0	0	0	4	0	0	0
	APPROACH %	0%	30%	70%	14%	43%	43%	11%	89%	0%	7%	87%	7%										
	APP/DEPART	10	/	9	7	/	5	37	/	41	30	/	29	0									
	BEGIN PEAK HR		4:00 PM																				
	VOLUMES	0	1	3	0	1	1	3	17	0	1	10	0	37						1	0	0	0
	APPROACH %	0%	25%	75%	0%	50%	50%	15%	85%	0%	9%	91%	0%										
	PEAK HR FACTOR		0.333			0.250			0.455			0.688		0.578									
	APP/DEPART	4	/	4	2	/	2	20	/	20	11	/	11	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:			
5/23/19 THURSDAY	LOCATION: Eastvale	PROJECT #:	SC2210
	NORTH & SOUTH: Harrison	LOCATION #:	12
	EAST & WEST: Limonite	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

N ▲ ◄ W E ► S ▼

		NORTHBOUND Harrison			SOUTHBOUND Harrison			EASTBOUND Limonite			WESTBOUND Limonite			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	1	1	1	1	0	1	3	0	1	2	1	
AM	7:00 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
AM	7:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
AM	7:45 AM	0	0	0	1	0	0	0	4	0	0	0	0	5
AM	8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
AM	8:15 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
AM	8:30 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
AM	8:45 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	1	0	2	2	0	0	6	0	0	12	0	23
AM	APPROACH %	0%	100%	0%	50%	50%	0%	0%	100%	0%	0%	100%	0%	
AM	APP/DEPART	1	/	1	4	/	2	6	/	8	12	/	12	0
AM	BEGIN PEAK HR		7:45 AM											
AM	VOLUMES	0	1	0	1	1	0	0	5	0	0	5	0	13
AM	APPROACH %	0%	100%	0%	50%	50%	0%	0%	100%	0%	0%	100%	0%	
AM	PEAK HR FACTOR		0.250			0.500			0.313			0.417		0.650
AM	APP/DEPART	1	/	1	2	/	1	5	/	6	5	/	5	0
PM	03:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
PM	3:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
PM	3:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	1	0	0	2	0	0	1	0	4
PM	4:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
PM	4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
PM	5:30 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
PM	5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
PM	VOLUMES	0	0	1	0	2	0	0	8	0	0	8	0	19
PM	APPROACH %	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%	
PM	APP/DEPART	1	/	0	2	/	2	8	/	9	8	/	8	0
PM	BEGIN PEAK HR		4:00 PM											
PM	VOLUMES	0	0	0	0	1	0	0	4	0	0	4	0	9
PM	APPROACH %	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	
PM	PEAK HR FACTOR		0.000			0.250			0.500			0.500		0.563
PM	APP/DEPART	0	/	0	1	/	1	4	/	4	4	/	4	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	1	0	0	0
VOLUMES	0	0	0	0	0	1	0	0	0
PEAK HR VOLUMES						0	0	0	0

Harrison

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

SOUTH SIDE

Harrison

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Harrison	LOCATION #:	12
THURSDAY	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Harrison			SOUTHBOUND Harrison			EASTBOUND Limonite			WESTBOUND Limonite				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
	LANES:	1	1	1	1	1	0	1	3	0	1	2	1							0	0	0	0
AM	7:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	1	0	0	4	0	5	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	1	0	0	0	0	3	0	0	4	0	8	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	3	0	0	1	0	4	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	1	0	0	0	0	10	0	0	17	0	28	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%										
	APP/DEPART	1	/	0	0	/	0	10	/	11	17	/	17	0									
	BEGIN PEAK HR		7:30 AM																				
	VOLUMES	0	0	1	0	0	0	0	5	0	0	13	0	19						0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%										
	PEAK HR FACTOR		0.250			0.000			0.417			0.813		0.594									
	APP/DEPART	1	/	0	0	/	0	5	/	6	13	/	13	0									
PM	03:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	8	0	0	6	0	14	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%										
	APP/DEPART	0	/	0	0	/	0	8	/	8	6	/	6	0									
	BEGIN PEAK HR		4:15 PM																				
	VOLUMES	0	0	0	0	0	0	0	5	0	0	1	0	6						0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%										
	PEAK HR FACTOR		0.000			0.000			0.625			0.250		0.500									
	APP/DEPART	0	/	0	0	/	0	5	/	5	1	/	1	0									

Harrison

NORTH SIDE

Limonite WEST SIDE

EAST SIDE **Limonite**

SOUTH SIDE

Harrison

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Harrison	LOCATION #:	12
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER

▲ N ▼ S ◄ W E ►

	NORTHBOUND Harrison			SOUTHBOUND Harrison			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	0	1	3	0	1	2	1	

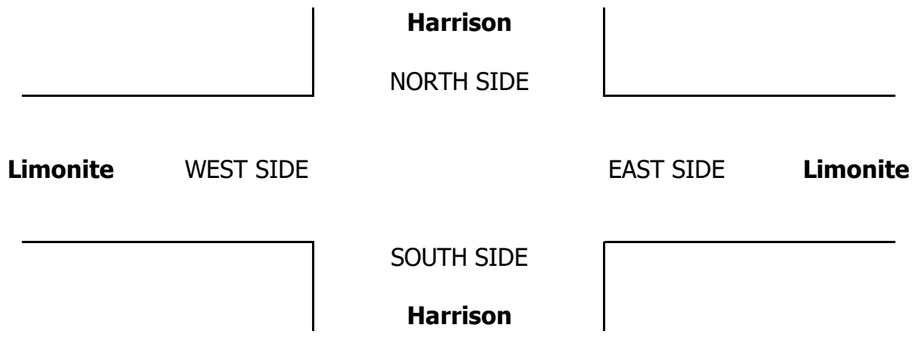
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%										
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0									
	BEGIN PEAK HR	7:00 AM																					
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0						0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%										
	PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000									
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0									
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%										
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0									
	BEGIN PEAK HR	3:00 PM																					
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0						0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%										
	PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000									
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Harrison	LOCATION #:	12
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 6:	NOTES:		
BUSES		AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼

		NORTHBOUND Harrison			SOUTHBOUND Harrison			EASTBOUND Limonite			WESTBOUND Limonite			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	1	1	1	1	0	1	3	0	1	2	1	
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
	7:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	1	0	0	0	0	0	0	1	2	0	5
	APPROACH %	0%	50%	50%	0%	0%	0%	0%	0%	0%	33%	67%	0%	
	APP/DEPART	2	/	1	0	/	1	0	/	1	3	/	2	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	1	1	0	0	0	0	0	0	1	1	0	4
	APPROACH %	0%	50%	50%	0%	0%	0%	0%	0%	0%	50%	50%	0%	
	PEAK HR FACTOR		0.250			0.000			0.000			0.500		0.500
	APP/DEPART	2	/	1	0	/	1	0	/	1	2	/	1	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0
	BEGIN PEAK HR		3:00 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.250		0.250
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Harrison

NORTH SIDE

Limonite WEST SIDE

EAST SIDE **Limonite**

SOUTH SIDE

Harrison

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 23, 19

LOCATION: Eastvale
NORTH & SOUTH: Sumner
EAST & WEST: Limonite

PROJECT #: SC2210
LOCATION #: 13
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W E ►
S ▼

☑ Add U-Turns to Left Turns

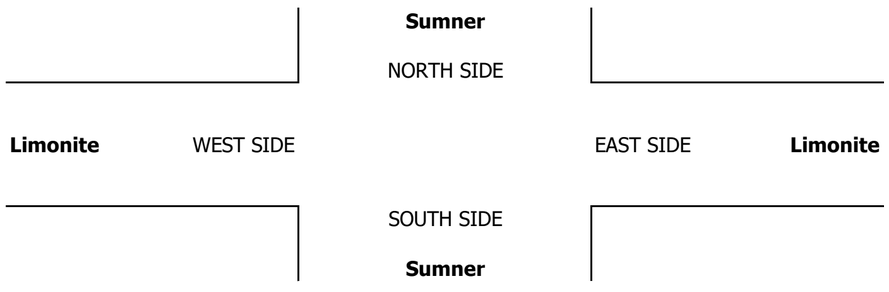
		NORTHBOUND Sumner			SOUTHBOUND Sumner			EASTBOUND Limonite			WESTBOUND Limonite			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 2	ET 3	ER 0	WL 2	WT 3	WR 1	TOTAL
AM	7:00 AM	25	101	26	24	70	20	49	91	2	28	120	4	560
	7:15 AM	24	102	29	11	102	41	61	99	7	21	109	10	616
	7:30 AM	33	110	45	16	49	44	56	82	7	18	119	9	588
	7:45 AM	36	101	38	28	34	26	58	99	3	13	104	13	553
	8:00 AM	31	93	31	34	53	26	38	77	6	29	101	16	535
	8:15 AM	21	81	43	25	40	23	42	110	5	26	84	10	510
	8:30 AM	14	84	29	11	30	16	31	69	4	29	84	12	413
	8:45 AM	17	55	36	15	24	22	33	83	6	20	71	11	393
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	201	727	277	164	402	218	368	710	40	184	792	85	4,168
	APPROACH %	17%	60%	23%	21%	51%	28%	33%	64%	4%	17%	75%	8%	
	APP/DEPART	1,205	/	1,179	784	/	590	1,118	/	1,186	1,061	/	1,213	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	118	414	138	79	255	131	224	371	19	80	452	36	2,317
	APPROACH %	18%	62%	21%	17%	55%	28%	36%	60%	3%	14%	80%	6%	
	PEAK HR FACTOR		0.891			0.755			0.919			0.934		0.940
	APP/DEPART	670	/	672	465	/	345	614	/	597	568	/	703	0
PM	03:00 PM	9	51	27	19	79	38	41	115	10	47	109	16	561
	3:15 PM	8	55	26	28	89	46	44	119	11	52	108	13	599
	3:30 PM	7	53	28	22	87	48	45	118	15	47	104	15	589
	3:45 PM	9	56	27	27	99	46	49	121	14	42	116	12	618
	4:00 PM	10	49	31	26	82	39	56	136	7	51	112	18	617
	4:15 PM	6	71	29	36	91	54	39	113	11	56	112	8	626
	4:30 PM	10	52	29	19	98	41	49	109	11	55	106	12	591
	4:45 PM	5	59	32	30	113	39	56	119	15	42	124	17	651
	5:00 PM	14	60	36	31	118	46	42	118	11	55	94	17	642
	5:15 PM	4	39	32	45	106	54	43	166	15	47	132	12	695
	5:30 PM	6	63	45	30	129	50	57	132	11	49	122	18	712
	5:45 PM	14	55	29	32	122	52	41	101	15	64	108	17	650
	VOLUMES	102	663	371	345	1,213	553	562	1,467	146	607	1,347	175	7,551
	APPROACH %	9%	58%	33%	16%	57%	26%	26%	67%	7%	29%	63%	8%	
	APP/DEPART	1,136	/	1,395	2,111	/	1,881	2,175	/	2,269	2,129	/	2,006	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	29	221	145	136	466	189	198	535	52	193	472	64	2,700
	APPROACH %	7%	56%	37%	17%	59%	24%	25%	68%	7%	26%	65%	9%	
	PEAK HR FACTOR		0.866			0.946			0.876			0.954		0.948
	APP/DEPART	395	/	478	791	/	679	785	/	849	729	/	694	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	
0	0	1	2	3
0	0	0	2	2
0	0	0	4	4
0	0	1	1	2
0	0	0	7	7
0	1	0	6	7
0	0	0	9	9
0	0	0	5	5
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	2	36	39
0	0	0	5	5
0	0	0	7	7
0	0	0	4	4
0	0	0	6	6
0	0	0	9	9
0	0	0	8	8
0	0	0	7	7
0	0	3	12	15
1	0	1	6	8
0	0	1	8	9
0	0	0	8	8
1	0	5	86	92

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
6	11	0	3
5	31	3	5
24	19	3	5
22	13	2	4
14	11	2	12
17	16	4	5
16	6	2	8
16	12	1	5
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
120	119	17	47
57	74	8	17
15	19	5	11
12	18	4	9
11	21	6	8
14	15	9	7
17	21	1	12
13	20	3	5
10	18	4	4
16	12	11	13
29	21	8	9
19	24	2	7
25	18	5	15
12	26	8	11
193	233	66	111
89	75	26	44



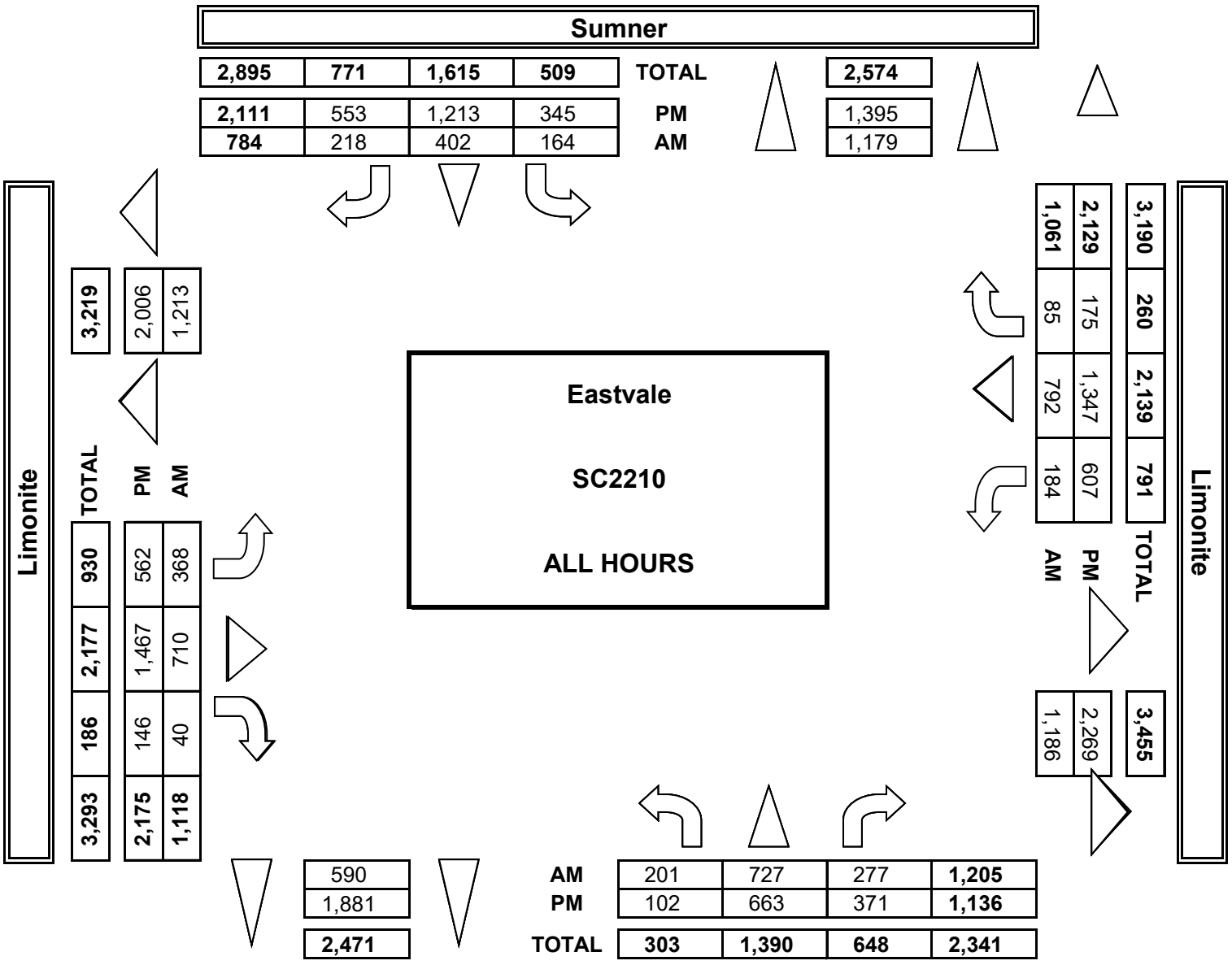
		ALL PED AND BIKE				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
AM	7:00 AM	0	0	2	0	2
	7:15 AM	1	0	0	0	1
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	0	0	0
	8:00 AM	1	0	2	0	3
	8:15 AM	0	1	0	1	2
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	2	1	4	1	8
PM	3:00 PM	1	0	1	1	3
	3:15 PM	1	0	1	1	3
	3:30 PM	0	0	0	0	0
	3:45 PM	0	0	0	0	0
	4:00 PM	1	0	0	0	1
	4:15 PM	0	0	1	2	3
	4:30 PM	2	0	1	1	4
	4:45 PM	1	0	0	1	2
	5:00 PM	2	0	1	1	4
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	1	0	0	0	1
	TOTAL	9	0	5	7	21

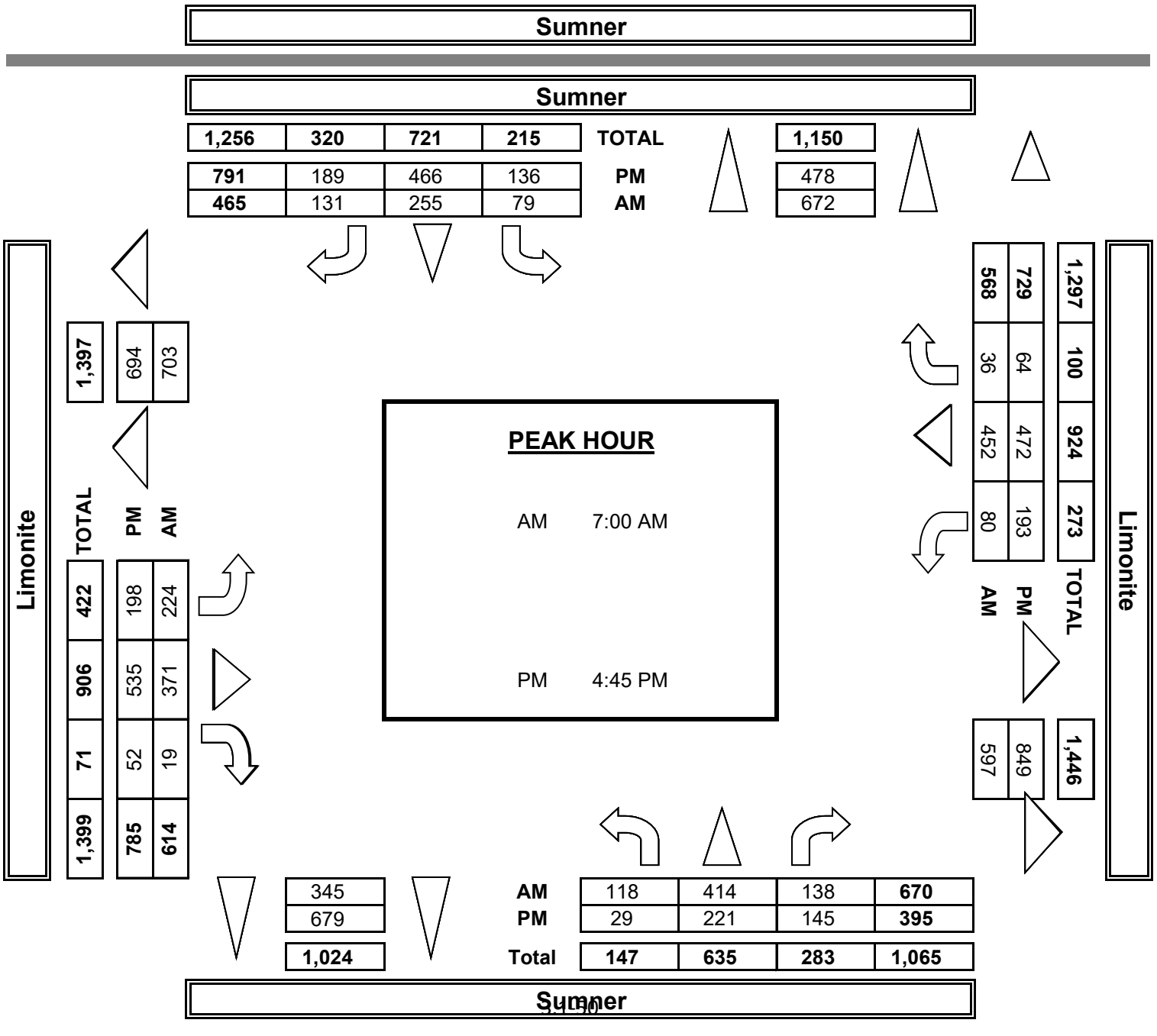
		PEDESTRIAN CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
AM	7:00 AM	0	0	1	0	1
	7:15 AM	1	0	0	0	1
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	2	0	2
	8:15 AM	0	1	0	0	1
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	1	1	3	0	5
PM	3:00 PM	0	0	1	1	2
	3:15 PM	1	0	0	1	2
	3:30 PM	0	0	0	0	0
	3:45 PM	0	0	0	0	0
	4:00 PM	1	0	0	0	1
	4:15 PM	0	0	1	2	3
	4:30 PM	1	0	0	1	2
	4:45 PM	1	0	0	0	1
	5:00 PM	2	0	0	1	3
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
	TOTAL	6	0	2	6	14

		BICYCLE CROSSINGS				
		ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	1	0	1
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	0	0	0
	8:00 AM	1	0	0	0	1
	8:15 AM	0	0	0	1	1
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	1	0	1	1	3
PM	3:00 PM	1	0	0	0	1
	3:15 PM	0	0	1	0	1
	3:30 PM	0	0	0	0	0
	3:45 PM	0	0	0	0	0
	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	1	0	1	0	2
	4:45 PM	0	0	0	1	1
	5:00 PM	0	0	1	0	1
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	1	0	0	0	1
	TOTAL	3	0	3	1	7

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Sumner	LOCATION #:	13
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

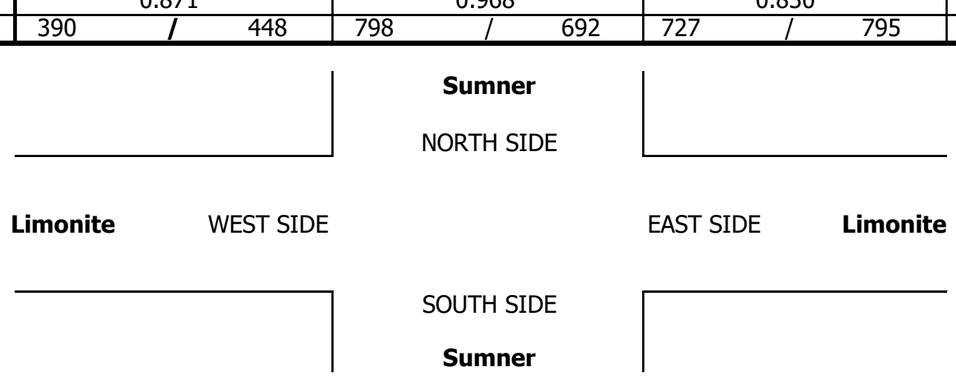
	NORTHBOUND Sumner			SOUTHBOUND Sumner			EASTBOUND Limonite			WESTBOUND Limonite			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 2	ET 3	ER 0	WL 2	WT 3	WR 1	TOTAL
7:00 AM	24	101	25	20	67	18	44	82	2	27	109	4	523
7:15 AM	24	100	29	11	100	41	55	90	7	19	106	10	592
7:30 AM	33	108	41	13	45	44	55	76	6	13	105	9	548
7:45 AM	36	97	38	26	32	23	57	91	3	9	94	12	518
8:00 AM	30	88	29	32	49	25	37	68	5	25	92	15	495
8:15 AM	21	81	38	24	38	18	39	104	5	24	71	10	473
8:30 AM	14	81	29	10	26	14	28	64	4	24	76	12	382
8:45 AM	17	49	29	15	21	19	32	71	5	16	62	9	345
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	199	705	258	151	378	202	347	646	37	157	715	81	3,876
APPROACH %	17%	61%	22%	21%	52%	28%	34%	63%	4%	16%	75%	8%	
APP/DEPART	1,162	/	1,133	731	/	550	1,030	/	1,076	953	/	1,117	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	117	406	133	70	244	126	210	339	18	63	414	35	2,181
APPROACH %	18%	62%	20%	16%	55%	29%	37%	60%	3%	12%	80%	7%	
PEAK HR FACTOR		0.901			0.724			0.934			0.923		0.921
APP/DEPART	656	/	651	440	/	325	568	/	547	517	/	658	0
03:00 PM	9	49	26	19	78	36	39	111	8	47	106	16	544
3:15 PM	7	53	23	28	87	46	42	115	11	51	106	12	581
3:30 PM	7	48	27	21	87	48	42	112	14	46	100	15	567
3:45 PM	9	53	26	25	97	46	47	117	14	42	112	12	600
4:00 PM	9	46	27	26	82	39	53	125	7	47	108	18	587
4:15 PM	6	62	25	36	90	52	37	110	9	51	106	8	592
4:30 PM	9	51	27	17	97	40	47	103	11	48	105	12	567
4:45 PM	5	56	32	29	109	37	52	118	14	38	120	16	626
5:00 PM	14	59	35	31	114	46	37	116	11	49	92	16	620
5:15 PM	4	39	32	44	101	54	42	162	15	44	129	12	678
5:30 PM	6	62	44	29	128	49	56	129	11	47	118	16	695
5:45 PM	13	53	29	29	121	52	41	94	13	58	106	17	626
VOLUMES	98	631	353	334	1,191	545	535	1,412	138	568	1,308	170	7,283
APPROACH %	9%	58%	33%	16%	58%	26%	26%	68%	7%	28%	64%	8%	
APP/DEPART	1,082	/	1,334	2,070	/	1,840	2,085	/	2,157	2,046	/	1,952	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	36	213	140	133	464	201	174	501	50	177	445	61	2,619
APPROACH %	9%	55%	36%	17%	58%	25%	24%	69%	7%	25%	63%	9%	
PEAK HR FACTOR		0.871			0.968			0.830			0.951		0.942
APP/DEPART	390	/	448	798	/	692	727	/	795	704	/	684	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	2	2
0	0	0	2	2
0	0	0	1	1
0	0	1	0	1
0	0	0	4	4
0	1	0	5	6
0	0	0	6	6
0	0	0	2	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	1	22	24
0	0	0	5	5
0	0	0	7	7
0	0	0	6	6
0	0	0	4	4
0	0	0	3	3
0	0	0	6	6
0	0	0	3	3
0	0	0	3	3
0	0	1	8	9
1	0	0	3	4
0	0	1	7	8
0	0	0	3	3
1	0	2	58	61

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
5	11	0	3
5	31	3	5
23	19	3	5
22	12	2	3
13	10	1	11
17	12	4	5
16	4	2	8
14	11	1	4
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
115	110	16	44
55	73	8	16
14	18	4	11
10	18	4	9
10	21	6	8
14	15	9	7
14	21	1	12
12	19	2	5
10	17	4	4
16	11	11	13
28	21	8	9
19	24	2	7
25	17	5	13
12	26	8	11
184	228	64	109
84	88	23	40



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Sumner	LOCATION #:	13
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 2:	NOTES:
2-AXLE WORK VEHICLES/ TRUCKS	

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

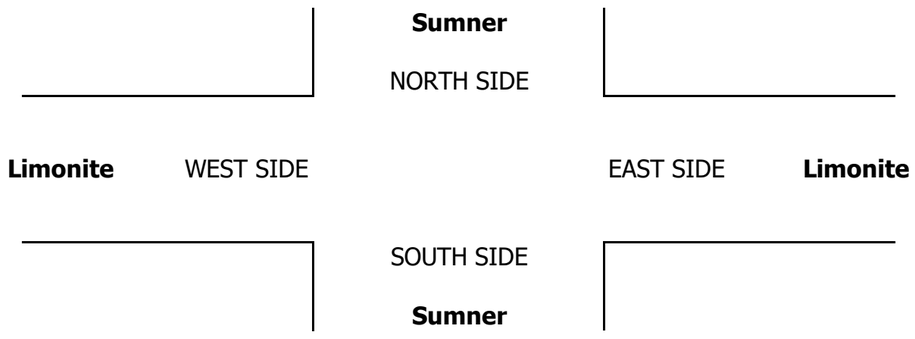
	NORTHBOUND Sumner			SOUTHBOUND Sumner			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	2	3	0	2	3	1	
7:00 AM	0	0	1	4	3	2	2	7	0	0	8	0	27
7:15 AM	0	1	0	0	2	0	5	8	0	0	2	0	18
7:30 AM	0	1	2	3	4	0	1	3	0	3	7	0	24
7:45 AM	0	4	0	2	1	3	1	5	0	2	6	1	25
8:00 AM	1	4	2	0	3	1	1	6	1	0	6	1	26
8:15 AM	0	0	4	1	2	3	3	5	0	1	8	0	27
8:30 AM	0	3	0	1	3	1	2	2	0	1	5	0	18
8:45 AM	0	3	5	0	2	3	1	11	1	3	6	1	36
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	16	14	11	20	13	16	47	2	10	48	3	201
APPROACH %	3%	52%	45%	25%	45%	30%	25%	72%	3%	16%	79%	5%	
APP/DEPART	31	/	35	44	/	29	65	/	75	61	/	62	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	1	10	11	2	10	8	7	24	2	3	25	2	107
APPROACH %	5%	45%	50%	10%	50%	40%	21%	73%	6%	9%	78%	6%	
PEAK HR FACTOR		0.688			0.833			0.635			0.800		0.743
APP/DEPART	22	/	19	20	/	15	33	/	39	32	/	34	0
03:00 PM	0	2	1	0	1	1	1	2	2	0	1	0	11
3:15 PM	1	2	3	0	2	0	2	3	0	1	1	1	16
3:30 PM	0	5	1	1	0	0	3	4	1	1	2	0	18
3:45 PM	0	3	1	2	2	0	2	3	0	0	4	0	17
4:00 PM	1	3	3	0	0	0	3	9	0	1	2	0	22
4:15 PM	0	8	4	0	1	1	1	2	2	2	5	0	26
4:30 PM	1	1	2	2	1	1	2	3	0	2	1	0	16
4:45 PM	0	3	0	1	3	2	4	1	1	0	3	1	19
5:00 PM	0	1	1	0	4	0	3	2	0	2	2	0	15
5:15 PM	0	0	0	1	5	0	0	3	0	0	2	0	11
5:30 PM	0	0	1	1	0	0	1	3	0	1	2	2	11
5:45 PM	1	2	0	3	0	0	0	3	2	1	1	0	13
VOLUMES	4	30	17	11	19	5	22	38	8	11	26	4	195
APPROACH %	8%	59%	33%	31%	54%	14%	32%	56%	12%	27%	63%	10%	
APP/DEPART	51	/	55	35	/	37	68	/	67	41	/	36	0
BEGIN PEAK HR		3:30 PM											
VOLUMES	2	15	9	3	5	4	10	15	3	5	11	1	83
APPROACH %	8%	58%	35%	25%	42%	33%	36%	54%	11%	29%	65%	6%	
PEAK HR FACTOR		0.542			0.500			0.583			0.607		0.798
APP/DEPART	26	/	26	12	/	13	28	/	27	17	/	17	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	2	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	3	3
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	1	1	2

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
1	0	0	0
0	0	0	0
1	0	0	0
0	1	0	1
1	1	1	1
0	2	0	0
0	1	0	0
1	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
4	6	1	2
2	5	1	1
1	1	1	0
2	0	0	0
1	0	0	0
0	0	0	0
2	0	0	0
1	1	1	0
0	1	0	0
0	1	0	0
1	0	0	0
0	0	0	0
0	0	0	2
0	0	0	0
8	4	2	2
3	3	1	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION: Eastvale		PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH: Sumner		LOCATION #:	13
	EAST & WEST: Limonite		CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Sumner			SOUTHBOUND Sumner			EASTBOUND Limonite			WESTBOUND Limonite				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
	LANES:	1	2	0	1	2	0	2	3	0	2	3	1							0	0	0	0
AM	7:00 AM	0	0	0	0	0	0	1	1	0	0	1	0	3	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	1	0	0	0	0	1	1	0	3	0	6	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	2	0	1	1	0	4	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	0	0	1	0	0	2	0	0	0	0	4	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	1	0	1	0	0	3	0	5	0	0	0	0	0	0	1	0	0
	8:30 AM	0	0	0	0	1	1	0	1	0	0	2	0	5	0	0	0	0	0	0	1	0	0
	8:45 AM	0	1	2	0	0	0	0	0	0	0	2	0	5	0	0	0	0	0	1	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	3	0	2	2	2	9	1	1	12	0	34	0	0	0	0	0	1	2	0	0
	APPROACH %	0%	40%	60%	0%	50%	50%	17%	75%	8%	8%	92%	0%										
	APP/DEPART	5	/	4	4	/	4	12	/	12	13	/	14	0									
	BEGIN PEAK HR		7:30 AM																				
	VOLUMES	0	2	2	0	2	2	0	4	0	0	7	0	19						1	2	0	0
	APPROACH %	0%	50%	50%	0%	50%	50%	0%	100%	0%	0%	100%	0%										
	PEAK HR FACTOR		0.333			0.500			0.500			0.583		0.792									
	APP/DEPART	4	/	2	4	/	2	4	/	6	7	/	9	0									
PM	03:00 PM	0	0	0	0	0	1	1	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	5:30 PM	0	1	0	0	0	1	0	0	0	0	1	0	3	0	0	0	0	0	0	1	0	0
	5:45 PM	0	0	0	0	1	0	0	4	0	0	0	0	5	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	2	3	2	9	0	0	7	1	25	0	0	0	0	0	0	1	0	0
	APPROACH %	0%	100%	0%	0%	40%	60%	18%	82%	0%	0%	88%	13%										
	APP/DEPART	1	/	4	5	/	2	11	/	9	8	/	10	0									
	BEGIN PEAK HR		5:00 PM																				
	VOLUMES	0	1	0	0	1	1	0	5	0	0	1	1	10						0	1	0	0
	APPROACH %	0%	100%	0%	0%	50%	50%	0%	100%	0%	0%	50%	50%										
	PEAK HR FACTOR		0.250			0.500			0.313			0.500		0.500									
	APP/DEPART	1	/	2	2	/	1	5	/	5	2	/	2	0									

Sumner

NORTH SIDE

Limonite WEST SIDE

EAST SIDE **Limonite**

SOUTH SIDE

Sumner

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Sumner	LOCATION #:	13
THURSDAY	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Sumner			SOUTHBOUND Sumner			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	2	3	0	2	3	1	
AM 7:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
7:15 AM	0	1	0	0	0	0	0	0	0	2	1	0	4
7:30 AM	0	0	0	0	0	0	0	2	0	0	3	0	5
7:45 AM	0	0	0	0	1	0	0	1	0	0	3	0	5
8:00 AM	0	0	0	2	0	0	0	1	0	0	3	0	6
8:15 AM	0	0	1	0	0	0	0	0	0	0	2	0	3
8:30 AM	0	0	0	0	0	0	1	2	0	1	1	0	5
8:45 AM	0	2	0	0	1	0	0	1	0	0	1	1	6
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	3	1	2	2	0	1	8	0	3	16	1	37
APPROACH %	0%	75%	25%	50%	50%	0%	11%	89%	0%	15%	80%	5%	
APP/DEPART	4	/	5	4	/	5	9	/	11	20	/	16	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	0	2	1	2	1	0	1	4	0	1	7	1	20
APPROACH %	0%	67%	33%	67%	33%	0%	20%	80%	0%	11%	78%	11%	
PEAK HR FACTOR		0.375			0.375			0.417			0.750		0.833
APP/DEPART	3	/	4	3	/	2	5	/	7	9	/	7	0
PM 03:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
3:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	1	0	0	0	0	0	1	0	0	1	0	3
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	1	1	0	2
VOLUMES	0	1	0	0	1	0	1	8	0	1	6	0	18
APPROACH %	0%	100%	0%	0%	100%	0%	11%	89%	0%	14%	86%	0%	
APP/DEPART	1	/	2	1	/	2	9	/	8	7	/	6	0
BEGIN PEAK HR		3:30 PM											
VOLUMES	0	1	0	0	0	0	0	5	0	0	2	0	8
APPROACH %	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.250			0.000			0.625			0.500		0.667
APP/DEPART	1	/	1	0	/	0	5	/	5	2	/	2	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	1
PEAK HR VOLUMES						0	0	0	1
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0

Sumner

NORTH SIDE

Limonite WEST SIDE

EAST SIDE **Limonite**

SOUTH SIDE

Sumner

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Sumner	LOCATION #:	13
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 5:	NOTES:
RV	

AM ▲ N
PM ◄ W E ►
MD S ▼
OTHER
OTHER

	NORTHBOUND Sumner			SOUTHBOUND Sumner			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	2	3	0	2	3	1	

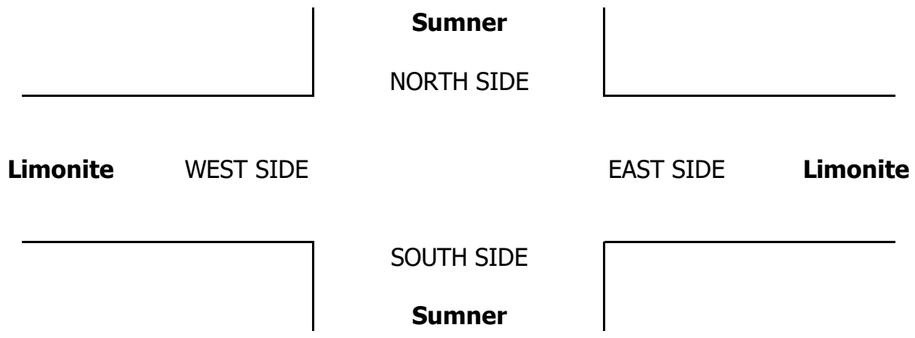
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%										
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0									
	BEGIN PEAK HR	7:00 AM																					
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0						0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%										
	PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000									
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0									
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%										
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0									
	BEGIN PEAK HR	3:00 PM																					
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0						0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%										
	PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000									
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Sumner	LOCATION #:	13
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

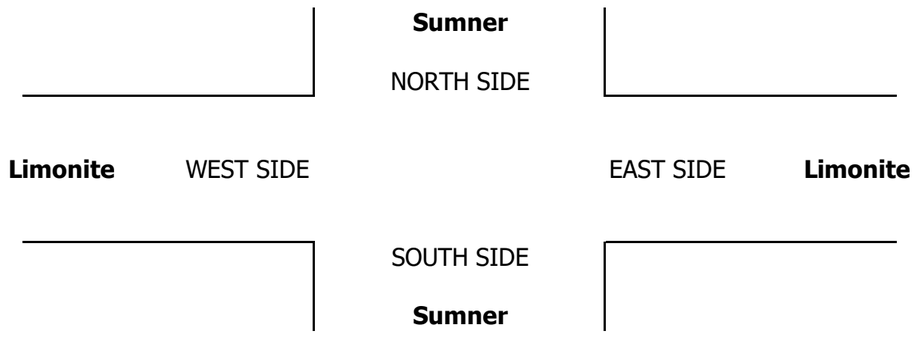
AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Sumner			SOUTHBOUND Sumner			EASTBOUND Limonite			WESTBOUND Limonite			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	0	1	2	0	2	3	0	2	3	1	
AM	7:00 AM	1	0	0	0	0	0	1	0	0	1	0	0	3
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	1	1	0	0	0	0	0	0	1	1	0	4
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
	8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	1	1	0	0	1	1	0	0	3	1	0	9
	APPROACH %	33%	33%	33%	0%	0%	100%	100%	0%	0%	75%	25%	0%	
	APP/DEPART	3	/	2	1	/	2	1	/	2	4	/	3	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	1	1	1	0	0	0	1	0	0	1	1	0	7
	APPROACH %	33%	33%	33%	0%	0%	0%	100%	0%	0%	33%	33%	0%	
	PEAK HR FACTOR		0.375			0.000			0.250			0.375		0.438
	APP/DEPART	3	/	2	0	/	1	1	/	2	3	/	2	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	1	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	1	/	0	0	/	0	0	/	1	0	/	0	0
	BEGIN PEAK HR		3:15 PM											
	VOLUMES	0	0	1	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
	APP/DEPART	1	/	0	0	/	0	0	/	1	0	/	0	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

T816

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 23, 19

LOCATION: Eastvale
NORTH & SOUTH: Scholar
EAST & WEST: Limonite

PROJECT #: SC2210
LOCATION #: 14
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►

☑ Add U-Turns to Left Turns

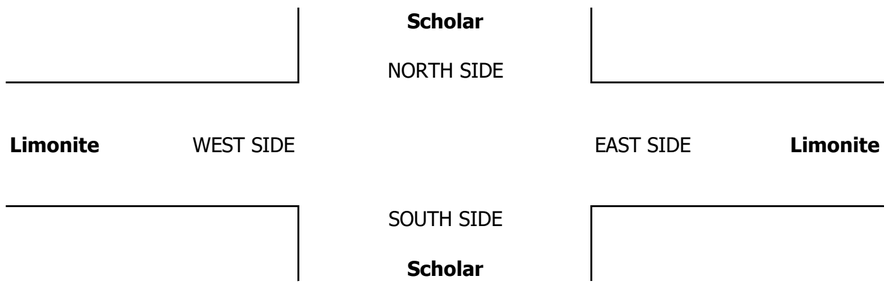
		NORTHBOUND Scholar			SOUTHBOUND Scholar			EASTBOUND Limonite			WESTBOUND Limonite			
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL
AM	7:00 AM	9	28	28	15	36	7	4	136	10	13	123	2	411
	7:15 AM	15	28	26	16	49	12	9	116	9	17	101	5	403
	7:30 AM	21	37	22	18	23	6	11	139	4	8	111	6	406
	7:45 AM	20	40	24	13	45	11	15	137	15	18	99	13	450
	8:00 AM	16	33	26	14	77	3	5	126	27	14	128	8	477
	8:15 AM	26	58	24	7	48	10	6	167	15	13	81	7	462
	8:30 AM	22	35	32	10	14	4	6	116	4	15	107	7	372
	8:45 AM	6	20	19	5	9	7	8	122	4	12	97	5	314
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	135	279	201	98	301	60	64	1,059	88	110	847	53	3,295
	APPROACH %	22%	45%	33%	21%	66%	13%	5%	87%	7%	11%	84%	5%	
	APP/DEPART	615	/	390	459	/	498	1,211	/	1,359	1,010	/	1,048	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	83	168	96	52	193	30	37	569	61	53	419	34	1,795
	APPROACH %	24%	48%	28%	19%	70%	11%	6%	85%	9%	10%	83%	7%	
	PEAK HR FACTOR		0.803			0.731			0.887			0.843		0.941
	APP/DEPART	347	/	236	275	/	307	667	/	717	506	/	535	0
PM	03:00 PM	7	16	15	5	16	5	6	159	9	16	139	9	402
	3:15 PM	9	15	19	4	20	7	4	178	8	18	154	9	445
	3:30 PM	10	19	23	8	19	4	6	170	10	21	155	9	454
	3:45 PM	8	17	15	5	21	6	7	172	7	25	163	12	458
	4:00 PM	13	20	19	8	16	9	5	193	8	23	164	16	494
	4:15 PM	9	18	23	6	26	4	10	164	11	30	150	13	464
	4:30 PM	8	16	26	6	23	4	4	149	11	34	156	10	447
	4:45 PM	10	14	23	12	27	8	4	168	9	27	165	14	481
	5:00 PM	12	28	18	12	43	6	11	173	6	25	160	14	508
	5:15 PM	10	12	35	15	35	6	5	203	20	32	172	14	559
	5:30 PM	10	11	25	17	35	10	5	206	11	37	170	17	554
	5:45 PM	9	19	24	7	28	12	12	164	11	37	167	22	512
	VOLUMES	115	205	265	105	309	81	79	2,099	121	325	1,915	159	5,778
	APPROACH %	20%	35%	45%	21%	62%	16%	3%	91%	5%	14%	80%	7%	
	APP/DEPART	585	/	436	495	/	754	2,299	/	2,470	2,399	/	2,118	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	41	70	102	51	141	34	33	746	48	131	669	67	2,133
	APPROACH %	19%	33%	48%	23%	62%	15%	4%	90%	6%	15%	77%	8%	
	PEAK HR FACTOR		0.918			0.911			0.907			0.959		0.954
	APP/DEPART	213	/	165	226	/	319	827	/	900	867	/	749	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	1	0	1
0	0	2	0	2
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	2	1	3
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	6	1	7
0	0	1	0	1
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	2	0	2
0	0	1	0	1
0	0	0	0	0
0	0	2	1	3
0	0	7	1	8
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
18	1	4	1
14	0	3	5
10	0	2	1
10	1	6	5
16	0	6	2
6	0	5	2
16	0	1	4
13	2	2	2
0	0	0	0
0	0	0	0
0	0	0	0
103	4	29	22
42	1	19	10
8	1	2	2
10	2	2	1
12	1	3	2
8	1	2	2
13	2	2	2
13	1	2	5
14	1	2	3
11	3	3	1
8	2	2	5
15	1	10	1
18	2	2	3
14	0	2	1
144	17	34	28
55	5	16	10



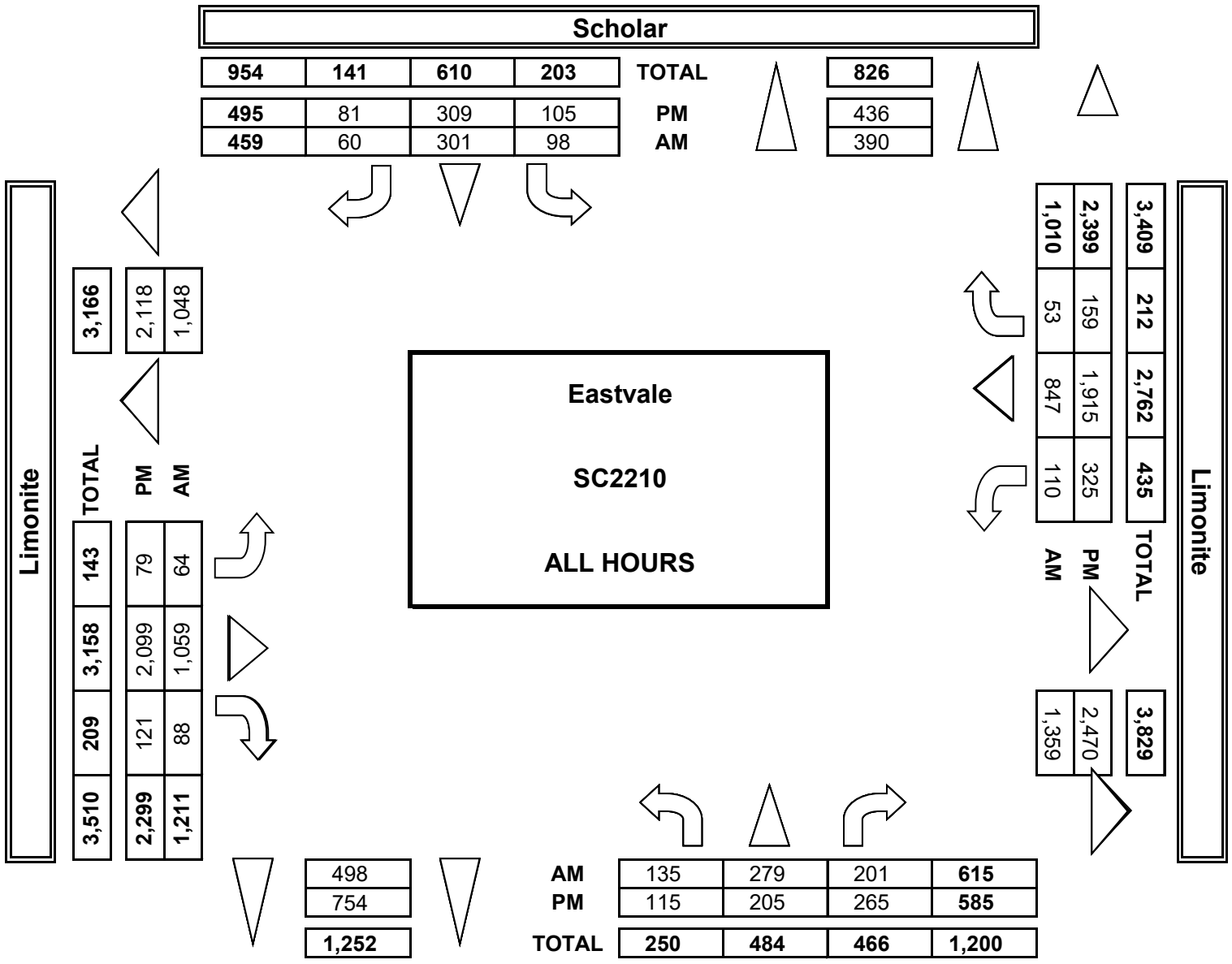
		ALL PED AND BIKE				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
AM	7:00 AM	0	7	1	0	8
	7:15 AM	0	3	1	0	4
	7:30 AM	0	2	0	0	2
	7:45 AM	0	1	0	0	1
	8:00 AM	0	9	2	0	11
	8:15 AM	1	4	1	1	7
	8:30 AM	0	3	0	0	3
	8:45 AM	0	1	0	0	1
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	1	30	5	1	37
PM	3:00 PM	0	2	1	1	4
	3:15 PM	1	2	2	0	5
	3:30 PM	0	1	2	1	4
	3:45 PM	0	0	0	0	0
	4:00 PM	0	2	2	0	4
	4:15 PM	1	1	0	0	2
	4:30 PM	0	0	2	0	2
	4:45 PM	0	2	1	0	3
	5:00 PM	0	2	1	2	5
	5:15 PM	0	3	4	0	7
	5:30 PM	0	0	0	0	0
	5:45 PM	0	4	1	0	5
	TOTAL	2	19	16	4	41

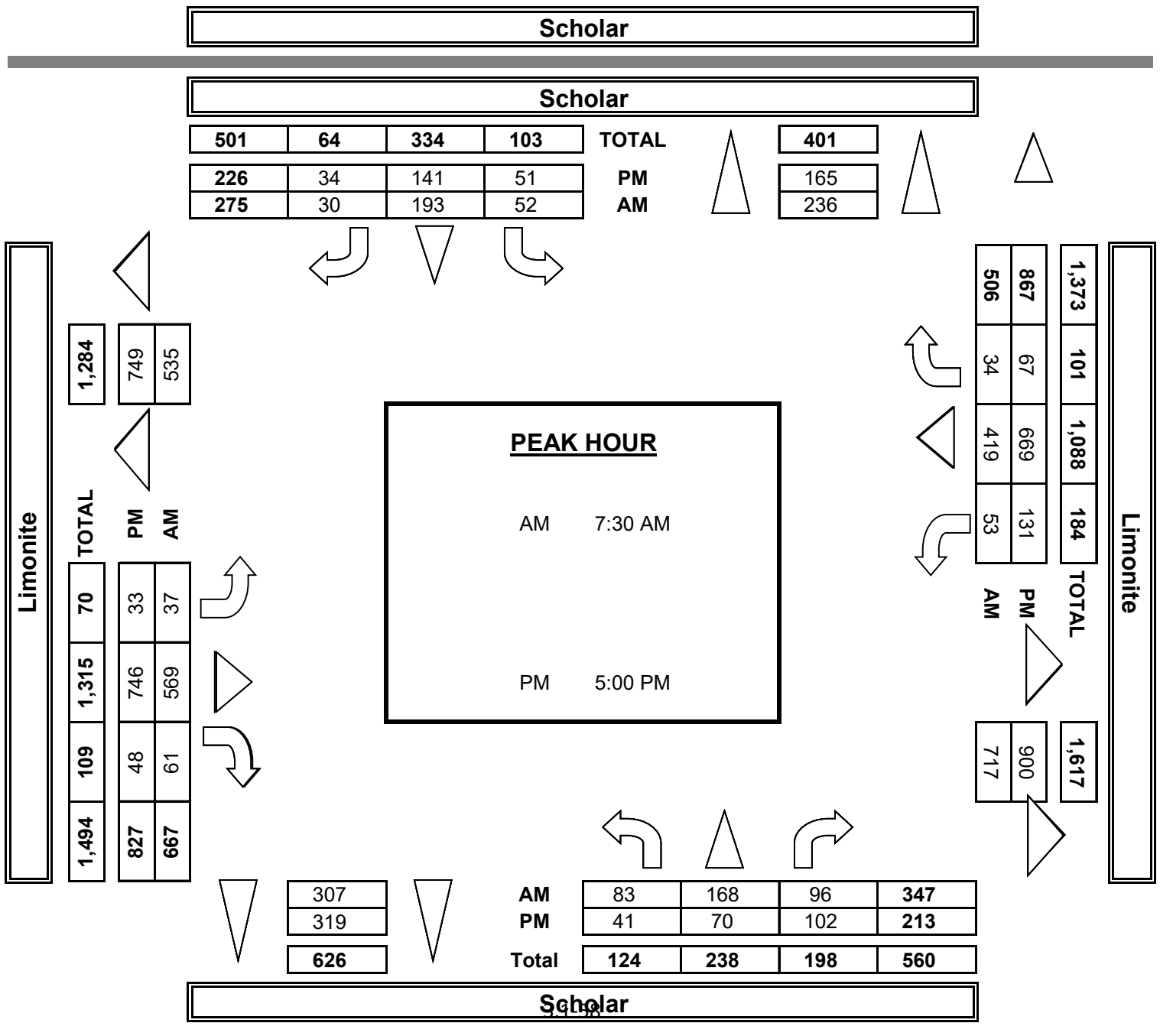
		PEDESTRIAN CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
AM	7:00 AM	0	4	0	0	4
	7:15 AM	0	1	0	0	1
	7:30 AM	0	1	0	0	1
	7:45 AM	0	0	0	0	0
	8:00 AM	0	6	2	0	8
	8:15 AM	0	1	1	1	3
	8:30 AM	0	2	0	0	2
	8:45 AM	0	1	0	0	1
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	0	16	3	1	20
PM	3:00 PM	0	2	0	1	3
	3:15 PM	1	1	2	0	4
	3:30 PM	0	1	1	1	3
	3:45 PM	0	0	0	0	0
	4:00 PM	0	1	2	0	3
	4:15 PM	1	1	0	0	2
	4:30 PM	0	0	0	0	0
	4:45 PM	0	1	1	0	2
	5:00 PM	0	2	1	2	5
	5:15 PM	0	3	4	0	7
	5:30 PM	0	0	0	0	0
	5:45 PM	0	2	0	0	2
	TOTAL	2	14	11	4	31

		BICYCLE CROSSINGS				
		ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	3	1	0	4
	7:15 AM	0	2	1	0	3
	7:30 AM	0	1	0	0	1
	7:45 AM	0	1	0	0	1
	8:00 AM	0	3	0	0	3
	8:15 AM	1	3	0	0	4
	8:30 AM	0	1	0	0	1
	8:45 AM	0	0	0	0	0
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	1	14	2	0	17
PM	3:00 PM	0	0	1	0	1
	3:15 PM	0	1	0	0	1
	3:30 PM	0	0	1	0	1
	3:45 PM	0	0	0	0	0
	4:00 PM	0	1	0	0	1
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	2	0	2
	4:45 PM	0	1	0	0	1
	5:00 PM	0	0	0	0	0
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	0	2	1	0	3
	TOTAL	0	5	5	0	10

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Scholar	LOCATION #:	14
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ | ◄ W | E ► | S ▼

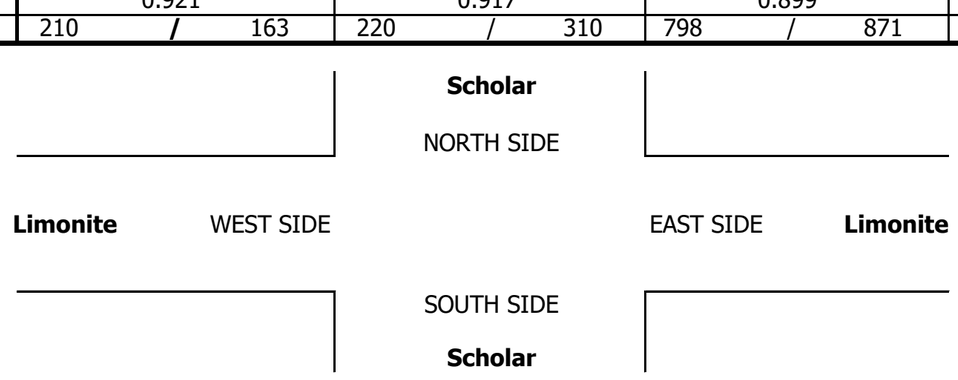
	NORTHBOUND Scholar			SOUTHBOUND Scholar			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	1	1	2	1	1	2	1	
7:00 AM	9	28	27	15	35	6	4	123	9	12	111	2	381
7:15 AM	14	28	24	16	49	12	8	109	8	16	93	5	382
7:30 AM	20	37	21	18	22	6	11	131	2	7	97	6	378
7:45 AM	19	39	22	12	42	11	14	126	15	18	88	13	419
8:00 AM	16	32	26	14	75	3	5	113	27	11	115	8	445
8:15 AM	24	58	22	7	47	9	6	154	15	13	67	6	428
8:30 AM	22	35	30	10	14	4	5	109	4	13	95	7	348
8:45 AM	6	20	17	5	6	6	7	113	3	11	82	5	281
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	130	277	189	97	290	57	60	978	83	101	748	52	3,062
APPROACH %	22%	46%	32%	22%	65%	13%	5%	87%	7%	11%	83%	6%	
APP/DEPART	596	/	384	444	/	474	1,121	/	1,264	901	/	940	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	79	166	91	51	186	29	33	524	59	49	367	33	1,670
APPROACH %	24%	49%	27%	19%	70%	11%	5%	85%	10%	11%	82%	7%	
PEAK HR FACTOR		0.808			0.723			0.884			0.838		0.938
APP/DEPART	336	/	232	266	/	294	619	/	666	449	/	478	0
03:00 PM	7	16	14	5	15	5	5	153	9	15	136	9	389
3:15 PM	9	14	19	2	20	7	4	172	7	18	149	9	430
3:30 PM	9	19	19	7	18	4	5	163	10	20	149	8	431
3:45 PM	8	17	15	4	20	6	7	166	7	25	160	12	447
4:00 PM	13	20	18	8	16	9	4	187	7	23	159	16	480
4:15 PM	9	18	23	5	26	4	9	157	11	30	144	13	449
4:30 PM	8	16	24	6	23	4	4	141	10	33	154	10	433
4:45 PM	8	14	21	12	27	8	4	164	9	27	159	14	467
5:00 PM	10	28	18	12	42	6	11	165	6	24	155	14	491
5:15 PM	10	12	35	14	35	6	5	197	20	31	167	14	546
5:30 PM	9	11	25	17	32	10	5	201	11	35	163	17	536
5:45 PM	9	19	24	7	27	12	11	155	11	37	165	21	498
VOLUMES	109	204	255	99	301	81	74	2,021	118	318	1,860	157	5,597
APPROACH %	19%	36%	45%	21%	63%	17%	3%	91%	5%	14%	80%	7%	
APP/DEPART	568	/	428	481	/	736	2,213	/	2,376	2,335	/	2,057	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	38	70	102	50	136	34	27	718	48	126	650	66	2,071
APPROACH %	18%	33%	49%	23%	62%	15%	3%	90%	6%	15%	77%	8%	
PEAK HR FACTOR		0.921			0.917			0.899			0.945		0.948
APP/DEPART	210	/	163	220	/	310	798	/	871	843	/	727	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	2	0	2
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	2	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	5	0	5
0	0	1	0	1
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	2	0	2
0	0	1	0	1
0	0	0	0	0
0	0	2	1	3
0	0	7	1	8

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
17	1	4	1
12	0	3	5
9	0	1	1
10	1	6	5
16	0	6	2
6	0	5	1
14	0	1	4
13	1	2	2
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
97	3	28	21
41	1	18	9
8	1	2	2
10	2	2	1
12	1	3	2
8	1	2	2
13	2	1	2
13	1	2	5
13	1	2	3
11	3	3	1
8	2	2	5
15	1	10	1
18	2	2	3
14	0	2	1
143	17	33	28
55	5	16	10



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Scholar	LOCATION #:	14
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 2:	NOTES:
2-AXLE WORK VEHICLES/ TRUCKS	

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Scholar			SOUTHBOUND Scholar			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	1	1	2	1	1	2	1	

U-TURNS

NB	SB	EB	WB	TTL

RTOR

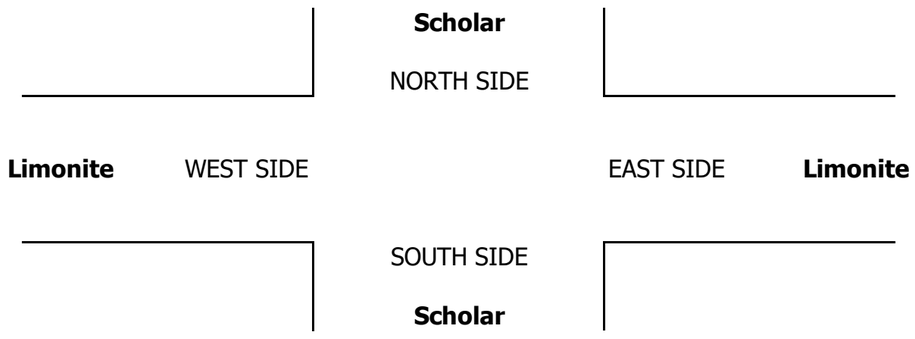
NRR	SRR	ERR	WRR
0	0	0	0

AM

7:00 AM	0	0	1	0	1	0	0	11	0	0	10	0	23	0 0 0 0 0	1 0 0 0
7:15 AM	0	0	2	0	0	0	1	6	1	0	5	0	15	0 0 1 0 1	2 0 0 0
7:30 AM	0	0	1	0	0	0	0	6	2	1	7	0	17	0 0 0 0 0	1 0 1 0
7:45 AM	1	1	2	0	2	0	1	7	0	0	8	0	22	0 0 0 0 0	0 0 0 0
8:00 AM	0	1	0	0	1	0	0	6	0	1	7	0	16	0 0 0 0 0	0 0 0 0
8:15 AM	2	0	2	0	1	1	0	9	0	0	8	1	24	0 0 0 0 0	0 0 0 1
8:30 AM	0	0	1	0	0	0	1	4	0	1	8	0	15	0 0 0 0 0	1 0 0 0
8:45 AM	0	0	0	0	2	0	1	8	0	1	11	0	23	0 0 0 1 1	0 0 0 0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0 0 0 0	0 0 0 0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0 0 0 0	0 0 0 0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0 0 0 0	0 0 0 0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0 0 0 0	0 0 0 0
VOLUMES	3	2	9	0	7	1	4	57	3	4	64	1	155	0 0 1 1 2	5 0 1 1
APPROACH %	21%	14%	64%	0%	88%	13%	6%	89%	5%	6%	93%	1%			
APP/DEPART	14	/	6	8	/	13	64	/	67	69	/	69	0		
BEGIN PEAK HR	7:30 AM														
VOLUMES	3	2	5	0	4	1	1	28	2	2	30	1	79		1 0 1 1
APPROACH %	30%	20%	50%	0%	80%	20%	3%	90%	6%	6%	91%	3%			
PEAK HR FACTOR	0.625			0.625			0.861			0.917			0.823		
APP/DEPART	10	/	4	5	/	8	31	/	33	33	/	34	0		

PM

03:00 PM	0	0	1	0	0	0	1	5	0	1	2	0	10	0 0 0 0 0	0 0 0 0
3:15 PM	0	0	0	2	0	0	0	4	1	0	3	0	10	0 0 0 0 0	0 0 0 0
3:30 PM	1	0	2	1	1	0	1	6	0	1	4	1	18	0 0 0 0 0	0 0 0 0
3:45 PM	0	0	0	1	0	0	0	5	0	0	3	0	9	0 0 0 0 0	0 0 0 0
4:00 PM	0	0	1	0	0	0	1	4	1	0	4	0	11	0 0 0 0 0	0 0 1 0
4:15 PM	0	0	0	1	0	0	1	6	0	0	5	0	13	0 0 0 0 0	0 0 0 0
4:30 PM	0	0	0	0	0	0	0	5	1	1	2	0	9	0 0 0 0 0	0 0 0 0
4:45 PM	2	0	2	0	0	0	0	4	0	0	5	0	13	0 0 0 0 0	0 0 0 0
5:00 PM	1	0	0	0	1	0	0	6	0	1	5	0	14	0 0 0 0 0	0 0 0 0
5:15 PM	0	0	0	1	0	0	0	5	0	1	4	0	11	0 0 0 0 0	0 0 0 0
5:30 PM	1	0	0	0	3	0	0	5	0	2	4	0	15	0 0 0 0 0	0 0 0 0
5:45 PM	0	0	0	0	1	0	1	6	0	0	1	1	10	0 0 0 0 0	0 0 0 0
VOLUMES	5	0	6	6	6	0	5	61	3	7	42	2	143	0 0 0 0 0	0 0 1 0
APPROACH %	45%	0%	55%	50%	50%	0%	7%	88%	4%	14%	82%	4%			
APP/DEPART	11	/	7	12	/	16	69	/	73	51	/	47	0		
BEGIN PEAK HR	4:45 PM														
VOLUMES	4	0	2	1	4	0	0	20	0	4	18	0	53		0 0 0 0
APPROACH %	67%	0%	33%	20%	80%	0%	0%	100%	0%	18%	82%	0%			
PEAK HR FACTOR	0.375			0.417			0.833			0.917			0.883		
APP/DEPART	6	/	0	5	/	8	20	/	23	22	/	22	0		



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Scholar	LOCATION #:	14
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

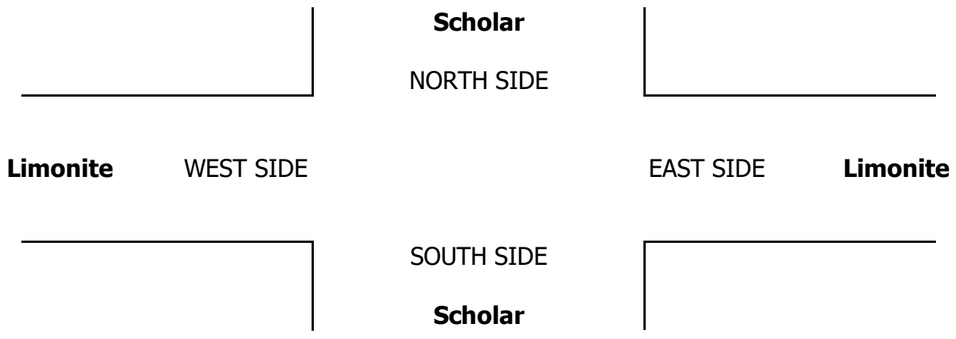
CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Scholar			SOUTHBOUND Scholar			EASTBOUND Limonite			WESTBOUND Limonite				U-TURNS					RTOR			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:	1	1	1	1	2	1	1	2	1	1	2	1							0	0	0	0
AM																						
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
7:30 AM	1	0	0	0	0	0	0	2	0	0	2	0	5	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	3	0	0	3	0	6	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	1	0	0	0	0	1	0	0	2	0	4	0	0	0	0	0	1	0	0	0
8:45 AM	0	0	0	0	1	0	0	1	1	0	2	0	5	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	0	1	0	1	0	0	11	1	1	11	0	27	0	0	0	0	0	1	0	0	0
APPROACH %	50%	0%	50%	0%	100%	0%	0%	92%	8%	8%	92%	0%										
APP/DEPART	2	/	0	1	/	3	12	/	12	12	/	12	0									
BEGIN PEAK HR	8:00 AM																					
VOLUMES	0	0	1	0	1	0	0	6	1	0	8	0	17						1	0	0	0
APPROACH %	0%	0%	100%	0%	100%	0%	0%	86%	14%	0%	100%	0%										
PEAK HR FACTOR	0.250			0.250			0.583			0.667			0.708									
APP/DEPART	1	/	0	1	/	2	7	/	7	8	/	8	0									
PM																						
03:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0
3:15 PM	0	1	0	0	0	0	0	1	0	0	1	0	3	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
5:00 PM	1	0	0	0	0	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0
VOLUMES	1	1	0	0	1	0	0	9	0	0	6	0	18	0	0	0	0	0	0	0	0	0
APPROACH %	50%	50%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%										
APP/DEPART	2	/	1	1	/	1	9	/	9	6	/	7	0									
BEGIN PEAK HR	3:00 PM																					
VOLUMES	1	0	0	0	0	0	0	5	0	0	1	0	7						0	0	0	0
APPROACH %	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%										
PEAK HR FACTOR	0.250			0.000			0.625			0.250			0.583									
APP/DEPART	1	/	0	0	/	0	5	/	5	1	/	2	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Scholar	LOCATION #:	14
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

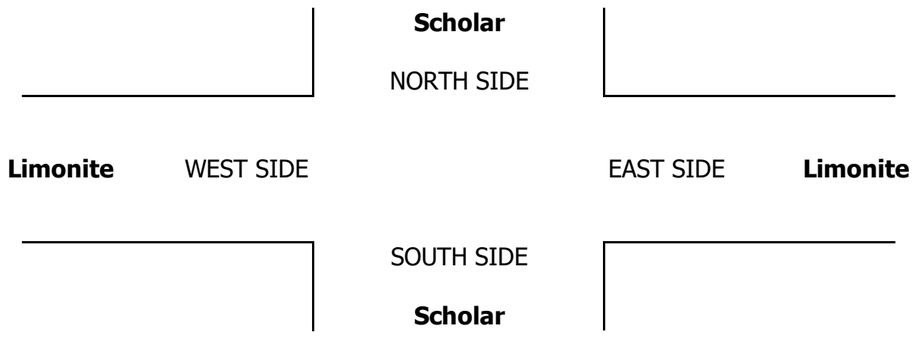
	NORTHBOUND Scholar			SOUTHBOUND Scholar			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	1	1	2	1	1	2	1	
7:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
7:15 AM	1	0	0	0	0	0	0	0	0	0	3	0	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
7:45 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
8:00 AM	0	0	0	0	0	0	0	4	0	1	3	0	8
8:15 AM	0	0	0	0	0	0	0	3	0	0	4	0	7
8:30 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
8:45 AM	0	0	1	0	0	1	0	0	0	0	2	0	4
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	0	1	0	0	1	0	12	0	1	21	0	37
APPROACH %	50%	0%	50%	0%	0%	100%	0%	100%	0%	5%	95%	0%	
APP/DEPART	2	/	0	1	/	1	12	/	13	22	/	23	0
BEGIN PEAK HR	7:45 AM												
VOLUMES	0	0	1	0	0	1	0	9	0	1	11	0	23
APPROACH %	0%	0%	100%	0%	0%	100%	0%	100%	0%	8%	92%	0%	
PEAK HR FACTOR	0.250			0.250			0.563			0.750			0.719
APP/DEPART	1	/	0	1	/	1	9	/	10	12	/	12	0
03:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
3:30 PM	0	0	1	0	0	0	0	1	0	0	1	0	3
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:30 PM	0	0	1	0	0	0	0	1	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
VOLUMES	0	0	2	0	0	0	0	7	0	0	7	0	16
APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	2	/	0	0	/	0	7	/	9	7	/	7	0
BEGIN PEAK HR	3:00 PM												
VOLUMES	0	0	1	0	0	0	0	3	0	0	2	0	6
APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR	0.250			0.000			0.750			0.500			0.500
APP/DEPART	1	/	0	0	/	0	3	/	4	2	/	2	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Scholar	LOCATION #:	14
THURSDAY	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

		NORTHBOUND Scholar			SOUTHBOUND Scholar			EASTBOUND Limonite			WESTBOUND Limonite		
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	1	1	1	2	1	1	2	1	1	2	1	
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
AM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
AM	BEGIN PEAK HR		7:00 AM											
AM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
AM	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
AM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	BEGIN PEAK HR		3:00 PM											
PM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
PM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Scholar

NORTH SIDE

Limonite WEST SIDE

EAST SIDE **Limonite**

SOUTH SIDE

Scholar

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:			
5/23/19 THURSDAY	LOCATION: Eastvale	PROJECT #: SC2210	
	NORTH & SOUTH: Scholar	LOCATION #: 14	
	EAST & WEST: Limonite	CONTROL: SIGNAL	

CLASS 6:	NOTES:		
BUSES		AM / PM / MD / OTHER / OTHER	▲ N ◄ W E ► S ▼

	NORTHBOUND Scholar			SOUTHBOUND Scholar			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	2	1	1	2	1	1	2	1	
AM 7:00 AM	0	0	0	0	0	1	0	1	1	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
7:30 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
7:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	1	0	0	0	0	1	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	1	1	3	1	0	1	1	3	3	0	14
APPROACH %	0%	0%	100%	20%	60%	20%	0%	50%	50%	50%	50%	0%	
APP/DEPART	1	/	0	5	/	7	2	/	3	6	/	4	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	0	0	1	2	1	0	1	1	1	2	0	9
APPROACH %	0%	0%	0%	25%	50%	25%	0%	50%	50%	33%	67%	0%	
PEAK HR FACTOR		0.000			0.500			0.250			0.375		0.750
APP/DEPART	0	/	0	4	/	4	2	/	2	3	/	3	0
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	2	0	1	0	0	1	0	0	0	0	4
APPROACH %	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%	0%	0%	
APP/DEPART	2	/	0	1	/	1	1	/	3	0	/	0	0
BEGIN PEAK HR		3:15 PM											
VOLUMES	0	0	1	0	1	0	0	1	0	0	0	0	3
APPROACH %	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%	0%	0%	
PEAK HR FACTOR		0.250			0.250			0.250			0.000		0.750
APP/DEPART	1	/	0	1	/	1	1	/	2	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Scholar

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

SOUTH SIDE

Scholar

INTERSECTION TURNING MOVEMENT COUNTS

T816

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 23, 19

LOCATION: Eastvale
NORTH & SOUTH: Hamner
EAST & WEST: Limonite

PROJECT #: SC2210
LOCATION #: 15
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

◄ W E ► ▲ N S ▼

☑ Add U-Turns to Left Turns

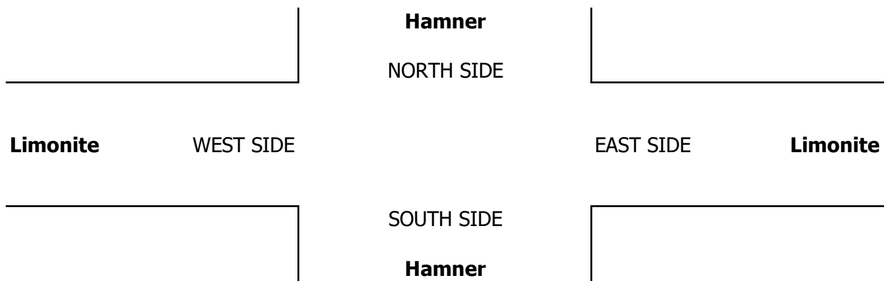
		NORTHBOUND Hamner			SOUTHBOUND Hamner			EASTBOUND Limonite			WESTBOUND Limonite			
	LANES:	NL 2	NT 3	NR 1	SL 2	ST 2	SR 1	EL 2	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
AM	7:00 AM	18	126	63	31	70	8	21	134	9	40	100	13	633
	7:15 AM	26	121	68	41	83	25	36	119	6	68	76	19	688
	7:30 AM	32	167	86	44	69	11	34	141	11	34	81	27	737
	7:45 AM	30	130	56	47	53	22	38	111	5	40	78	28	638
	8:00 AM	32	117	61	51	83	26	35	105	6	45	74	13	648
	8:15 AM	33	115	51	43	80	19	54	118	8	44	53	26	644
	8:30 AM	15	115	60	30	55	26	40	104	3	34	62	36	580
	8:45 AM	23	86	58	39	59	15	56	93	9	61	66	35	600
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	209	977	503	326	552	152	314	925	57	366	590	197	5,168
	APPROACH %	12%	58%	30%	32%	54%	15%	24%	71%	4%	32%	51%	17%	
	APP/DEPART	1,689	/	1,490	1,030	/	999	1,296	/	1,779	1,153	/	900	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	120	535	271	183	288	84	143	476	28	187	309	87	2,711
	APPROACH %	13%	58%	29%	33%	52%	15%	22%	74%	4%	32%	53%	15%	
	PEAK HR FACTOR		0.812			0.867			0.870			0.894		0.920
	APP/DEPART	926	/	765	555	/	519	647	/	941	583	/	486	0
PM	03:00 PM	41	123	47	53	125	41	70	132	12	85	86	33	848
	3:15 PM	47	120	38	52	129	49	76	140	10	74	104	29	868
	3:30 PM	34	129	37	44	137	39	79	138	14	83	84	24	842
	3:45 PM	35	127	47	54	135	38	67	113	10	81	90	31	828
	4:00 PM	41	132	50	58	130	45	79	111	15	88	108	29	886
	4:15 PM	46	117	42	53	134	48	67	114	14	79	97	48	859
	4:30 PM	42	118	34	62	144	55	77	106	12	108	90	42	890
	4:45 PM	57	122	32	63	130	54	70	111	16	96	107	37	895
	5:00 PM	43	142	61	52	157	42	68	133	17	85	102	41	943
	5:15 PM	44	129	43	51	164	42	68	142	24	95	99	53	954
	5:30 PM	50	129	41	63	186	54	80	145	16	103	93	35	995
	5:45 PM	45	111	52	62	145	49	65	131	9	86	149	51	955
	VOLUMES	525	1,499	524	667	1,716	556	866	1,516	169	1,063	1,209	453	10,763
	APPROACH %	21%	59%	21%	23%	58%	19%	34%	59%	7%	39%	44%	17%	
	APP/DEPART	2,548	/	2,836	2,939	/	3,066	2,551	/	2,772	2,725	/	2,089	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	182	511	197	228	652	187	281	551	66	369	443	180	3,847
	APPROACH %	20%	57%	22%	21%	61%	18%	31%	61%	7%	37%	45%	18%	
	PEAK HR FACTOR		0.904			0.880			0.932			0.867		0.967
	APP/DEPART	890	/	977	1,067	/	1,135	898	/	997	992	/	738	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	
3	1	0	0	4
5	0	0	2	7
2	0	0	2	4
9	0	0	2	11
11	0	0	5	16
6	1	0	7	14
4	0	0	1	5
11	0	0	8	19
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
51	2	0	27	80
15	2	0	7	24
17	3	1	5	26
12	2	0	8	22
14	1	0	8	23
21	0	0	6	27
12	1	1	8	22
16	5	0	10	31
23	2	1	8	34
10	2	0	5	17
22	1	0	5	28
19	2	1	10	32
25	2	1	8	36
206	23	5	88	322

RTOR

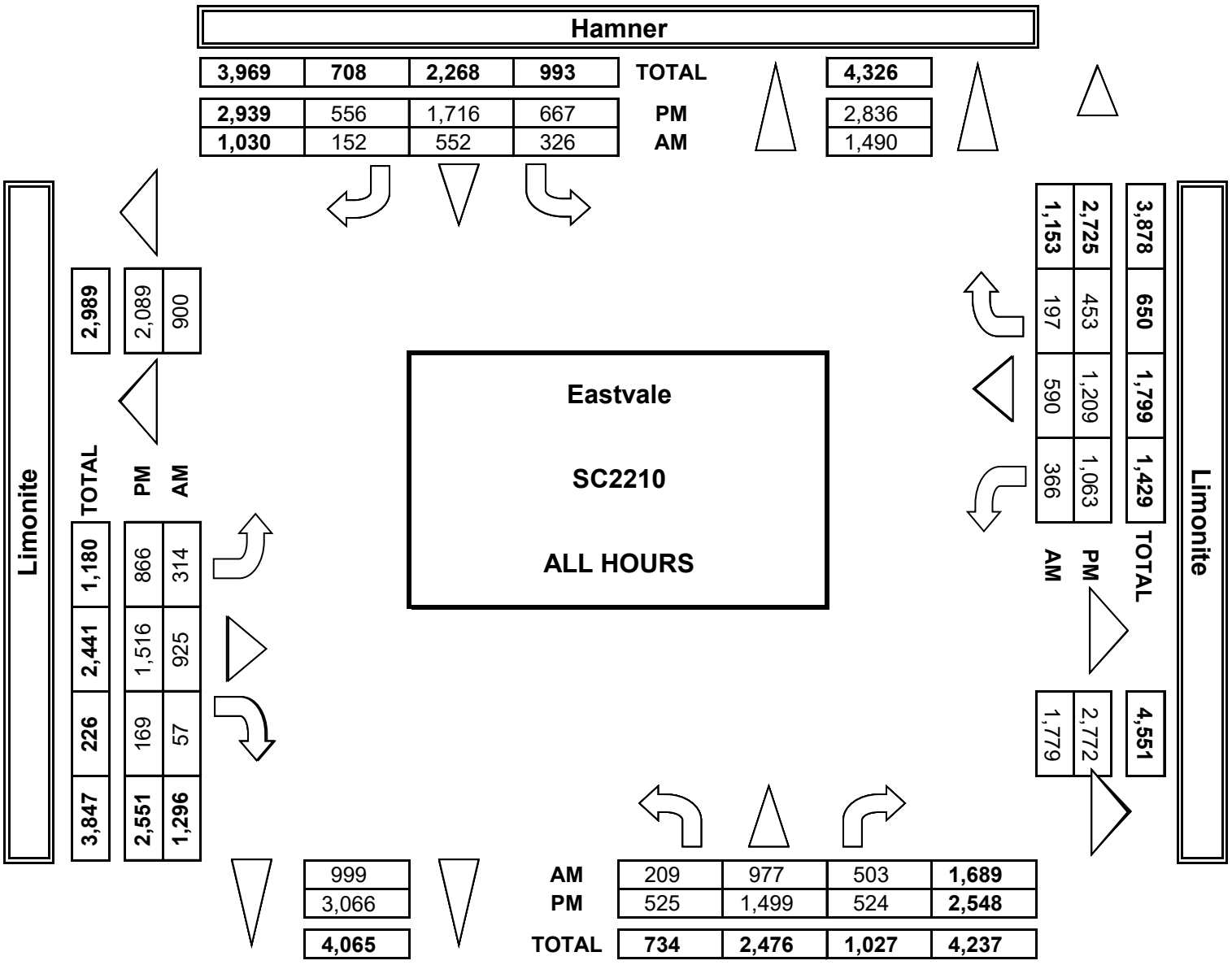
NRR	SRR	ERR	WRR
0	0	0	0
32	3	0	2
38	13	0	6
47	9	6	8
34	17	2	14
32	20	1	6
33	12	5	19
36	15	1	14
35	12	4	18
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
287	101	19	87
151	59	9	34
26	19	6	14
24	28	5	17
17	20	8	14
23	18	5	15
19	26	7	18
22	27	5	24
22	25	6	23
20	24	9	22
27	22	8	18
19	27	9	24
17	28	8	15
20	35	4	9
256	299	80	213
83	112	29	66

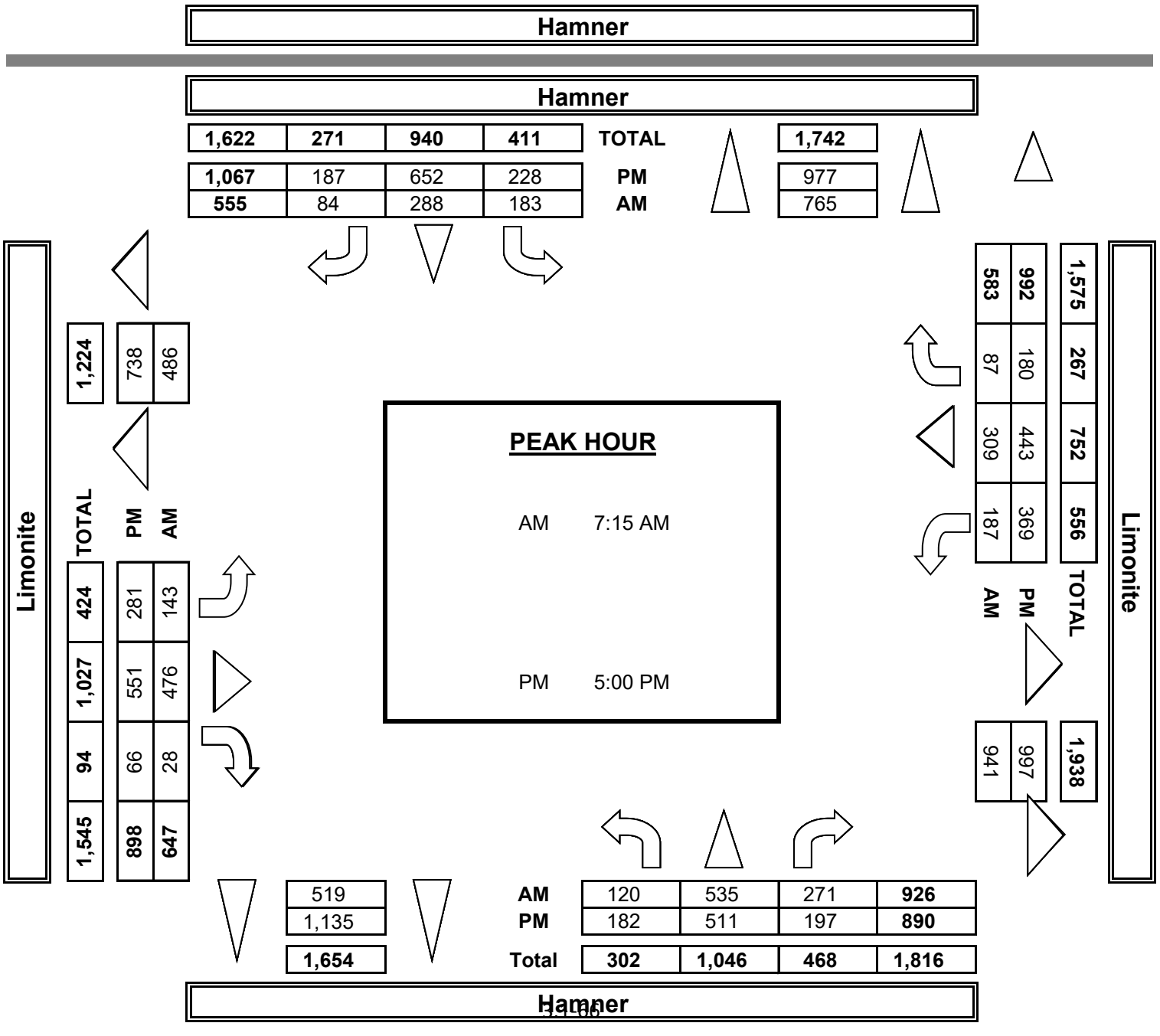


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	7:15 AM	0	1	2	1	4	0	0	0	0	0	0	1	2	1	4
	7:30 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	7:45 AM	2	0	1	0	3	1	0	0	0	1	1	0	1	0	2
	8:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:15 AM	1	0	5	9	15	1	0	0	0	1	0	0	5	9	14
	8:30 AM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	8:45 AM	1	0	1	0	2	1	0	0	0	1	0	0	1	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	8	1	11	10	30	5	0	1	0	6	3	1	10	10	24
PM	3:00 PM	3	0	1	0	4	3	0	0	0	3	0	0	1	0	1
	3:15 PM	3	1	1	0	5	2	1	1	0	4	1	0	0	0	1
	3:30 PM	3	1	1	0	5	3	0	1	0	4	0	1	0	0	1
	3:45 PM	4	0	2	0	6	4	0	2	0	6	0	0	0	0	0
	4:00 PM	4	0	1	0	5	3	0	1	0	4	1	0	0	0	1
	4:15 PM	3	0	1	0	4	3	0	1	0	4	0	0	0	0	0
	4:30 PM	2	0	2	0	4	2	0	1	0	3	0	0	1	0	1
	4:45 PM	4	1	1	0	6	3	0	1	0	4	1	1	0	0	2
	5:00 PM	5	0	2	0	7	5	0	2	0	7	0	0	0	0	0
	5:15 PM	4	1	5	0	10	4	1	5	0	10	0	0	0	0	0
	5:30 PM	4	1	4	0	9	4	0	2	0	6	0	1	2	0	3
	5:45 PM	4	1	4	1	10	3	1	3	1	8	1	0	1	0	2
	TOTAL	43	6	25	1	75	39	3	20	1	63	4	3	5	0	12

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Hamner	LOCATION #:	15
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Hamner			SOUTHBOUND Hamner			EASTBOUND Limonite			WESTBOUND Limonite			
LANES:	NL 2	NT 3	NR 1	SL 2	ST 2	SR 1	EL 2	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
7:00 AM	17	114	62	30	67	6	19	122	8	32	89	10	576
7:15 AM	23	114	66	33	79	21	33	116	6	61	71	15	638
7:30 AM	29	158	82	40	64	10	32	133	9	32	68	24	681
7:45 AM	29	128	49	43	51	17	32	107	3	38	71	20	588
8:00 AM	31	114	59	47	79	22	31	97	6	42	62	12	602
8:15 AM	30	111	48	41	76	14	50	109	8	38	45	25	595
8:30 AM	14	106	57	26	49	22	39	97	3	29	54	31	527
8:45 AM	21	82	56	35	49	12	51	82	8	56	58	31	541
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	194	927	479	295	514	124	287	863	51	328	518	168	4,748
APPROACH %	12%	58%	30%	32%	55%	13%	24%	72%	4%	32%	51%	17%	
APP/DEPART	1,600	/	1,384	933	/	916	1,201	/	1,660	1,014	/	788	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	87	514	256	163	273	70	128	453	24	163	272	71	2,509
APPROACH %	10%	58%	29%	32%	54%	14%	21%	75%	4%	32%	53%	14%	
PEAK HR FACTOR		0.820			0.855			0.869			0.878		0.921
APP/DEPART	882	/	713	506	/	485	605	/	882	516	/	429	0
03:00 PM	41	119	45	52	119	41	68	127	12	84	83	32	823
3:15 PM	46	118	35	48	125	48	74	135	9	72	100	25	835
3:30 PM	33	125	36	43	130	38	78	131	14	82	81	22	813
3:45 PM	35	126	43	52	131	36	64	110	9	80	85	31	802
4:00 PM	41	128	46	55	122	45	77	103	15	86	105	25	848
4:15 PM	45	116	39	50	128	46	66	105	14	78	90	46	823
4:30 PM	42	114	34	60	141	51	74	98	11	105	86	40	856
4:45 PM	55	118	30	59	127	53	67	105	16	94	103	35	862
5:00 PM	42	137	59	51	152	40	65	128	17	82	99	40	912
5:15 PM	43	119	41	50	161	41	66	136	23	94	96	51	921
5:30 PM	48	126	40	60	182	53	77	142	16	103	89	35	971
5:45 PM	45	105	50	61	142	48	62	123	8	84	147	49	924
VOLUMES	516	1,451	498	641	1,660	540	838	1,443	164	1,044	1,164	431	10,390
APPROACH %	21%	59%	20%	23%	58%	19%	34%	59%	7%	40%	44%	16%	
APP/DEPART	2,465	/	2,738	2,841	/	2,985	2,445	/	2,645	2,639	/	2,022	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	103	487	190	215	637	182	268	529	64	336	431	175	3,728
APPROACH %	12%	57%	22%	21%	61%	17%	31%	61%	7%	35%	44%	18%	
PEAK HR FACTOR		0.898			0.882			0.918			0.865		0.960
APP/DEPART	855	/	937	1,041	/	1,112	863	/	961	969	/	718	0

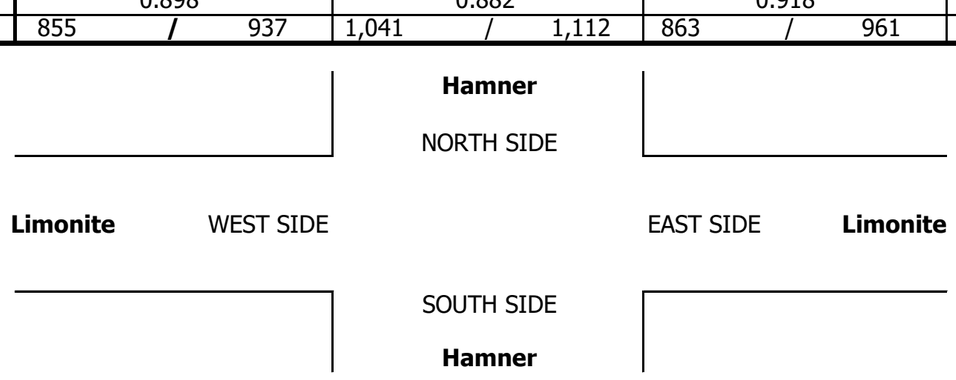
U-TURNS

NB	SB	EB	WB	TTL
2	1	0	0	3
4	0	0	2	6
2	0	0	2	4
8	0	0	2	10
11	0	0	4	15
6	1	0	7	14
4	0	0	1	5
11	0	0	7	18
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
48	2	0	25	75
15	2	0	7	24
17	3	1	5	26
12	2	0	8	22
14	1	0	8	23
21	0	0	6	27
11	1	1	8	21
16	5	0	9	30
22	2	1	8	33
10	2	0	5	17
22	1	0	5	28
18	2	1	10	31
25	2	1	7	35
203	23	5	86	317

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
32	2	0	2
37	11	0	4
46	8	4	8
30	13	1	9
31	17	1	6
30	10	5	18
35	12	1	14
34	11	3	16
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
275	84	15	77
25	19	6	14
22	28	5	16
16	20	8	14
20	18	5	15
16	26	7	17
20	26	5	24
22	25	6	22
19	24	9	22
26	21	8	18
18	27	9	23
16	28	8	15
20	34	4	8
240	296	80	208

144	49	6	27
80	110	29	64



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Hamner	LOCATION #:	15
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 2:	NOTES:
2-AXLE WORK VEHICLES/ TRUCKS	

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

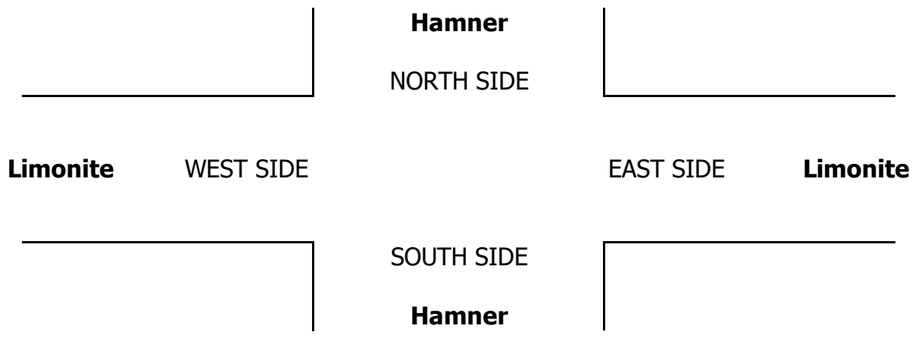
	NORTHBOUND Hamner			SOUTHBOUND Hamner			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	1	2	2	1	2	3	1	2	2	1	
7:00 AM	1	7	0	1	3	2	2	9	1	4	7	2	39
7:15 AM	2	4	2	4	3	1	3	2	0	5	3	2	31
7:30 AM	3	8	2	4	4	1	1	6	2	2	6	2	41
7:45 AM	1	1	4	4	2	5	6	2	1	2	5	6	39
8:00 AM	1	2	1	2	4	3	3	2	0	2	6	1	27
8:15 AM	3	2	3	1	3	4	4	6	0	4	5	1	36
8:30 AM	1	8	3	3	5	4	0	5	0	5	3	3	40
8:45 AM	2	4	1	3	9	3	5	8	1	5	3	4	48
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	14	36	16	22	33	23	24	40	5	29	38	21	301
APPROACH %	21%	55%	24%	28%	42%	29%	35%	58%	7%	33%	43%	24%	
APP/DEPART	66	/	81	78	/	68	69	/	80	88	/	72	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	7	16	8	9	21	14	12	21	1	14	17	9	151
APPROACH %	23%	52%	26%	20%	48%	32%	35%	62%	3%	33%	40%	21%	
PEAK HR FACTOR		0.646			0.733			0.607			0.875		0.786
APP/DEPART	31	/	37	44	/	36	34	/	40	42	/	38	0
03:00 PM	0	3	1	0	5	0	2	3	0	1	3	1	19
3:15 PM	1	2	3	2	4	1	2	4	1	2	3	3	28
3:30 PM	1	3	1	1	6	1	1	4	0	1	2	1	22
3:45 PM	0	1	3	1	4	2	3	3	1	1	4	0	23
4:00 PM	0	4	3	2	7	0	2	5	0	2	3	3	31
4:15 PM	1	1	3	1	5	2	1	7	0	1	6	1	29
4:30 PM	0	3	0	1	3	4	3	5	1	3	4	1	28
4:45 PM	2	3	2	4	3	1	3	6	0	2	2	1	29
5:00 PM	1	4	1	0	4	2	3	5	0	3	3	1	27
5:15 PM	1	8	2	1	3	1	2	5	1	1	3	1	29
5:30 PM	2	3	1	1	4	1	3	3	0	0	2	0	20
5:45 PM	0	5	0	1	2	1	3	5	1	2	1	1	22
VOLUMES	9	40	20	15	50	16	28	55	5	19	36	14	307
APPROACH %	13%	58%	29%	19%	62%	20%	32%	63%	6%	28%	52%	20%	
APP/DEPART	69	/	82	81	/	75	88	/	92	69	/	58	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	1	11	8	8	18	7	9	23	1	7	15	6	117
APPROACH %	5%	50%	36%	24%	55%	21%	27%	70%	3%	24%	52%	21%	
PEAK HR FACTOR		0.786			0.917			0.917			0.906		0.944
APP/DEPART	22	/	26	33	/	28	33	/	40	29	/	23	0

U-TURNS

NB	SB	EB	WB	TTL
1	0	0	0	1
1	0	0	0	1
0	0	0	0	0
1	0	0	0	1
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
3	0	0	2	5
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	1	1
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	1	1
3	0	0	2	5

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	1	0	0
1	1	0	1
0	1	2	0
4	4	1	3
0	2	0	0
3	2	0	1
1	3	0	0
1	1	1	2
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
10	15	4	7
5	8	1	3
1	0	0	0
2	0	0	1
1	0	0	0
2	0	0	0
2	0	0	1
2	1	0	0
0	0	0	1
1	0	0	0
1	1	0	0
1	0	0	1
1	0	0	0
0	1	0	0
14	3	0	4
5	1	0	2



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19 THURSDAY	LOCATION: Eastvale		PROJECT #:	SC2210
	NORTH & SOUTH: Hamner		LOCATION #:	15
	EAST & WEST: Limonite		CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Hamner			SOUTHBOUND Hamner			EASTBOUND Limonite			WESTBOUND Limonite			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	2	3	1	2	2	1	2	3	1	2	2	1	
AM	7:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	2
AM	7:15 AM	0	0	0	1	0	0	0	1	0	0	0	1	3
AM	7:30 AM	0	1	0	0	0	0	1	0	0	0	2	0	4
AM	7:45 AM	0	0	1	0	0	0	0	1	0	0	1	1	4
AM	8:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
AM	8:15 AM	0	0	0	1	0	0	0	2	0	1	1	0	5
AM	8:30 AM	0	0	0	1	1	0	1	0	0	0	2	0	5
AM	8:45 AM	0	0	1	0	1	0	0	1	0	0	2	0	5
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	1	2	3	2	0	2	7	0	2	9	3	31
AM	APPROACH %	0%	33%	67%	60%	40%	0%	22%	78%	0%	14%	64%	21%	
AM	APP/DEPART	3	/	6	5	/	4	9	/	12	14	/	9	0
AM	BEGIN PEAK HR		8:00 AM											
AM	VOLUMES	0	0	1	2	2	0	1	5	0	1	6	0	18
AM	APPROACH %	0%	0%	100%	50%	50%	0%	17%	83%	0%	14%	86%	0%	
AM	PEAK HR FACTOR		0.250			0.500			0.750			0.875		0.900
AM	APP/DEPART	1	/	1	4	/	3	6	/	8	7	/	6	0
PM	03:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
PM	3:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
PM	3:30 PM	0	1	0	0	1	0	0	1	0	0	0	0	3
PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
PM	4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
PM	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
PM	4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	1	2	0	0	0	0	3	0	0	1	0	7
PM	VOLUMES	0	2	4	0	2	0	0	7	0	0	3	0	18
PM	APPROACH %	0%	33%	67%	0%	100%	0%	0%	100%	0%	0%	100%	0%	
PM	APP/DEPART	6	/	2	2	/	2	7	/	11	3	/	3	0
PM	BEGIN PEAK HR		5:00 PM											
PM	VOLUMES	0	1	2	0	0	0	0	4	0	0	1	0	8
PM	APPROACH %	0%	33%	67%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PM	PEAK HR FACTOR		0.250			0.000			0.333			0.250		0.286
PM	APP/DEPART	3	/	1	0	/	0	4	/	6	1	/	1	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
						0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	1
PEAK HR VOLUMES						0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	1	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	1	0	0	0
PEAK HR VOLUMES						0	0	0	0

Hamner

NORTH SIDE

Limonite WEST SIDE

EAST SIDE **Limonite**

SOUTH SIDE

Hamner

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Hamner	LOCATION #:	15
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

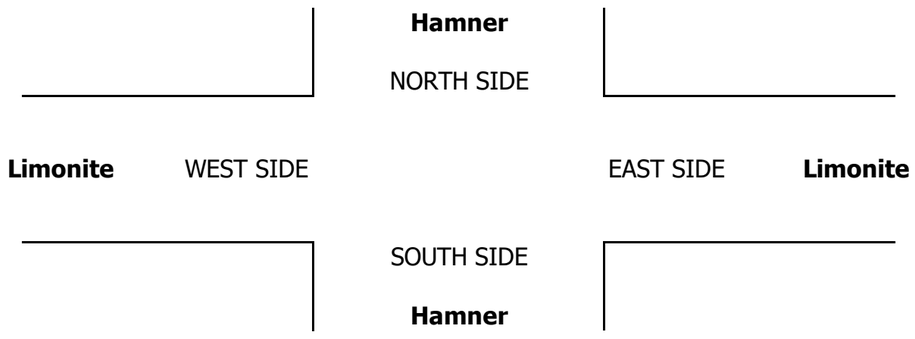
	NORTHBOUND Hamner			SOUTHBOUND Hamner			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	1	2	2	1	2	3	1	2	2	1	
7:00 AM	0	4	1	0	0	0	0	2	0	2	4	0	13
7:15 AM	0	0	0	0	0	1	0	0	0	2	2	1	6
7:30 AM	0	0	2	0	0	0	0	2	0	0	4	0	8
7:45 AM	0	0	1	0	0	0	0	1	0	0	1	0	3
8:00 AM	0	1	1	0	0	0	1	4	0	0	5	0	12
8:15 AM	0	1	0	0	1	1	0	1	0	1	2	0	7
8:30 AM	0	1	0	0	0	0	0	2	0	0	2	0	5
8:45 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	7	5	0	1	2	1	13	0	5	23	1	58
APPROACH %	0%	58%	42%	0%	33%	67%	7%	93%	0%	17%	79%	3%	
APP/DEPART	12	/	9	3	/	6	14	/	18	29	/	25	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	2	4	0	1	1	1	8	0	1	12	0	30
APPROACH %	0%	33%	67%	0%	50%	50%	11%	89%	0%	8%	92%	0%	
PEAK HR FACTOR		0.300			0.250			0.450			0.542		0.577
APP/DEPART	6	/	3	2	/	2	9	/	12	13	/	13	0
03:00 PM	0	1	0	0	1	0	0	1	0	0	0	0	3
3:15 PM	0	0	0	1	0	0	0	0	0	0	1	0	2
3:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
3:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	1	0	0	2	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
4:30 PM	0	1	0	0	0	0	0	1	0	0	0	1	3
4:45 PM	0	1	0	0	0	0	0	0	0	0	1	0	2
5:00 PM	0	1	1	0	1	0	0	0	0	0	0	0	3
5:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	1	0	0	0	0	0	0	2	0	3
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
VOLUMES	0	6	2	2	4	0	0	7	0	0	6	1	28
APPROACH %	0%	75%	25%	33%	67%	0%	0%	100%	0%	0%	86%	14%	
APP/DEPART	8	/	7	6	/	4	7	/	11	7	/	6	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	0	3	1	0	1	0	0	3	0	0	2	1	11
APPROACH %	0%	75%	25%	0%	100%	0%	0%	100%	0%	0%	67%	33%	
PEAK HR FACTOR		0.500			0.250			0.375			0.750		0.917
APP/DEPART	4	/	4	1	/	1	3	/	4	3	/	2	0

U-TURNS

	NB	SB	EB	WB	TTL
AM	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
PM	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
AM	0	0	0	0
	0	0	0	1
	1	0	0	0
	0	0	0	0
	1	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	2	0	0	1
	2	0	0	0
PM	0	0	0	0
	0	0	0	0
	0	0	0	0
	1	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	1	0	0	0
	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	Hamner	LOCATION #:	15
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 5:	NOTES:
RV	

AM ▲ N
PM ◄ W E ►
MD S ▼
OTHER
OTHER

	NORTHBOUND Hamner			SOUTHBOUND Hamner			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	1	2	2	1	2	3	1	2	2	1	

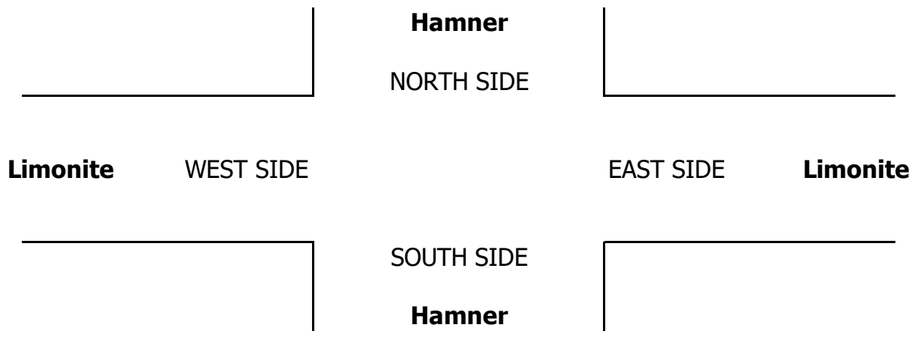
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%										
	APP/DEPART	0	/	0	1	/	0	0	/	1	0	/	0	0									
	BEGIN PEAK HR	8:00 AM																					
	VOLUMES	0	0	0	1	0	0	0	0	0	0	0	0	1						0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%										
	PEAK HR FACTOR	0.000			0.250			0.000			0.000			0.250									
	APP/DEPART	0	/	0	1	/	0	0	/	1	0	/	0	0									
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%										
	APP/DEPART	0	/	0	1	/	0	0	/	1	0	/	0	0									
	BEGIN PEAK HR	3:30 PM																					
	VOLUMES	0	0	0	1	0	0	0	0	0	0	0	0	1						0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%										
	PEAK HR FACTOR	0.000			0.250			0.000			0.000			0.250									
	APP/DEPART	0	/	0	1	/	0	0	/	1	0	/	0	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	Hamner	LOCATION #:	15
THURSDAY	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼
BUSES			

	NORTHBOUND Hamner			SOUTHBOUND Hamner			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	1	2	2	1	2	3	1	2	2	1	
AM 7:00 AM	0	1	0	0	0	0	0	1	0	1	0	0	3
7:15 AM	1	3	0	3	1	2	0	0	0	0	0	0	10
7:30 AM	0	0	0	0	1	0	0	0	0	0	1	1	3
7:45 AM	0	1	1	0	0	0	0	0	1	0	0	1	4
8:00 AM	0	0	0	2	0	1	0	0	0	1	0	0	4
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	2	3
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	6	1	5	2	3	0	2	1	2	2	4	29
APPROACH %	13%	75%	13%	50%	20%	30%	0%	67%	33%	25%	25%	50%	
APP/DEPART	8	/	10	10	/	5	3	/	8	8	/	6	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	1	4	1	5	2	3	0	0	1	1	1	2	21
APPROACH %	17%	67%	17%	50%	20%	30%	0%	0%	100%	25%	25%	50%	
PEAK HR FACTOR		0.375			0.417			0.250			0.500		0.525
APP/DEPART	6	/	6	10	/	4	1	/	6	4	/	5	0
PM 03:00 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
3:15 PM	0	0	0	1	0	0	0	0	0	0	0	1	2
3:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	2
3:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	1	0	0	0	1	0	0	0	1	3
4:15 PM	0	0	0	1	0	0	0	0	0	0	0	1	2
4:30 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
VOLUMES	0	0	0	8	0	0	0	4	0	0	0	7	19
APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
APP/DEPART	0	/	7	8	/	0	4	/	12	7	/	0	0
BEGIN PEAK HR		3:15 PM											
VOLUMES	0	0	0	3	0	0	0	2	0	0	0	3	8
APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
PEAK HR FACTOR		0.000			0.750			0.500			0.750		0.667
APP/DEPART	0	/	3	3	/	0	2	/	5	3	/	0	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
						0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	1	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	1	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	2	0	1
PEAK HR VOLUMES						0	2	0	1
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	1
VOLUMES	0	0	0	0	0	0	0	0	1
PEAK HR VOLUMES						0	0	0	0

Hamner

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

SOUTH SIDE

Hamner

INTERSECTION TURNING MOVEMENT COUNTS

T816

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 23, 19

LOCATION: Eastvale
NORTH & SOUTH: I-15 SB Ramps
EAST & WEST: Limonite

PROJECT #: SC2210
LOCATION #: 16
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

◄ W E ► N S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EASTBOUND Limonite			WESTBOUND Limonite				U-TURNS					RTOR			
	LANES:	NL X	NT X	NR X	SL 1.3	ST 0.3	SR 1.3	EL X	ET 2	ER 1	WL 2	WT 2	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL	NRR X	SRR 0	ERR 0	WRR X
AM	7:00 AM	0	0	0	23	0	74	0	171	87	130	88	0	573	0	0	0	0	0	0	53	4	0
	7:15 AM	0	0	0	18	0	84	0	181	92	143	83	0	601	0	0	0	0	0	0	63	11	0
	7:30 AM	0	0	0	16	0	63	0	174	112	154	88	0	607	0	0	0	0	0	0	45	6	0
	7:45 AM	0	0	0	18	0	56	0	130	110	137	116	0	567	0	0	0	0	0	0	41	15	0
	8:00 AM	0	0	0	22	2	60	0	128	73	91	134	0	510	0	0	0	0	0	0	49	8	0
	8:15 AM	0	0	0	27	1	81	0	154	87	102	104	0	556	0	0	0	0	0	0	55	6	0
	8:30 AM	0	0	0	35	0	58	0	150	84	107	121	0	555	0	0	0	0	0	0	48	9	0
	8:45 AM	0	0	0	36	0	73	0	123	68	90	146	0	536	0	0	0	0	0	0	54	3	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	195	3	549	0	1,211	713	954	880	0	4,505	0	0	0	0	0	0	408	62	0
	APPROACH %	0%	0%	0%	26%	0%	73%	0%	63%	37%	52%	48%	0%										
	APP/DEPART	0	/	0	747	/	1,670	1,924	/	1,406	1,834	/	1,429	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	0	0	0	75	0	277	0	656	401	564	375	0	2,348						0	202	36	0
	APPROACH %	0%	0%	0%	21%	0%	79%	0%	62%	38%	60%	40%	0%										
	PEAK HR FACTOR		0.000			0.863			0.924			0.928		0.967									
	APP/DEPART	0	/	0	352	/	965	1,057	/	731	939	/	652	0									
PM	03:00 PM	0	0	0	25	1	63	0	140	60	68	138	0	495	0	0	0	0	0	0	47	6	0
	3:15 PM	0	0	0	31	0	69	0	141	65	76	142	0	524	0	0	0	0	0	0	48	3	0
	3:30 PM	0	0	0	27	1	72	0	152	77	71	143	0	543	0	0	0	0	0	0	53	7	0
	3:45 PM	0	0	0	30	0	74	0	163	73	75	151	0	566	0	0	0	0	0	0	57	5	0
	4:00 PM	0	0	0	29	0	87	0	181	91	87	159	0	634	0	0	0	0	0	0	66	12	0
	4:15 PM	0	0	0	28	1	70	0	177	71	70	169	0	586	0	0	0	0	0	0	59	2	0
	4:30 PM	0	0	0	38	1	73	0	170	75	73	158	0	588	0	0	0	0	0	0	52	6	0
	4:45 PM	0	0	0	22	0	81	0	145	92	74	173	0	587	0	0	0	0	0	0	48	21	0
	5:00 PM	0	0	0	33	0	69	0	172	74	88	188	0	624	0	0	0	0	0	0	42	5	0
	5:15 PM	0	0	0	31	1	83	0	181	94	92	201	0	683	0	0	0	0	0	0	65	6	0
	5:30 PM	0	0	0	40	0	100	0	180	101	94	165	0	680	0	0	0	0	0	0	76	12	0
	5:45 PM	0	0	0	51	0	99	0	171	87	84	202	0	694	0	0	0	0	0	0	73	6	0
	VOLUMES	0	0	0	385	5	940	0	1,973	960	952	1,989	0	7,204	0	0	0	0	0	0	686	91	0
	APPROACH %	0%	0%	0%	29%	0%	71%	0%	67%	33%	32%	68%	0%										
	APP/DEPART	0	/	0	1,330	/	1,917	2,933	/	2,358	2,941	/	2,929	0									
	BEGIN PEAK HR		5:00 PM																				
	VOLUMES	0	0	0	155	1	351	0	704	356	358	756	0	2,681						0	256	29	0
	APPROACH %	0%	0%	0%	31%	0%	69%	0%	66%	34%	32%	68%	0%										
	PEAK HR FACTOR		0.000			0.845			0.943			0.951		0.966									
	APP/DEPART	0	/	0	507	/	715	1,060	/	859	1,114	/	1,107	0									

I-15 SB Ramps

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

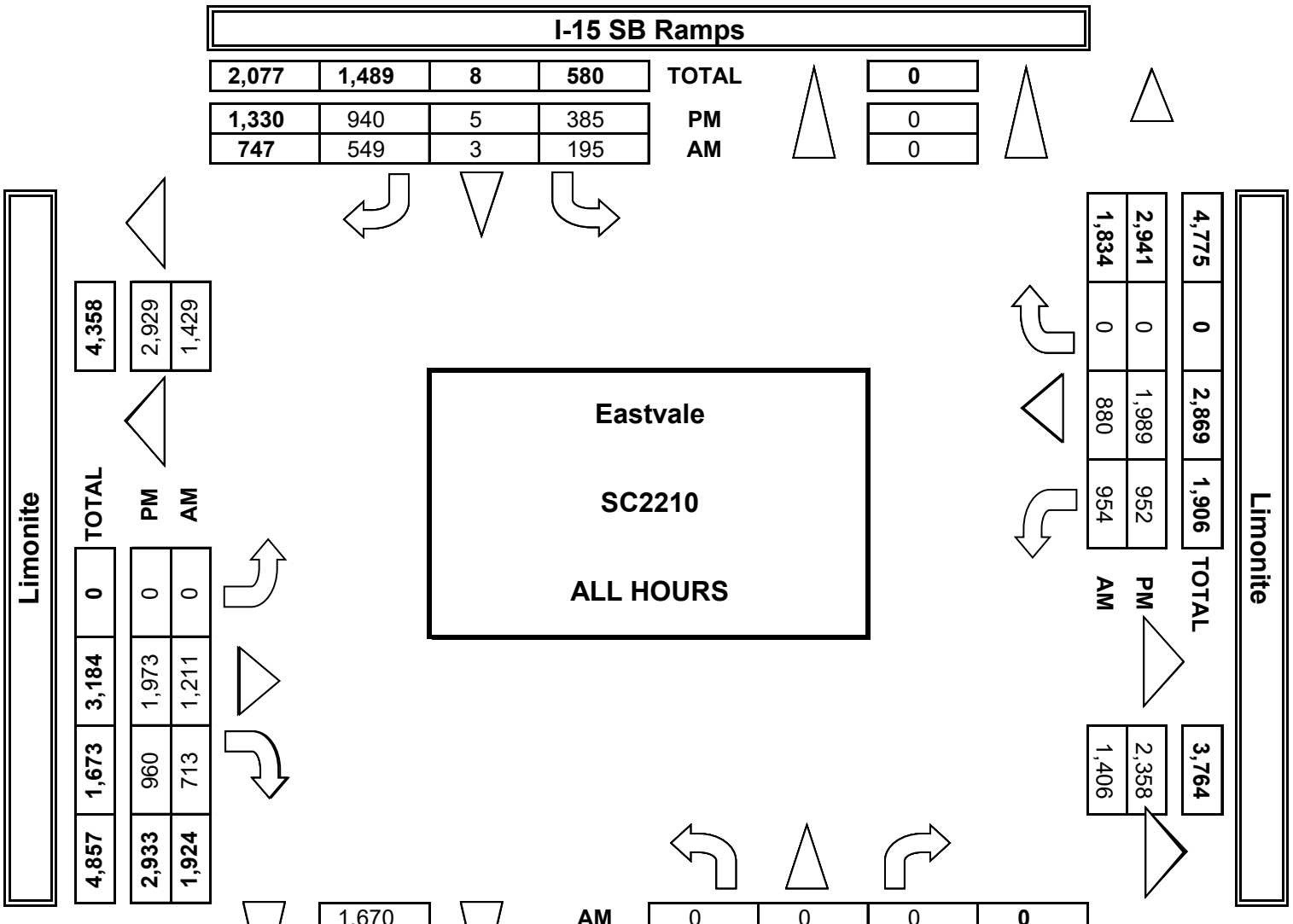
SOUTH SIDE

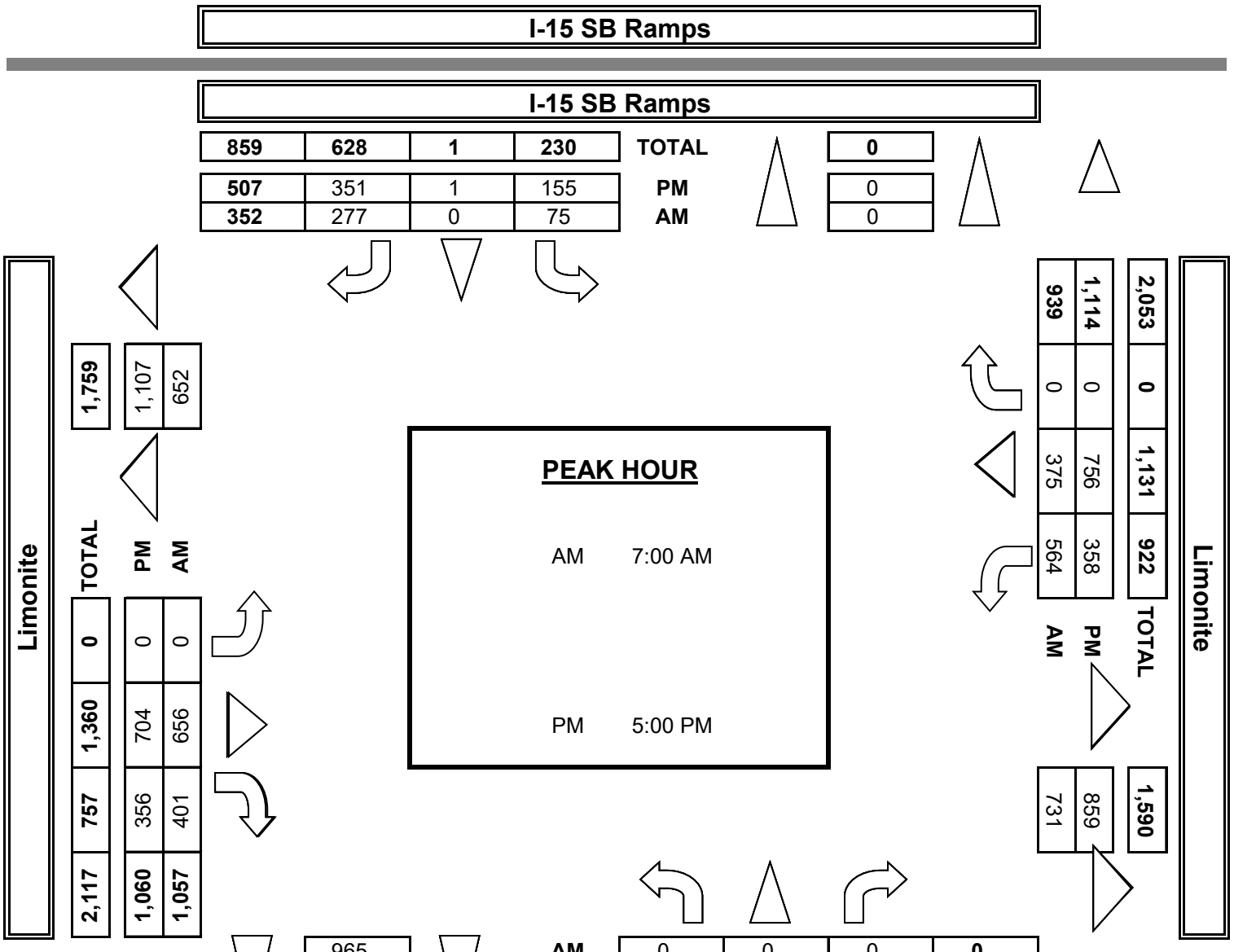
I-15 SB Ramps

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	1	2	0	3	0	1	1	0	2	0	0	1	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	8:45 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	1	3	1	6	1	1	1	1	4	0	0	2	0	2
PM	3:00 PM	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1
	3:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	3:30 PM	0	0	1	1	2	0	0	0	1	1	0	0	1	0	1
	3:45 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	4:00 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1
	4:45 PM	1	0	1	1	3	1	0	0	1	2	0	0	1	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	5:30 PM	0	0	3	0	3	0	0	0	0	0	0	0	3	0	3
	5:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	TOTAL	2	0	13	2	17	2	0	5	2	9	0	0	8	0	8

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	I-15 SB Ramps	LOCATION #:	16
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

◄ W | ▲ N | S ▼ | E ►

	NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
LANES:	NL X	NT X	NR X	SL 1.3	ST 0.3	SR 1.3	EL X	ET 2	ER 1	WL 2	WT 2	WR X	TOTAL

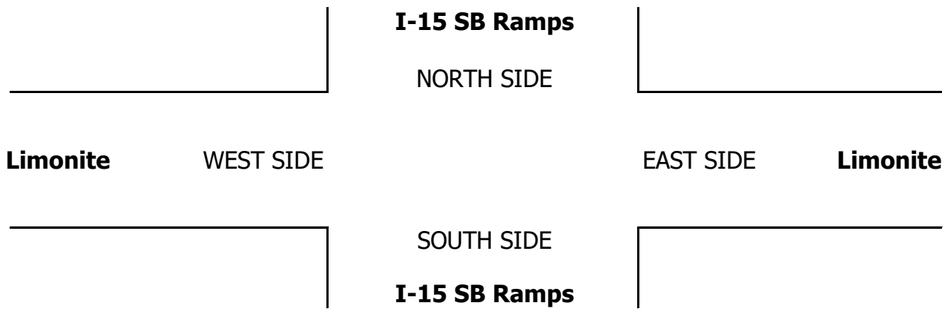
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
X	0	0	X

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	17	0	67	0	162	77	118	73	0	514	0	0	0	0	0	0	47	3	0
	7:15 AM	0	0	0	17	0	75	0	172	86	122	74	0	546	0	0	0	0	0	0	56	11	0
	7:30 AM	0	0	0	15	0	53	0	168	107	148	77	0	568	0	0	0	0	0	0	38	6	0
	7:45 AM	0	0	0	17	0	50	0	119	101	120	106	0	513	0	0	0	0	0	0	38	12	0
	8:00 AM	0	0	0	17	1	49	0	119	66	77	122	0	451	0	0	0	0	0	0	40	8	0
	8:15 AM	0	0	0	21	0	72	0	142	82	87	95	0	499	0	0	0	0	0	0	49	6	0
	8:30 AM	0	0	0	28	0	52	0	138	79	90	106	0	493	0	0	0	0	0	0	45	8	0
	8:45 AM	0	0	0	30	0	69	0	112	60	78	137	0	486	0	0	0	0	0	0	52	1	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	162	1	487	0	1,132	658	840	790	0	4,070	0	0	0	0	0	0	365	55	0
	APPROACH %	0%	0%	0%	25%	0%	75%	0%	63%	37%	52%	48%	0%										
	APP/DEPART	0	/	0	650	/	1,499	1,790	/	1,294	1,630	/	1,277	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	0	0	0	66	0	245	0	621	371	508	330	0	2,141						0	179	32	0
	APPROACH %	0%	0%	0%	21%	0%	79%	0%	63%	37%	61%	39%	0%										
	PEAK HR FACTOR		0.000			0.845			0.902			0.927		0.942									
	APP/DEPART	0	/	0	311	/	879	992	/	687	838	/	575	0									
PM	03:00 PM	0	0	0	23	1	62	0	134	58	65	132	0	475	0	0	0	0	0	0	46	6	0
	3:15 PM	0	0	0	28	0	66	0	137	57	72	138	0	498	0	0	0	0	0	0	45	2	0
	3:30 PM	0	0	0	26	1	70	0	144	73	66	138	0	518	0	0	0	0	0	0	52	7	0
	3:45 PM	0	0	0	29	0	72	0	157	69	71	143	0	541	0	0	0	0	0	0	55	4	0
	4:00 PM	0	0	0	26	0	87	0	173	84	79	155	0	604	0	0	0	0	0	0	66	10	0
	4:15 PM	0	0	0	24	1	65	0	167	65	67	161	0	550	0	0	0	0	0	0	54	2	0
	4:30 PM	0	0	0	36	1	70	0	158	71	68	154	0	558	0	0	0	0	0	0	49	6	0
	4:45 PM	0	0	0	21	0	77	0	141	88	72	163	0	562	0	0	0	0	0	0	45	20	0
	5:00 PM	0	0	0	31	0	68	0	167	73	84	185	0	608	0	0	0	0	0	0	41	5	0
	5:15 PM	0	0	0	31	1	80	0	174	89	82	199	0	656	0	0	0	0	0	0	64	6	0
	5:30 PM	0	0	0	38	0	96	0	176	100	90	163	0	663	0	0	0	0	0	0	74	12	0
	5:45 PM	0	0	0	48	0	98	0	159	86	80	200	0	671	0	0	0	0	0	0	73	6	0
	VOLUMES	0	0	0	361	5	911	0	1,887	913	896	1,931	0	6,904	0	0	0	0	0	0	664	86	0
	APPROACH %	0%	0%	0%	28%	0%	71%	0%	67%	33%	32%	68%	0%										
	APP/DEPART	0	/	0	1,277	/	1,814	2,800	/	2,248	2,827	/	2,842	0									
	BEGIN PEAK HR		5:00 PM																				
	VOLUMES	0	0	0	148	1	342	0	676	348	336	747	0	2,598						0	252	29	0
	APPROACH %	0%	0%	0%	30%	0%	70%	0%	66%	34%	31%	69%	0%										
	PEAK HR FACTOR		0.000			0.841			0.928			0.964		0.968									
	APP/DEPART	0	/	0	491	/	685	1,024	/	824	1,083	/	1,089	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/23/19 THURSDAY			
LOCATION:	Eastvale	PROJECT #:	SC2210
NORTH & SOUTH:	I-15 SB Ramps	LOCATION #:	16
EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	1.3	0.3	1.3	X	2	1	2	2	X	
AM	7:00 AM	0	0	0	4	0	4	0	7	5	8	9	0	37
AM	7:15 AM	0	0	0	1	0	6	0	4	6	15	7	0	39
AM	7:30 AM	0	0	0	1	0	5	0	5	5	6	6	0	28
AM	7:45 AM	0	0	0	0	0	3	0	7	5	13	9	0	37
AM	8:00 AM	0	0	0	3	1	8	0	5	4	11	8	0	40
AM	8:15 AM	0	0	0	3	1	5	0	6	3	8	3	0	29
AM	8:30 AM	0	0	0	5	0	2	0	9	4	13	10	0	43
AM	8:45 AM	0	0	0	5	0	1	0	7	7	8	8	0	36
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	0	0	22	2	34	0	50	39	82	60	0	289
AM	APPROACH %	0%	0%	0%	38%	3%	59%	0%	56%	44%	58%	42%	0%	
AM	APP/DEPART	0	/	0	58	/	123	89	/	72	142	/	94	0
AM	BEGIN PEAK HR		7:45 AM											
AM	VOLUMES	0	0	0	11	2	18	0	27	16	45	30	0	149
AM	APPROACH %	0%	0%	0%	35%	6%	58%	0%	63%	37%	60%	40%	0%	
AM	PEAK HR FACTOR		0.000			0.646			0.827			0.815		0.866
AM	APP/DEPART	0	/	0	31	/	63	43	/	38	75	/	48	0
PM	03:00 PM	0	0	0	1	0	1	0	4	2	2	6	0	16
PM	3:15 PM	0	0	0	1	0	3	0	3	6	4	2	0	19
PM	3:30 PM	0	0	0	0	0	2	0	5	4	3	5	0	19
PM	3:45 PM	0	0	0	1	0	2	0	6	3	4	6	0	22
PM	4:00 PM	0	0	0	1	0	0	0	6	4	5	4	0	20
PM	4:15 PM	0	0	0	2	0	5	0	8	4	2	6	0	27
PM	4:30 PM	0	0	0	0	0	3	0	7	2	2	3	0	17
PM	4:45 PM	0	0	0	1	0	3	0	4	3	2	7	0	20
PM	5:00 PM	0	0	0	1	0	0	0	4	1	3	3	0	12
PM	5:15 PM	0	0	0	0	0	1	0	5	5	8	1	0	20
PM	5:30 PM	0	0	0	1	0	3	0	3	1	3	2	0	13
PM	5:45 PM	0	0	0	2	0	0	0	10	1	4	1	0	18
PM	VOLUMES	0	0	0	11	0	23	0	65	36	42	46	0	223
PM	APPROACH %	0%	0%	0%	32%	0%	68%	0%	64%	36%	48%	52%	0%	
PM	APP/DEPART	0	/	0	34	/	78	101	/	76	88	/	69	0
PM	BEGIN PEAK HR		3:30 PM											
PM	VOLUMES	0	0	0	4	0	9	0	25	15	14	21	0	88
PM	APPROACH %	0%	0%	0%	31%	0%	69%	0%	63%	38%	40%	60%	0%	
PM	PEAK HR FACTOR		0.000			0.464			0.833			0.875		0.815
PM	APP/DEPART	0	/	0	13	/	29	40	/	29	35	/	30	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
	X	0	0	X
7:00 AM	0	4	0	0
7:15 AM	0	5	0	0
7:30 AM	0	4	0	0
7:45 AM	0	2	1	0
8:00 AM	0	7	0	0
8:15 AM	0	3	0	0
8:30 AM	0	1	1	0
8:45 AM	0	1	2	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	27	4	0
PEAK HR VOLUMES	0	13	2	0
03:00 PM	0	1	0	0
3:15 PM	0	3	1	0
3:30 PM	0	1	0	0
3:45 PM	0	2	0	0
4:00 PM	0	0	1	0
4:15 PM	0	5	0	0
4:30 PM	0	3	0	0
4:45 PM	0	2	1	0
5:00 PM	0	0	0	0
5:15 PM	0	1	0	0
5:30 PM	0	2	0	0
5:45 PM	0	0	0	0
VOLUMES	0	20	3	0
PEAK HR VOLUMES	0	8	1	0

I-15 SB Ramps

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

SOUTH SIDE

I-15 SB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	I-15 SB Ramps	LOCATION #:	16
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

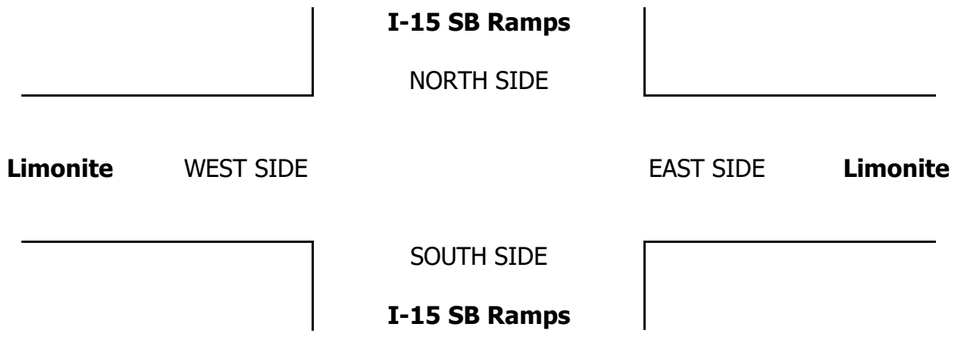
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	1.3	0.3	1.3	X	2	1	2	2	X	
AM	7:00 AM	0	0	0	1	0	0	0	1	4	2	4	0	12
	7:15 AM	0	0	0	0	0	1	0	1	0	4	0	0	6
	7:30 AM	0	0	0	0	0	1	0	0	0	0	2	0	3
	7:45 AM	0	0	0	0	0	1	0	1	1	1	0	0	4
	8:00 AM	0	0	0	1	0	0	0	1	1	0	1	0	4
	8:15 AM	0	0	0	1	0	3	0	0	1	2	3	0	10
	8:30 AM	0	0	0	1	0	1	0	0	1	2	2	0	7
	8:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	2
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	4	0	8	0	5	8	11	12	0	48
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	38%	62%	48%	52%	0%	
	APP/DEPART	0	/	0	12	/	19	13	/	9	23	/	20	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	0	0	3	0	5	0	2	4	5	6	0	25
	APPROACH %	0%	0%	0%	38%	0%	63%	0%	33%	67%	45%	55%	0%	
	PEAK HR FACTOR		0.000			0.500			0.300			0.458		0.521
	APP/DEPART	0	/	0	8	/	9	6	/	5	11	/	11	0
PM	03:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	3:15 PM	0	0	0	1	0	0	0	1	0	0	1	0	3
	3:30 PM	0	0	0	1	0	0	0	2	0	1	0	0	4
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	1	0	0	0	1	0	2	0	0	4
	4:15 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
	4:30 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
	4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	5:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
	5:15 PM	0	0	0	0	0	1	0	1	0	1	0	0	3
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	1	0	0	0	2	0	0	0	0	3
	VOLUMES	0	0	0	7	0	1	0	10	0	4	2	0	24
	APPROACH %	0%	0%	0%	88%	0%	13%	0%	100%	0%	67%	33%	0%	
	APP/DEPART	0	/	0	8	/	4	10	/	17	6	/	3	0
	BEGIN PEAK HR		3:15 PM											
	VOLUMES	0	0	0	3	0	0	0	4	0	3	1	0	11
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	75%	25%	0%	
	PEAK HR FACTOR		0.000			0.750			0.500			0.500		0.688
	APP/DEPART	0	/	0	3	/	3	4	/	7	4	/	1	0

U-TURNS					RTOR			
NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
					X	0	0	X
0	0	0	0	0	0	0	1	0
0	0	0	0	0	0	1	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	3	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	4	1	0
					0	3	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
					0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION: Eastvale		PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH: I-15 SB Ramps		LOCATION #:	16
	EAST & WEST: Limonite		CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EASTBOUND Limonite			WESTBOUND Limonite				U-TURNS					RTOR			
	LANES:	NL X	NT X	NR X	SL 1.3	ST 0.3	SR 1.3	EL X	ET 2	ER 1	WL 2	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL	NRR X	SRR 0	ERR 0	WRR X
AM	7:00 AM	0	0	0	1	0	3	0	1	1	2	1	0	9	0	0	0	0	0	0	2	0	0
	7:15 AM	0	0	0	0	0	2	0	0	0	2	2	0	6	0	0	0	0	0	0	1	0	0
	7:30 AM	0	0	0	0	0	4	0	1	0	0	2	0	7	0	0	0	0	0	0	3	0	0
	7:45 AM	0	0	0	1	0	2	0	2	3	2	0	0	10	0	0	0	0	0	0	1	2	0
	8:00 AM	0	0	0	1	0	3	0	3	2	3	2	0	14	0	0	0	0	0	0	2	0	0
	8:15 AM	0	0	0	2	0	1	0	4	1	5	3	0	16	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	1	0	2	0	3	0	2	1	0	9	0	0	0	0	0	0	1	0	0
	8:45 AM	0	0	0	1	0	2	0	1	1	4	1	0	10	0	0	0	0	0	0	1	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	7	0	19	0	15	8	20	12	0	81	0	0	0	0	0	0	11	2	0
	APPROACH %	0%	0%	0%	27%	0%	73%	0%	65%	35%	63%	38%	0%										
	APP/DEPART	0	/	0	26	/	28	23	/	22	32	/	31	0									
	BEGIN PEAK HR		7:45 AM																				
	VOLUMES	0	0	0	5	0	8	0	11	4	14	7	0	49						0	4	0	0
	APPROACH %	0%	0%	0%	38%	0%	62%	0%	73%	27%	67%	33%	0%										
	PEAK HR FACTOR		0.000			0.813			0.750			0.656		0.766									
	APP/DEPART	0	/	0	13	/	18	15	/	16	21	/	15	0									
PM	03:00 PM	0	0	0	1	0	0	0	1	0	1	0	0	3	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	1	0	0	0	0	1	0	1	0	3	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	1	0
	4:00 PM	0	0	0	1	0	0	0	0	2	1	0	0	4	0	0	0	0	0	0	0	1	0
	4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	1	0	0	0	2	1	2	1	0	7	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	1	0	0	0	0	1	0	2	0	0	0	0	0	0	1	0	0
	5:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	0	0	0	0	1	0	0
	5:15 PM	0	0	0	0	0	1	0	1	0	1	0	0	3	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	1	0	1	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	5	0	5	0	6	5	8	5	0	34	0	0	0	0	0	0	2	2	0
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	55%	45%	62%	38%	0%										
	APP/DEPART	0	/	0	10	/	13	11	/	11	13	/	10	0									
	BEGIN PEAK HR		3:45 PM																				
	VOLUMES	0	0	0	2	0	1	0	3	3	3	3	0	15						0	1	1	0
	APPROACH %	0%	0%	0%	67%	0%	33%	0%	50%	50%	50%	50%	0%										
	PEAK HR FACTOR		0.000			0.750			0.500			0.500		0.536									
	APP/DEPART	0	/	0	3	/	6	6	/	5	6	/	4	0									

I-15 SB Ramps

NORTH SIDE

Limonite WEST SIDE

EAST SIDE **Limonite**

SOUTH SIDE

I-15 SB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	I-15 SB Ramps	LOCATION #:	16
THURSDAY	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1.3	0.3	1.3	X	2	1	2	2	X	
AM 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	1	0	0	0	0	1
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	0	0	0	0	0	0	1	0	0	0	0	1
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.250			0.000		0.250
APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0	0
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	1	0	0	0	0	1	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	1	0	0	0	0	3	0	0	0	4
APPROACH %	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	
APP/DEPART	0	/	0	1	/	3	3	/	1	0	/	0	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	0	0	0	1	0	0	0	0	3	0	0	0	4
APPROACH %	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.250			0.750			0.000		0.500
APP/DEPART	0	/	0	1	/	3	3	/	1	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	X	0	0	X
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

I-15 SB Ramps

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

SOUTH SIDE

I-15 SB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:			
5/23/19 THURSDAY	LOCATION: Eastvale	PROJECT #:	SC2210
	NORTH & SOUTH: I-15 SB Ramps	LOCATION #:	16
	EAST & WEST: Limonite	CONTROL:	SIGNAL

CLASS 6: BUSES

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1.3	0.3	1.3	X	2	1	2	2	X	
AM 7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	0	0	0	4	0	0	0	0	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	0	0	0	0	0	1	0	1	1	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
8:30 AM	0	0	0	0	0	1	0	0	0	0	2	0	3
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	1	0	8	0	1	6	0	16
APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	14%	86%	0%	
APP/DEPART	0	/	0	1	/	1	8	/	8	7	/	7	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	0	0	0	0	1	0	3	0	1	4	0	9
APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	20%	80%	0%	
PEAK HR FACTOR		0.000			0.250			0.188			0.625		0.563
APP/DEPART	0	/	0	1	/	1	3	/	3	5	/	5	0
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	1	1	1	0	3
4:30 PM	0	0	0	0	0	0	0	2	0	1	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
VOLUMES	0	0	0	0	0	0	0	5	3	2	5	0	15
APPROACH %	0%	0%	0%	0%	0%	0%	0%	63%	38%	29%	71%	0%	
APP/DEPART	0	/	0	0	/	5	8	/	5	7	/	5	0
BEGIN PEAK HR		3:45 PM											
VOLUMES	0	0	0	0	0	0	0	3	2	2	2	0	9
APPROACH %	0%	0%	0%	0%	0%	0%	0%	60%	40%	50%	50%	0%	
PEAK HR FACTOR		0.000			0.000			0.625			0.500		0.750
APP/DEPART	0	/	0	0	/	4	5	/	3	4	/	2	0

U-TURNS / **RTOR**

	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						X	0	0	X
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	1	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	1	0	0
AM PEAK HR VOLUMES						0	1	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PM PEAK HR VOLUMES						0	0	0	0

I-15 SB Ramps

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

SOUTH SIDE

I-15 SB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

T816

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, May 23, 19

LOCATION: Eastvale
NORTH & SOUTH: I-15 NB Ramps
EAST & WEST: Limonite

PROJECT #: SC2210
LOCATION #: 17
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

◄ W E ► N ▲ S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND I-15 NB Ramps			SOUTHBOUND I-15 NB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
	LANES:	NL 1.3	NT 0.3	NR 1.3	SL X	ST X	SR X	EL 2	ET 2	ER X	WL X	WT 2	WR 1	TOTAL
AM	7:00 AM	40	0	48	0	0	0	112	81	0	0	180	63	524
	7:15 AM	37	0	64	0	0	0	139	60	0	0	189	61	550
	7:30 AM	30	0	69	0	0	0	126	64	0	0	212	47	548
	7:45 AM	46	0	88	0	0	0	92	56	0	0	207	40	529
	8:00 AM	46	0	70	0	0	0	72	78	0	0	179	37	482
	8:15 AM	49	1	89	0	0	0	84	97	0	0	159	28	507
	8:30 AM	62	2	66	0	0	0	89	94	0	0	166	43	522
	8:45 AM	81	1	80	0	0	0	77	82	0	0	155	47	523
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	391	4	574	0	0	0	791	612	0	0	1,447	366	4,185
	APPROACH %	40%	0%	59%	0%	0%	0%	56%	44%	0%	0%	80%	20%	
	APP/DEPART	969	/	1,161	0	/	0	1,403	/	1,186	1,813	/	1,838	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	153	0	269	0	0	0	469	261	0	0	788	211	2,151
	APPROACH %	36%	0%	64%	0%	0%	0%	64%	36%	0%	0%	79%	21%	
	PEAK HR FACTOR		0.787			0.000			0.917			0.964		0.978
	APP/DEPART	422	/	680	0	/	0	730	/	530	999	/	941	0
PM	03:00 PM	74	0	129	0	0	0	49	116	0	0	133	28	529
	3:15 PM	71	0	128	0	0	0	54	128	0	0	147	30	558
	3:30 PM	79	0	139	0	0	0	58	122	0	0	145	35	578
	3:45 PM	82	0	145	0	0	0	63	139	0	0	144	32	605
	4:00 PM	80	0	154	0	0	0	60	148	0	0	166	36	644
	4:15 PM	87	0	150	0	0	0	67	138	0	0	153	34	629
	4:30 PM	71	0	154	0	0	0	62	146	0	0	160	39	632
	4:45 PM	76	0	151	0	0	0	41	126	0	0	171	33	598
	5:00 PM	80	0	163	0	0	0	60	145	0	0	196	16	660
	5:15 PM	97	0	162	0	0	0	56	156	0	0	196	27	694
	5:30 PM	99	0	179	0	0	0	59	161	0	0	162	29	689
	5:45 PM	96	1	139	0	0	0	57	163	0	0	190	28	674
	VOLUMES	992	1	1,793	0	0	0	686	1,688	0	0	1,963	367	7,490
	APPROACH %	36%	0%	64%	0%	0%	0%	29%	71%	0%	0%	84%	16%	
	APP/DEPART	2,786	/	1,054	0	/	0	2,374	/	3,481	2,330	/	2,955	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	372	1	643	0	0	0	232	625	0	0	744	100	2,717
	APPROACH %	37%	0%	63%	0%	0%	0%	27%	73%	0%	0%	88%	12%	
	PEAK HR FACTOR		0.914			0.000			0.974			0.946		0.979
	APP/DEPART	1,016	/	333	0	/	0	857	/	1,268	844	/	1,116	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	X	X	0
39	0	0	21
40	0	0	5
51	0	0	1
64	0	0	5
52	0	0	7
64	0	0	5
52	0	0	11
56	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
418	0	0	56
194	0	0	32
69	0	0	5
61	0	0	4
73	0	0	3
71	0	0	4
75	0	0	6
81	0	0	3
79	0	0	7
87	0	0	6
80	0	0	1
72	0	0	0
78	0	0	0
67	0	0	4
893	0	0	43
297	0	0	5

I-15 NB Ramps

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

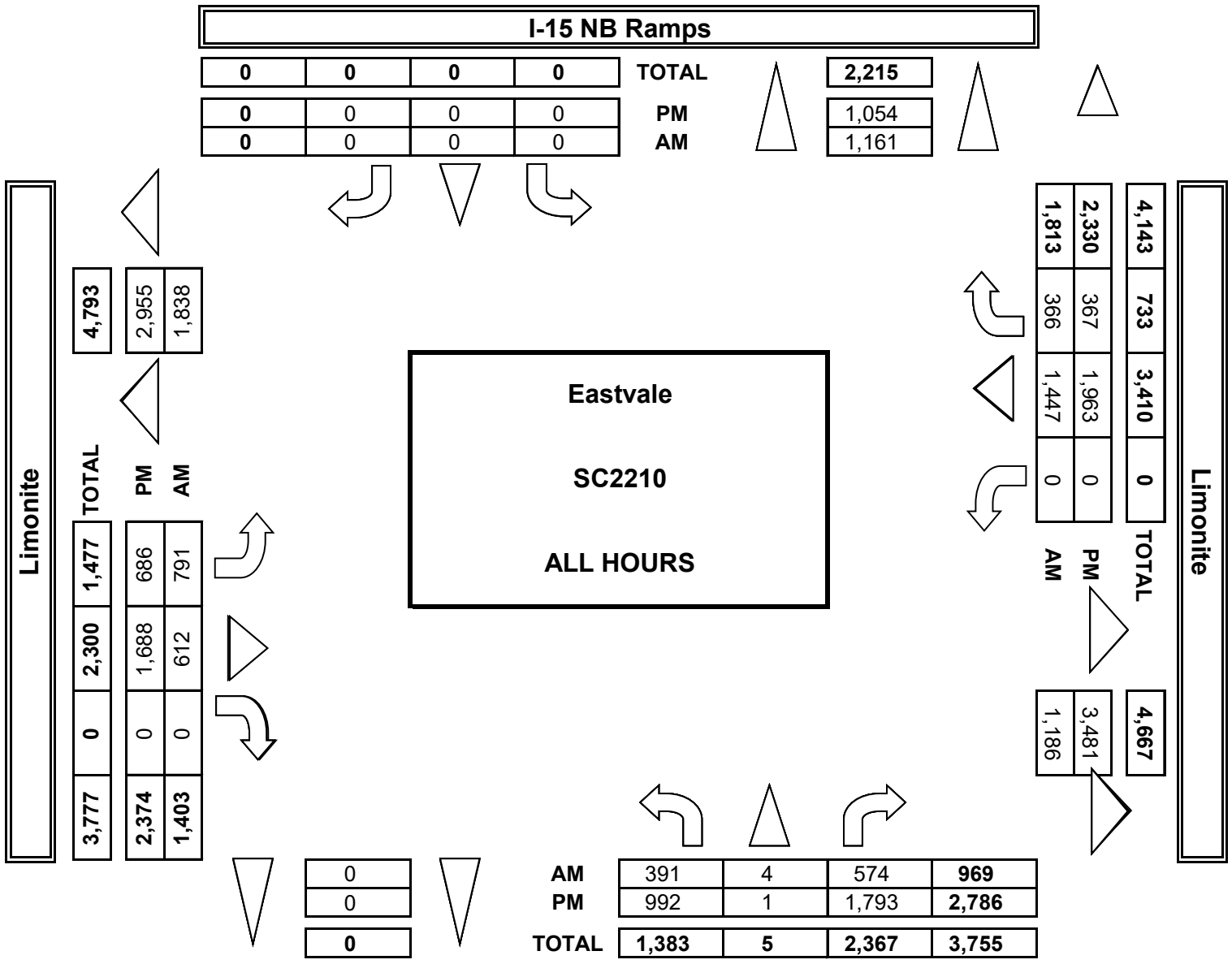
SOUTH SIDE

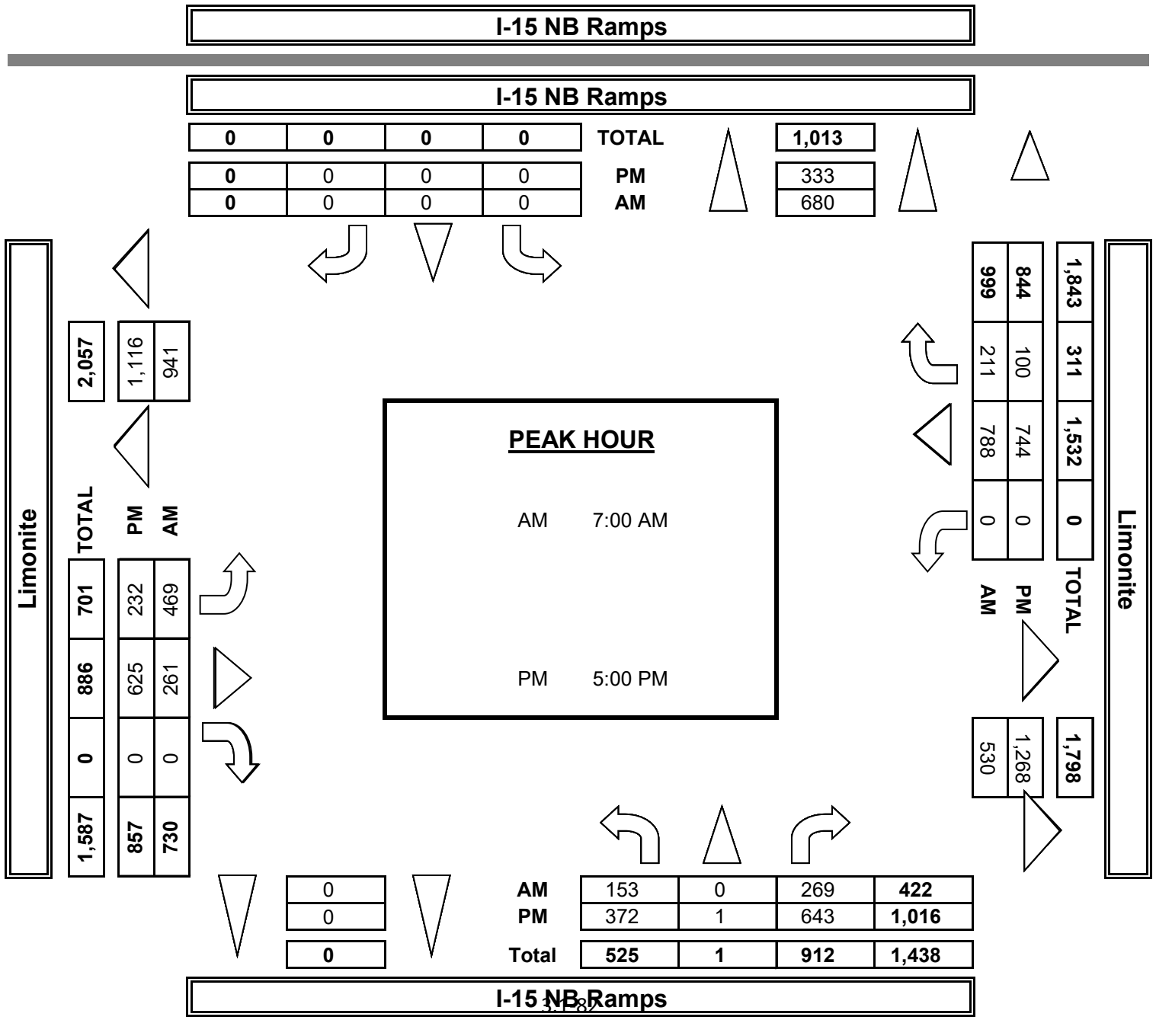
I-15 NB Ramps

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	3	0	3	0	0	2	0	2	0	0	1	0	1
PM	3:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	3:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	3:30 PM	0	0	2	1	3	0	0	1	1	2	0	0	1	0	1
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	4:30 PM	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1
	4:45 PM	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	5:30 PM	0	0	3	0	3	0	0	0	0	0	0	0	3	0	3
	5:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	TOTAL	0	0	14	1	15	0	0	6	1	7	0	0	8	0	8

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	I-15 NB Ramps	LOCATION #:	17
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-15 NB Ramps			SOUTHBOUND I-15 NB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	X	X	X	2	2	X	X	2	1	

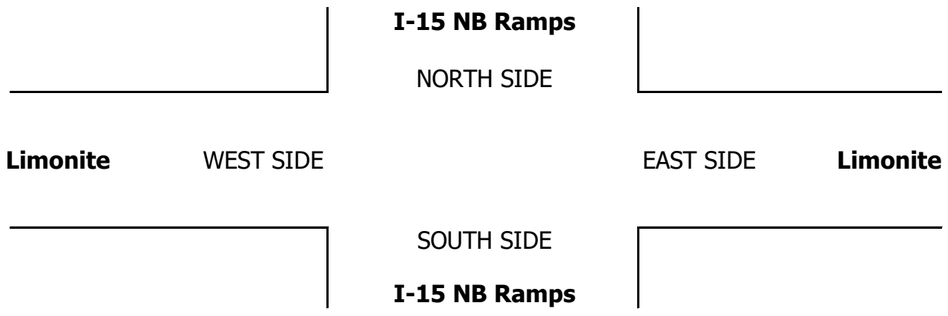
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	X	X	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	33	0	43	0	0	0	110	69	0	0	161	55	471	0	0	0	0	0	34	0	0	21
	7:15 AM	31	0	59	0	0	0	133	54	0	0	166	52	495	0	0	0	0	0	37	0	0	3
	7:30 AM	26	0	61	0	0	0	124	59	0	0	199	39	508	0	0	0	0	0	46	0	0	1
	7:45 AM	40	0	82	0	0	0	88	48	0	0	186	37	481	0	0	0	0	0	59	0	0	4
	8:00 AM	43	0	63	0	0	0	70	66	0	0	156	36	434	0	0	0	0	0	46	0	0	7
	8:15 AM	42	1	74	0	0	0	77	86	0	0	142	25	447	0	0	0	0	0	56	0	0	4
	8:30 AM	53	0	62	0	0	0	84	81	0	0	143	39	462	0	0	0	0	0	48	0	0	10
	8:45 AM	73	1	72	0	0	0	73	69	0	0	140	43	471	0	0	0	0	0	51	0	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	341	2	516	0	0	0	759	532	0	0	1,293	326	3,769	0	0	0	0	0	377	0	0	51
	APPROACH %	40%	0%	60%	0%	0%	0%	59%	41%	0%	0%	80%	20%										
	APP/DEPART	859	/	1,087	0	/	0	1,291	/	1,048	1,619	/	1,634	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	130	0	245	0	0	0	455	230	0	0	712	183	1,955						176	0	0	29
	APPROACH %	35%	0%	65%	0%	0%	0%	66%	34%	0%	0%	80%	20%										
	PEAK HR FACTOR		0.768			0.000			0.916			0.940		0.962									
	APP/DEPART	375	/	638	0	/	0	685	/	475	895	/	842	0									
PM	03:00 PM	71	0	126	0	0	0	45	112	0	0	129	26	509	0	0	0	0	0	68	0	0	5
	3:15 PM	70	0	122	0	0	0	51	123	0	0	140	29	535	0	0	0	0	0	58	0	0	4
	3:30 PM	75	0	133	0	0	0	52	115	0	0	137	33	545	0	0	0	0	0	69	0	0	3
	3:45 PM	81	0	138	0	0	0	61	134	0	0	136	28	578	0	0	0	0	0	67	0	0	3
	4:00 PM	75	0	137	0	0	0	57	140	0	0	160	33	602	0	0	0	0	0	65	0	0	6
	4:15 PM	82	0	141	0	0	0	63	128	0	0	147	32	593	0	0	0	0	0	76	0	0	3
	4:30 PM	68	0	146	0	0	0	55	139	0	0	154	37	599	0	0	0	0	0	75	0	0	7
	4:45 PM	74	0	143	0	0	0	40	122	0	0	160	32	571	0	0	0	0	0	81	0	0	6
	5:00 PM	79	0	150	0	0	0	57	141	0	0	190	15	632	0	0	0	0	0	74	0	0	1
	5:15 PM	95	0	152	0	0	0	56	149	0	0	187	23	662	0	0	0	0	0	68	0	0	0
	5:30 PM	98	0	163	0	0	0	57	156	0	0	157	27	658	0	0	0	0	0	72	0	0	0
	5:45 PM	94	0	128	0	0	0	52	154	0	0	185	28	641	0	0	0	0	0	60	0	0	4
	VOLUMES	962	0	1,679	0	0	0	646	1,613	0	0	1,882	343	7,125	0	0	0	0	0	833	0	0	42
	APPROACH %	36%	0%	64%	0%	0%	0%	29%	71%	0%	0%	85%	15%										
	APP/DEPART	2,641	/	989	0	/	0	2,259	/	3,292	2,225	/	2,844	0									
	BEGIN PEAK HR		5:00 PM																				
	VOLUMES	366	0	593	0	0	0	222	600	0	0	719	93	2,593						274	0	0	5
	APPROACH %	38%	0%	62%	0%	0%	0%	27%	73%	0%	0%	89%	11%										
	PEAK HR FACTOR		0.919			0.000			0.965			0.953		0.979									
	APP/DEPART	959	/	315	0	/	0	822	/	1,193	812	/	1,085	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	I-15 NB Ramps	LOCATION #:	17
THURSDAY	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 2:	NOTES:			
2-AXLE		AM		▲ N
WORK		PM		
VEHICLES/		MD	◄ W	E ►
TRUCKS		OTHER		S ▼
		OTHER		

		NORTHBOUND I-15 NB Ramps			SOUTHBOUND I-15 NB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1.3	0.3	1.3	X	X	X	2	2	X	X	2	1	
AM	7:00 AM	5	0	5	0	0	0	2	9	0	0	12	6	39
	7:15 AM	5	0	3	0	0	0	4	1	0	0	17	4	34
	7:30 AM	2	0	6	0	0	0	2	4	0	0	10	4	28
	7:45 AM	5	0	4	0	0	0	1	6	0	0	17	3	36
	8:00 AM	2	0	5	0	0	0	1	7	0	0	17	1	33
	8:15 AM	3	0	10	0	0	0	1	8	0	0	8	3	33
	8:30 AM	7	2	4	0	0	0	2	12	0	0	16	2	45
	8:45 AM	7	0	6	0	0	0	2	10	0	0	9	3	37
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	36	2	43	0	0	0	15	57	0	0	106	26	285
	APPROACH %	44%	2%	53%	0%	0%	0%	21%	79%	0%	0%	80%	20%	
	APP/DEPART	81	/	43	0	/	0	72	/	100	132	/	142	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	19	2	25	0	0	0	6	37	0	0	50	9	148
	APPROACH %	41%	4%	54%	0%	0%	0%	14%	86%	0%	0%	85%	15%	
	PEAK HR FACTOR		0.885			0.000			0.768			0.819		0.822
	APP/DEPART	46	/	17	0	/	0	43	/	62	59	/	69	0
PM	03:00 PM	2	0	2	0	0	0	3	2	0	0	4	1	14
	3:15 PM	0	0	5	0	0	0	2	3	0	0	6	0	16
	3:30 PM	3	0	3	0	0	0	4	4	0	0	7	1	22
	3:45 PM	1	0	7	0	0	0	2	5	0	0	6	3	24
	4:00 PM	4	0	13	0	0	0	2	5	0	0	5	2	31
	4:15 PM	4	0	4	0	0	0	3	7	0	0	4	2	24
	4:30 PM	2	0	5	0	0	0	2	5	0	0	3	2	19
	4:45 PM	0	0	6	0	0	0	1	4	0	0	9	1	21
	5:00 PM	1	0	12	0	0	0	3	2	0	0	5	1	24
	5:15 PM	2	0	6	0	0	0	0	5	0	0	7	2	22
	5:30 PM	1	0	12	0	0	0	0	4	0	0	4	2	23
	5:45 PM	2	1	7	0	0	0	5	7	0	0	3	0	25
	VOLUMES	22	1	82	0	0	0	27	53	0	0	63	17	265
	APPROACH %	21%	1%	78%	0%	0%	0%	34%	66%	0%	0%	79%	21%	
	APP/DEPART	105	/	45	0	/	0	80	/	135	80	/	85	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	12	0	27	0	0	0	11	21	0	0	22	8	101
	APPROACH %	31%	0%	69%	0%	0%	0%	34%	66%	0%	0%	73%	27%	
	PEAK HR FACTOR		0.574			0.000			0.800			0.833		0.815
	APP/DEPART	39	/	19	0	/	0	32	/	48	30	/	34	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						0	X	X	0
7:00 AM	0	0	0	0	0	5	0	0	0
7:15 AM	0	0	0	0	0	2	0	0	0
7:30 AM	0	0	0	0	0	4	0	0	0
7:45 AM	0	0	0	0	0	4	0	0	1
8:00 AM	0	0	0	0	0	5	0	0	0
8:15 AM	0	0	0	0	0	5	0	0	1
8:30 AM	0	0	0	0	0	4	0	0	1
8:45 AM	0	0	0	0	0	3	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	32	0	0	3
PEAK HR VOLUMES						17	0	0	2
03:00 PM	0	0	0	0	0	1	0	0	0
3:15 PM	0	0	0	0	0	3	0	0	0
3:30 PM	0	0	0	0	0	2	0	0	0
3:45 PM	0	0	0	0	0	4	0	0	1
4:00 PM	0	0	0	0	0	7	0	0	0
4:15 PM	0	0	0	0	0	3	0	0	0
4:30 PM	0	0	0	0	0	2	0	0	0
4:45 PM	0	0	0	0	0	5	0	0	0
5:00 PM	0	0	0	0	0	6	0	0	0
5:15 PM	0	0	0	0	0	1	0	0	0
5:30 PM	0	0	0	0	0	5	0	0	0
5:45 PM	0	0	0	0	0	5	0	0	0
VOLUMES	0	0	0	0	0	44	0	0	1
PEAK HR VOLUMES						16	0	0	1

I-15 NB Ramps

NORTH SIDE

Limonite WEST SIDE

EAST SIDE **Limonite**

SOUTH SIDE

I-15 NB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
5/23/19	NORTH & SOUTH:	I-15 NB Ramps	LOCATION #:	17
THURSDAY	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 NB Ramps			SOUTHBOUND I-15 NB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
	LANES:	NL 1.3	NT 0.3	NR 1.3	SL X	ST X	SR X	EL 2	ET 2	ER X	WL X	WT 2	WR 1	TOTAL
AM	7:00 AM	2	0	0	0	0	0	0	2	0	0	3	0	7
	7:15 AM	0	0	2	0	0	0	1	1	0	0	3	1	8
	7:30 AM	2	0	1	0	0	0	0	0	0	0	0	3	6
	7:45 AM	1	0	1	0	0	0	1	0	0	0	0	0	3
	8:00 AM	0	0	2	0	0	0	0	2	0	0	1	0	5
	8:15 AM	3	0	1	0	0	0	0	1	0	0	2	0	7
	8:30 AM	1	0	0	0	0	0	0	0	0	0	3	0	4
	8:45 AM	0	0	1	0	0	0	0	1	0	0	2	1	5
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	9	0	8	0	0	0	2	7	0	0	14	5	45
	APPROACH %	53%	0%	47%	0%	0%	0%	22%	78%	0%	0%	74%	26%	
	APP/DEPART	17	/	7	0	/	0	9	/	15	19	/	23	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	5	0	4	0	0	0	2	3	0	0	6	4	24
	APPROACH %	56%	0%	44%	0%	0%	0%	40%	60%	0%	0%	60%	40%	
	PEAK HR FACTOR		0.750			0.000			0.625			0.625		0.750
	APP/DEPART	9	/	6	0	/	0	5	/	7	10	/	11	0
PM	03:00 PM	0	0	1	0	0	0	0	1	0	0	0	0	2
	3:15 PM	1	0	0	0	0	0	1	1	0	0	0	1	4
	3:30 PM	0	0	1	0	0	0	1	2	0	0	1	0	5
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
	4:00 PM	0	0	1	0	0	0	1	1	0	0	1	0	4
	4:15 PM	0	0	3	0	0	0	0	2	0	0	0	0	5
	4:30 PM	0	0	0	0	0	0	2	0	0	0	0	0	2
	4:45 PM	1	0	0	0	0	0	0	0	0	0	1	0	2
	5:00 PM	0	0	1	0	0	0	0	1	0	0	0	0	2
	5:15 PM	0	0	1	0	0	0	0	1	0	0	0	1	3
	5:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	2
	5:45 PM	0	0	2	0	0	0	0	2	0	0	1	0	5
	VOLUMES	2	0	11	0	0	0	6	11	0	0	4	3	37
	APPROACH %	15%	0%	85%	0%	0%	0%	35%	65%	0%	0%	57%	43%	
	APP/DEPART	13	/	9	0	/	0	17	/	22	7	/	6	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	5	0	0	0	2	5	0	0	2	1	15
	APPROACH %	0%	0%	100%	0%	0%	0%	29%	71%	0%	0%	67%	33%	
	PEAK HR FACTOR		0.417			0.000			0.583			0.750		0.750
	APP/DEPART	5	/	3	0	/	0	7	/	10	3	/	2	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR 0	SRR X	ERR X	WRR 0
7:00 AM	0	0	0	0
7:15 AM	1	0	0	1
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	1	0	0	0
8:15 AM	1	0	0	0
8:30 AM	0	0	0	0
8:45 AM	1	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	4	0	0	1
PEAK HR VOLUMES	1	0	0	1
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	1	0	0	0
3:45 PM	0	0	0	0
4:00 PM	1	0	0	0
4:15 PM	2	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	4	0	0	0
PEAK HR VOLUMES	4	0	0	0

I-15 NB Ramps

NORTH SIDE

Limonite WEST SIDE EAST SIDE **Limonite**

SOUTH SIDE

I-15 NB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	I-15 NB Ramps	LOCATION #:	17
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-15 NB Ramps			SOUTHBOUND I-15 NB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	X	X	X	2	2	X	X	2	1	

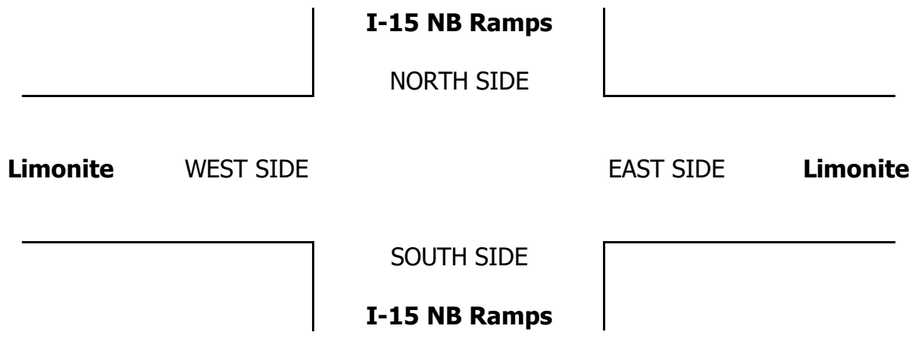
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	X	X	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	0	0	0	0	1	0	0	3	2	6	0	0	0	0	0	0	0	0	0
	7:15 AM	1	0	0	0	0	0	1	0	0	0	3	4	9	0	0	0	0	0	0	0	0	1
	7:30 AM	0	0	1	0	0	0	0	1	0	0	2	1	5	0	0	0	0	0	1	0	0	0
	7:45 AM	0	0	1	0	0	0	2	1	0	0	2	0	6	0	0	0	0	0	1	0	0	0
	8:00 AM	1	0	0	0	0	0	1	3	0	0	4	0	9	0	0	0	0	0	0	0	0	0
	8:15 AM	1	0	3	0	0	0	6	0	0	0	7	0	17	0	0	0	0	0	2	0	0	0
	8:30 AM	1	0	0	0	0	0	3	1	0	0	2	2	9	0	0	0	0	0	0	0	0	0
	8:45 AM	1	0	1	0	0	0	2	0	0	0	4	0	8	0	0	0	0	0	1	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	5	0	6	0	0	0	15	7	0	0	27	9	69	0	0	0	0	0	5	0	0	1
	APPROACH %	45%	0%	55%	0%	0%	0%	68%	32%	0%	0%	75%	25%										
	APP/DEPART	11	/	24	0	/	0	22	/	13	36	/	32	0									
	BEGIN PEAK HR		8:00 AM																				
	VOLUMES	4	0	4	0	0	0	12	4	0	0	17	2	43						3	0	0	0
	APPROACH %	50%	0%	50%	0%	0%	0%	75%	25%	0%	0%	89%	11%										
	PEAK HR FACTOR		0.500			0.000			0.667			0.679		0.632									
	APP/DEPART	8	/	14	0	/	0	16	/	8	19	/	21	0									
PM	03:00 PM	1	0	0	0	0	0	1	1	0	0	0	1	4	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	1	0	0	0	0	1	0	0	1	0	3	0	0	0	0	0	0	0	0	0
	3:30 PM	1	0	2	0	0	0	1	0	0	0	0	1	5	0	0	0	0	0	1	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	4:00 PM	1	0	3	0	0	0	0	1	0	0	0	1	6	0	0	0	0	0	2	0	0	0
	4:15 PM	1	0	2	0	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
	4:30 PM	1	0	3	0	0	0	2	1	0	0	2	0	9	0	0	0	0	0	2	0	0	0
	4:45 PM	1	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	3	0	0	0	0	1	0	0	1	1	6	0	0	0	0	0	3	0	0	0
	5:30 PM	0	0	3	0	0	0	1	0	0	0	1	0	5	0	0	0	0	0	1	0	0	0
	5:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0
	VOLUMES	6	0	20	0	0	0	6	5	0	0	7	4	48	0	0	0	0	0	11	0	0	0
	APPROACH %	23%	0%	77%	0%	0%	0%	55%	45%	0%	0%	64%	36%										
	APP/DEPART	26	/	10	0	/	0	11	/	25	11	/	13	0									
	BEGIN PEAK HR		4:00 PM																				
	VOLUMES	4	0	9	0	0	0	3	2	0	0	2	1	21						4	0	0	0
	APPROACH %	31%	0%	69%	0%	0%	0%	60%	40%	0%	0%	67%	33%										
	PEAK HR FACTOR		0.813			0.000			0.417			0.375		0.583									
	APP/DEPART	13	/	4	0	/	0	5	/	11	3	/	6	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	I-15 NB Ramps	LOCATION #:	17
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-15 NB Ramps			SOUTHBOUND I-15 NB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	X	X	X	2	2	X	X	2	1	

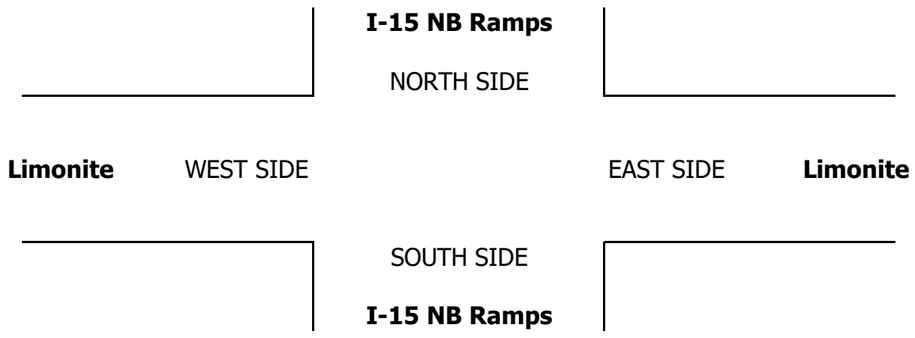
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	X	X	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%										
	APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0	0									
	BEGIN PEAK HR	8:00 AM																					
	VOLUMES	0	0	0	0	0	0	0	1	0	0	0	0	1						0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%										
	PEAK HR FACTOR	0.000			0.000			0.250			0.000			0.250									
	APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0	0									
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%										
	APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0	0									
	BEGIN PEAK HR	3:30 PM																					
	VOLUMES	0	0	0	0	0	0	0	1	0	0	0	0	1						0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%										
	PEAK HR FACTOR	0.000			0.000			0.250			0.000			0.250									
	APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
5/23/19	LOCATION:	Eastvale	PROJECT #:	SC2210
THURSDAY	NORTH & SOUTH:	I-15 NB Ramps	LOCATION #:	17
	EAST & WEST:	Limonite	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-15 NB Ramps			SOUTHBOUND I-15 NB Ramps			EASTBOUND Limonite			WESTBOUND Limonite			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	X	X	X	2	2	X	X	2	1	

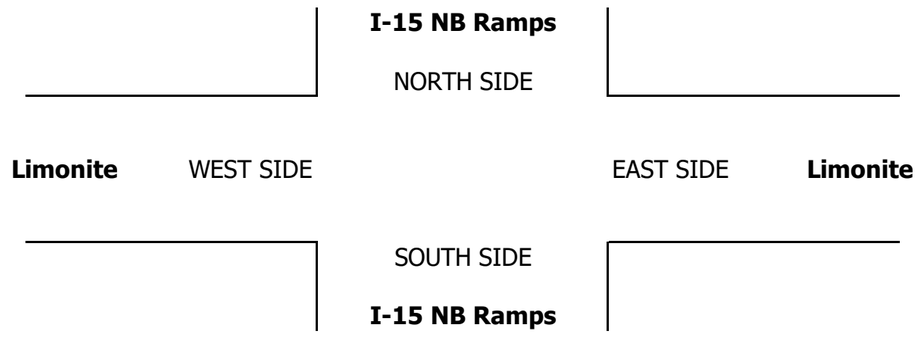
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	X	X	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	1	0	0	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	1	0	0	0	0	8	0	0	7	0	16	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%										
	APP/DEPART	1	/	0	0	/	0	8	/	9	7	/	7	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	0	0	1	0	0	0	0	3	0	0	5	0	9						0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%										
	PEAK HR FACTOR		0.250			0.000			0.188			0.625		0.563									
	APP/DEPART	1	/	0	0	/	0	3	/	4	5	/	5	0									
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	1	1	0	0	1	0	3	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	1	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	1	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	1	0	0	0	1	5	0	0	7	0	14	0	0	0	0	0	1	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	17%	83%	0%	0%	100%	0%										
	APP/DEPART	1	/	1	0	/	0	6	/	6	7	/	7	0									
	BEGIN PEAK HR		4:00 PM																				
	VOLUMES	0	0	1	0	0	0	1	2	0	0	4	0	8						1	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	33%	67%	0%	0%	100%	0%										
	PEAK HR FACTOR		0.250			0.000			0.375			0.500		0.667									
	APP/DEPART	1	/	1	0	/	0	3	/	3	4	/	4	0									



INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Jun 11, 19

LOCATION: Eastvale
NORTH & SOUTH: Archibald
EAST & WEST: Providence

PROJECT #: SC2210
LOCATION #: 18
CONTROL: SIGNAL

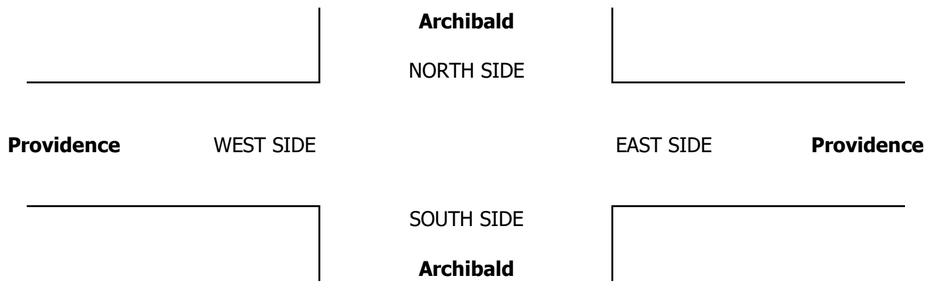
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

☑ Add U-Turns to Left Turns

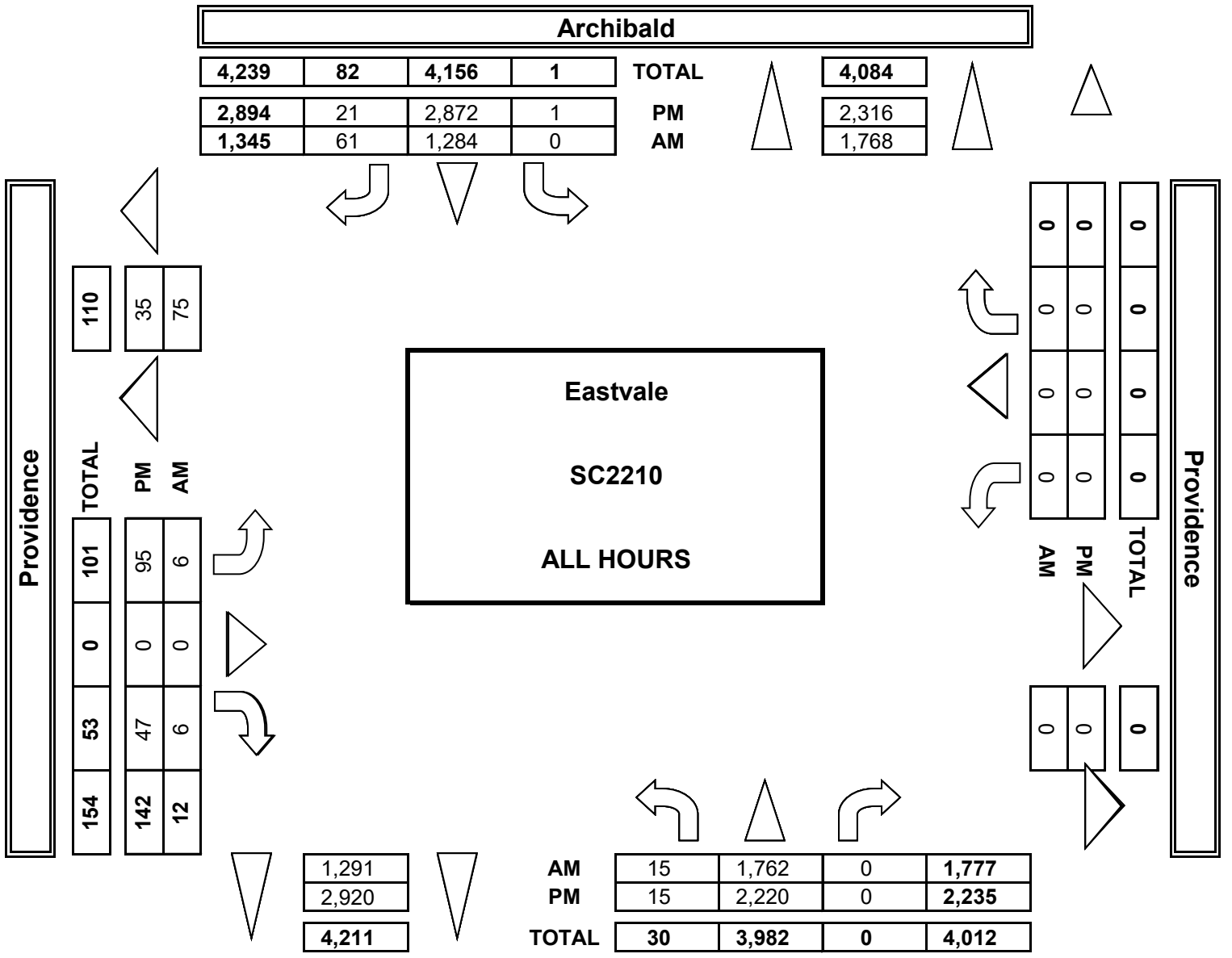
		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Providence			WESTBOUND Providence				U-TURNS					RTOR			
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 1	ET X	ER 1	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL	NRR X	SRR 0	ERR 0	WRR X
AM	7:00 AM	1	240	0	0	194	4	0	0	0	0	0	0	439	0	0	0	0	0	0	0	0	0
	7:15 AM	2	231	0	0	160	4	0	0	0	0	0	0	397	0	0	0	0	0	0	0	0	0
	7:30 AM	2	278	0	0	167	6	0	0	1	0	0	0	454	0	0	0	0	0	0	0	1	0
	7:45 AM	5	211	0	0	157	12	2	0	1	0	0	0	388	1	0	0	0	1	0	0	0	0
	8:00 AM	2	177	0	0	169	12	3	0	0	0	0	0	363	0	0	0	0	0	0	0	0	0
	8:15 AM	0	249	0	0	168	6	0	0	0	0	0	0	423	0	0	0	0	0	0	0	0	0
	8:30 AM	1	206	0	0	130	9	0	0	2	0	0	0	348	0	0	0	0	0	0	0	0	0
	8:45 AM	2	170	0	0	139	8	1	0	2	0	0	0	322	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	15	1,762	0	0	1,284	61	6	0	6	0	0	0	3,134	1	0	0	0	1	0	0	1	0
	APPROACH %	1%	99%	0%	0%	95%	5%	50%	0%	50%	0%	0%	0%										
	APP/DEPART	1,777	/	1,768	1,345	/	1,291	12	/	0	0	/	75	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	10	960	0	0	678	26	2	0	2	0	0	0	1,678						0	0	1	0
	APPROACH %	1%	99%	0%	0%	96%	4%	50%	0%	50%	0%	0%	0%										
	PEAK HR FACTOR		0.866			0.889			0.333			0.000		0.924									
	APP/DEPART	970	/	962	704	/	681	4	/	0	0	/	35	0									
PM	03:00 PM	1	197	0	0	179	2	4	0	3	0	0	0	386	0	0	0	0	0	0	0	3	0
	3:15 PM	1	205	0	0	197	1	3	0	2	0	0	0	409	0	0	0	0	0	0	0	1	0
	3:30 PM	2	226	0	0	220	6	6	0	3	0	0	0	463	0	0	0	0	0	0	0	2	0
	3:45 PM	2	179	0	0	225	1	8	0	2	0	0	0	417	0	0	0	0	0	0	0	1	0
	4:00 PM	0	193	0	0	217	0	6	0	1	0	0	0	417	0	0	0	0	0	0	0	1	0
	4:15 PM	4	181	0	0	257	1	5	0	7	0	0	0	455	0	0	0	0	0	0	1	3	0
	4:30 PM	1	150	0	1	230	6	16	0	5	0	0	0	409	0	1	0	0	1	0	4	3	0
	4:45 PM	1	168	0	0	266	2	7	0	7	0	0	0	451	0	0	0	0	0	0	0	5	0
	5:00 PM	0	176	0	0	259	1	14	0	5	0	0	0	455	0	0	0	0	0	0	0	2	0
	5:15 PM	2	211	0	0	270	1	9	0	7	0	0	0	500	0	0	0	0	0	0	0	2	0
	5:30 PM	1	163	0	0	240	0	16	0	2	0	0	0	422	1	0	0	0	1	0	0	1	0
	5:45 PM	0	171	0	0	312	0	1	0	3	0	0	0	487	0	0	0	0	0	0	0	3	0
	VOLUMES	15	2,220	0	1	2,872	21	95	0	47	0	0	0	5,271	1	1	0	0	2	0	5	27	0
	APPROACH %	1%	99%	0%	0%	99%	1%	67%	0%	33%	0%	0%	0%										
	APP/DEPART	2,235	/	2,316	2,894	/	2,920	142	/	0	0	/	35	0									
	BEGIN PEAK HR		5:00 PM																				
	VOLUMES	3	721	0	0	1,081	2	40	0	17	0	0	0	1,864						0	0	8	0
	APPROACH %	0%	100%	0%	0%	100%	0%	70%	0%	30%	0%	0%	0%										
	PEAK HR FACTOR		0.850			0.868			0.750			0.000		0.932									
	APP/DEPART	724	/	761	1,083	/	1,099	57	/	0	0	/	4	0									

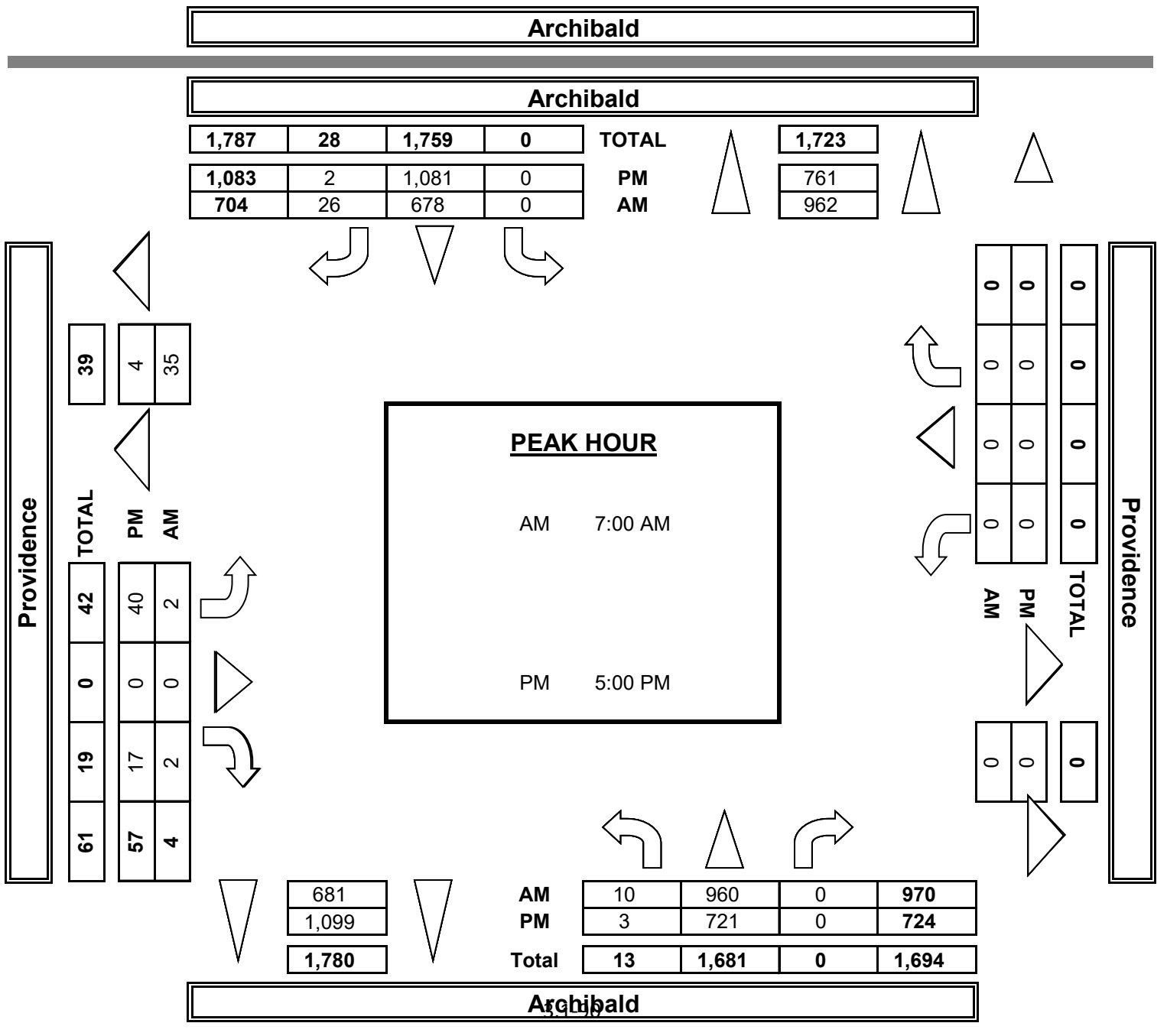


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	1	0	0	3	1	0	0	0	1	1	1	0	0	2
PM	3:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	5:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	1	2	0	5	0	0	0	0	0	2	1	2	0	5

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
6/11/19	LOCATION:	Eastvale	PROJECT #:	SC2210
TUESDAY	NORTH & SOUTH:	Archibald	LOCATION #:	18
	EAST & WEST:	Providence	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Providence			WESTBOUND Providence		
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	X	X	2	0	1	X	1	X	X	X	
AM	7:00 AM	1	214	0	0	170	3	0	0	0	0	0	0	388
AM	7:15 AM	1	210	0	0	138	2	0	0	0	0	0	0	351
AM	7:30 AM	2	263	0	0	147	5	0	0	1	0	0	0	418
AM	7:45 AM	5	194	0	0	138	10	1	0	1	0	0	0	349
AM	8:00 AM	2	165	0	0	148	9	1	0	0	0	0	0	325
AM	8:15 AM	0	227	0	0	151	6	0	0	0	0	0	0	384
AM	8:30 AM	1	191	0	0	114	7	0	0	1	0	0	0	314
AM	8:45 AM	2	157	0	0	121	7	0	0	1	0	0	0	288
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	14	1,621	0	0	1,127	49	2	0	4	0	0	0	2,817
AM	APPROACH %	1%	99%	0%	0%	96%	4%	33%	0%	67%	0%	0%	0%	
AM	APP/DEPART	1,635	/	1,623	1,176	/	1,132	6	/	0	0	/	62	0
AM	BEGIN PEAK HR		7:00 AM											
AM	VOLUMES	8	881	0	0	593	20	1	0	2	0	0	0	1,506
AM	APPROACH %	1%	99%	0%	0%	97%	3%	33%	0%	67%	0%	0%	0%	
AM	PEAK HR FACTOR		0.840			0.886			0.375			0.000		0.901
AM	APP/DEPART	890	/	882	613	/	596	3	/	0	0	/	28	0
PM	03:00 PM	0	180	0	0	162	0	1	0	2	0	0	0	345
PM	3:15 PM	1	194	0	0	185	0	2	0	1	0	0	0	383
PM	3:30 PM	0	217	0	0	205	3	4	0	1	0	0	0	430
PM	3:45 PM	1	166	0	0	211	1	8	0	1	0	0	0	388
PM	4:00 PM	0	174	0	0	203	0	6	0	1	0	0	0	384
PM	4:15 PM	1	168	0	0	244	0	3	0	5	0	0	0	421
PM	4:30 PM	1	140	0	1	217	2	16	0	3	0	0	0	380
PM	4:45 PM	1	162	0	0	256	0	5	0	5	0	0	0	429
PM	5:00 PM	0	168	0	0	248	1	12	0	5	0	0	0	434
PM	5:15 PM	1	198	0	0	259	0	7	0	6	0	0	0	471
PM	5:30 PM	1	157	0	0	236	0	14	0	2	0	0	0	410
PM	5:45 PM	0	165	0	0	307	0	1	0	3	0	0	0	476
PM	VOLUMES	7	2,089	0	1	2,733	7	79	0	35	0	0	0	4,951
PM	APPROACH %	0%	100%	0%	0%	100%	0%	69%	0%	31%	0%	0%	0%	
PM	APP/DEPART	2,096	/	2,169	2,741	/	2,769	114	/	0	0	/	13	0
PM	BEGIN PEAK HR		5:00 PM											
PM	VOLUMES	1	688	0	0	1,050	1	34	0	16	0	0	0	1,791
PM	APPROACH %	0%	100%	0%	0%	100%	0%	68%	0%	32%	0%	0%	0%	
PM	PEAK HR FACTOR		0.867			0.856			0.735			0.000		0.941
PM	APP/DEPART	690	/	722	1,051	/	1,067	50	/	0	0	/	2	0

U-TURNS / **RTOR**

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						X	0	0	X
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0
7:45 AM	1	0	0	0	1	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	1	0	0	0	1	0	0	1	0
AM PEAK HR VOLUMES						0	0	1	0
03:00 PM	0	0	0	0	0	0	0	2	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	1	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	3	0
4:30 PM	0	1	0	0	1	0	2	3	0
4:45 PM	0	0	0	0	0	0	0	5	0
5:00 PM	0	0	0	0	0	0	0	2	0
5:15 PM	0	0	0	0	0	0	0	2	0
5:30 PM	1	0	0	0	1	0	0	1	0
5:45 PM	0	0	0	0	0	0	0	3	0
VOLUMES	1	1	0	0	2	0	2	23	0
PM PEAK HR VOLUMES						0	0	8	0

Archibald

NORTH SIDE

Providence WEST SIDE

EAST SIDE **Providence**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
6/11/19	NORTH & SOUTH:	Archibald	LOCATION #:	18
TUESDAY	EAST & WEST:	Providence	CONTROL:	SIGNAL

CLASS 2:	NOTES:	AM		▲	
2-AXLE		PM		N	
WORK		MD	◄ W		E ►
VEHICLES/		OTHER		S	
TRUCKS		OTHER		▼	

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Providence			WESTBOUND Providence			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	X	X	2	0	1	X	1	X	X	X	
AM	7:00 AM	0	19	0	0	17	1	0	0	0	0	0	0	37
	7:15 AM	1	14	0	0	12	1	0	0	0	0	0	0	28
	7:30 AM	0	9	0	0	14	0	0	0	0	0	0	0	23
	7:45 AM	0	13	0	0	9	0	0	0	0	0	0	0	22
	8:00 AM	0	7	0	0	10	1	1	0	0	0	0	0	19
	8:15 AM	0	15	0	0	9	0	0	0	0	0	0	0	24
	8:30 AM	0	7	0	0	9	2	0	0	1	0	0	0	19
	8:45 AM	0	9	0	0	10	0	1	0	1	0	0	0	21
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	93	0	0	90	5	2	0	2	0	0	0	193
	APPROACH %	1%	99%	0%	0%	95%	5%	50%	0%	50%	0%	0%	0%	
	APP/DEPART	94	/	95	95	/	92	4	/	0	0	/	6	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	1	55	0	0	52	2	0	0	0	0	0	0	110
	APPROACH %	2%	98%	0%	0%	96%	4%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.737			0.750			0.000			0.000		0.743
	APP/DEPART	56	/	55	54	/	52	0	/	0	0	/	3	0
PM	03:00 PM	1	12	0	0	13	0	2	0	1	0	0	0	29
	3:15 PM	0	7	0	0	9	1	0	0	1	0	0	0	18
	3:30 PM	1	3	0	0	10	1	0	0	2	0	0	0	17
	3:45 PM	0	9	0	0	9	0	0	0	1	0	0	0	19
	4:00 PM	0	12	0	0	10	0	0	0	0	0	0	0	22
	4:15 PM	1	10	0	0	10	0	1	0	0	0	0	0	22
	4:30 PM	0	6	0	0	9	1	0	0	1	0	0	0	17
	4:45 PM	0	4	0	0	10	0	1	0	0	0	0	0	15
	5:00 PM	0	6	0	0	9	0	0	0	0	0	0	0	15
	5:15 PM	1	7	0	0	8	0	1	0	1	0	0	0	18
	5:30 PM	0	3	0	0	2	0	0	0	0	0	0	0	5
	5:45 PM	0	5	0	0	3	0	0	0	0	0	0	0	8
	VOLUMES	4	84	0	0	102	3	5	0	7	0	0	0	205
	APPROACH %	5%	95%	0%	0%	97%	3%	42%	0%	58%	0%	0%	0%	
	APP/DEPART	88	/	89	105	/	109	12	/	0	0	/	7	0
	BEGIN PEAK HR		3:00 PM											
	VOLUMES	2	31	0	0	41	2	2	0	5	0	0	0	83
	APPROACH %	6%	94%	0%	0%	95%	5%	29%	0%	71%	0%	0%	0%	
	PEAK HR FACTOR		0.635			0.827			0.583			0.000		0.716
	APP/DEPART	33	/	33	43	/	46	7	/	0	0	/	4	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	X	0	0	X
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
03:00 PM	0	0	1	0
3:15 PM	0	0	1	0
3:30 PM	0	0	1	0
3:45 PM	0	0	1	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	1	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	1	4	0
PEAK HR VOLUMES	0	0	4	0

Archibald

NORTH SIDE

Providence WEST SIDE EAST SIDE **Providence**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
6/11/19	NORTH & SOUTH:	Archibald	LOCATION #:	18
TUESDAY	EAST & WEST:	Providence	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Providence			WESTBOUND Providence			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	X	X	2	0	1	X	1	X	X	X	
AM	7:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	4
	7:15 AM	0	3	0	0	4	0	0	0	0	0	0	0	7
	7:30 AM	0	3	0	0	4	0	0	0	0	0	0	0	7
	7:45 AM	0	0	0	0	2	1	0	0	0	0	0	0	3
	8:00 AM	0	2	0	0	2	0	1	0	0	0	0	0	5
	8:15 AM	0	3	0	0	2	0	0	0	0	0	0	0	5
	8:30 AM	0	4	0	0	4	0	0	0	0	0	0	0	8
	8:45 AM	0	3	0	0	4	1	0	0	0	0	0	0	8
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	20	0	0	24	2	1	0	0	0	0	0	47
	APPROACH %	0%	100%	0%	0%	92%	8%	100%	0%	0%	0%	0%	0%	
	APP/DEPART	20	/	21	26	/	24	1	/	0	0	/	2	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	12	0	0	12	1	1	0	0	0	0	0	26
	APPROACH %	0%	100%	0%	0%	92%	8%	100%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.750			0.650			0.250			0.000		0.813
	APP/DEPART	12	/	13	13	/	12	1	/	0	0	/	1	0
PM	03:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
	3:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
	3:30 PM	0	3	0	0	1	2	0	0	0	0	0	0	6
	3:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	4:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	4:30 PM	0	1	0	0	1	0	0	0	1	0	0	0	3
	4:45 PM	0	1	0	0	0	0	0	0	1	0	0	0	2
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
	5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	12	0	0	9	2	0	0	2	0	0	0	25
	APPROACH %	0%	100%	0%	0%	82%	18%	0%	0%	100%	0%	0%	0%	
	APP/DEPART	12	/	12	11	/	11	2	/	0	0	/	2	0
	BEGIN PEAK HR		3:15 PM											
	VOLUMES	0	6	0	0	5	2	0	0	0	0	0	0	13
	APPROACH %	0%	100%	0%	0%	71%	29%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.500			0.583			0.000			0.000		0.542
	APP/DEPART	6	/	6	7	/	5	0	/	0	0	/	2	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
						X	0	0	X
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0

Archibald

NORTH SIDE

Providence WEST SIDE

EAST SIDE **Providence**

SOUTH SIDE

Archibald

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
6/11/19	LOCATION:	Eastvale	PROJECT #:	SC2210
TUESDAY	NORTH & SOUTH:	Archibald	LOCATION #:	18
	EAST & WEST:	Providence	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Providence			WESTBOUND Providence			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	X	X	2	0	1	X	1	X	X	X	

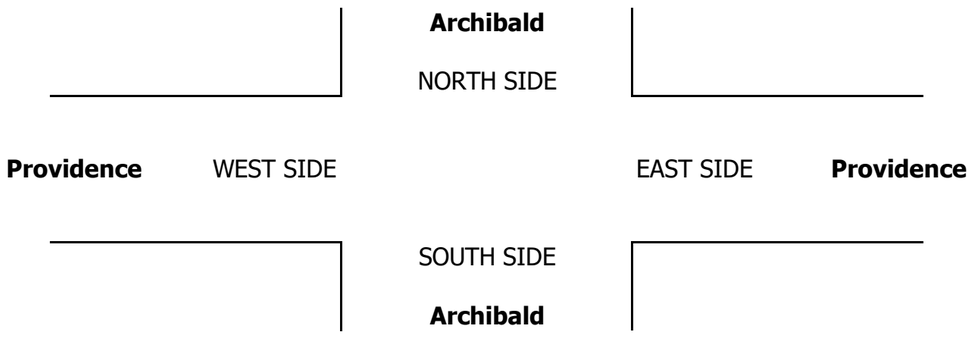
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
X	0	0	X

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	5	0	0	5	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
	7:15 AM	0	4	0	0	6	1	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0
	7:30 AM	0	3	0	0	2	1	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
	7:45 AM	0	4	0	0	8	1	1	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0
	8:00 AM	0	3	0	0	9	2	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0
	8:15 AM	0	4	0	0	5	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0
	8:30 AM	0	4	0	0	3	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
	8:45 AM	0	1	0	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	28	0	0	42	5	1	0	0	0	0	0	76	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	89%	11%	100%	0%	0%	0%	0%	0%										
	APP/DEPART	28	/	29	47	/	42	1	/	0	0	/	5	0									
	BEGIN PEAK HR		7:15 AM																				
	VOLUMES	0	14	0	0	25	5	1	0	0	0	0	0	45						0	0	0	0
	APPROACH %	0%	100%	0%	0%	83%	17%	100%	0%	0%	0%	0%	0%										
	PEAK HR FACTOR		0.875			0.682			0.250			0.000		0.804									
	APP/DEPART	14	/	15	30	/	25	1	/	0	0	/	5	0									
PM	03:00 PM	0	4	0	0	3	2	1	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
	3:15 PM	0	3	0	0	1	0	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
	3:30 PM	1	3	0	0	3	0	2	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0
	3:45 PM	1	4	0	0	4	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0
	4:00 PM	0	5	0	0	2	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
	4:15 PM	2	3	0	0	2	1	1	0	2	0	0	0	11	0	0	0	0	0	0	1	0	0
	4:30 PM	0	3	0	0	3	3	0	0	0	0	0	0	9	0	0	0	0	0	0	1	0	0
	4:45 PM	0	1	0	0	0	2	1	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0
	5:00 PM	0	2	0	0	2	0	2	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
	5:15 PM	0	4	0	0	1	1	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
	5:30 PM	0	1	0	0	2	0	2	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
	5:45 PM	0	1	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
	VOLUMES	4	34	0	0	25	9	11	0	3	0	0	0	86	0	0	0	0	0	0	2	0	0
	APPROACH %	11%	89%	0%	0%	74%	26%	79%	0%	21%	0%	0%	0%										
	APP/DEPART	38	/	45	34	/	28	14	/	0	0	/	13	0									
	BEGIN PEAK HR		3:30 PM																				
	VOLUMES	3	15	0	0	11	4	1	0	2	0	0	0	36						0	2	0	0
	APPROACH %	17%	83%	0%	0%	73%	27%	33%	0%	67%	0%	0%	0%										
	PEAK HR FACTOR		0.900			0.625			0.250			0.000		0.818									
	APP/DEPART	18	/	16	15	/	13	3	/	0	0	/	7	0									



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
6/11/19	LOCATION:	Eastvale	PROJECT #:	SC2210
TUESDAY	NORTH & SOUTH:	Archibald	LOCATION #:	18
	EAST & WEST:	Providence	CONTROL:	SIGNAL

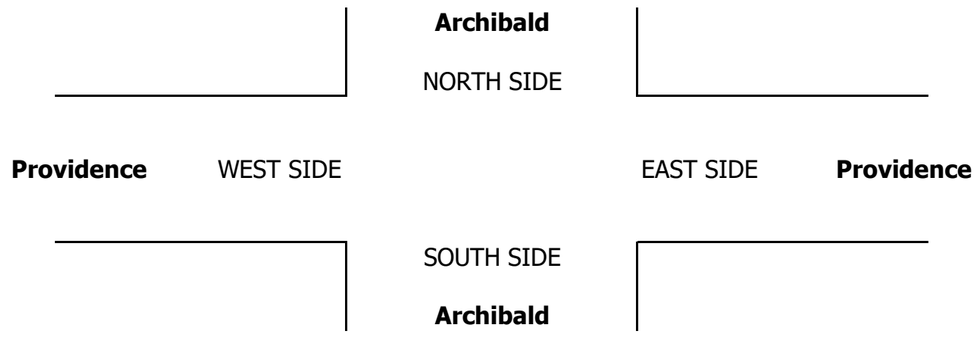
CLASS 5:	NOTES:
RV	

AM ▲ N
PM ◄ W E ►
MD S ▼
OTHER
OTHER

	NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Providence			WESTBOUND Providence			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	X	X	2	0	1	X	1	X	X	X	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR	7:00 AM												
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	0	0	2	0	0	0	0	0	0	0	3
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	1	/	1	2	/	2	0	/	0	0	/	0	0
BEGIN PEAK HR	3:00 PM												
VOLUMES	0	0	0	0	2	0	0	0	0	0	0	0	2
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.000			0.500			0.000			0.000			0.500
APP/DEPART	0	/	0	2	/	2	0	/	0	0	/	0	0

U-TURNS					
	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
	0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	0	0	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Eastvale	PROJECT #:	SC2210
6/11/19	NORTH & SOUTH:	Archibald	LOCATION #:	18
TUESDAY	EAST & WEST:	Providence	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

		NORTHBOUND Archibald			SOUTHBOUND Archibald			EASTBOUND Providence			WESTBOUND Providence			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	X	X	2	0	1	X	1	X	X	X	
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
AM	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
AM	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0
AM	BEGIN PEAK HR		7:30 AM											
AM	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
AM	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
AM	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250
AM	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
PM	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0
PM	BEGIN PEAK HR		4:30 PM											
PM	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
PM	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PM	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250
PM	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	X	0	0	X
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Archibald

NORTH SIDE

Providence WEST SIDE

EAST SIDE **Providence**

SOUTH SIDE

Archibald

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, May 23, 2019
JOB #: SC2210

LOCATION# Eastvale
CLASS1 Archibald between Providence and Limonite

AM	NORTHBOUND														PM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	22	2	0	0	0	0	0	0	0	0	0	0	24	12:00	0	107	18	0	10	2	1	0	3	0	0	0	0	141
0:15	0	20	0	0	0	0	0	0	0	0	0	0	0	20	12:15	0	117	26	4	11	4	0	2	1	0	1	0	0	166
0:30	0	12	0	0	0	0	0	0	0	0	0	0	0	12	12:30	0	104	16	2	6	2	1	0	3	0	0	1	0	135
0:45	0	15	3	0	3	0	0	0	0	0	0	0	0	21	12:45	0	81	12	1	11	4	0	0	2	0	0	0	0	111
1:00	0	9	2	0	0	0	0	0	0	0	0	0	0	11	13:00	0	108	14	0	12	2	0	0	3	0	0	0	0	139
1:15	0	4	2	0	1	0	0	0	0	0	1	0	0	8	13:15	0	130	16	1	11	2	0	1	0	1	0	1	0	163
1:30	0	13	3	0	0	0	0	0	0	0	0	0	0	16	13:30	0	117	19	0	12	4	1	1	2	0	0	0	0	156
1:45	0	6	0	0	2	1	0	0	0	0	0	0	0	9	13:45	0	108	19	0	18	4	0	0	3	0	1	0	0	153
2:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5	14:00	0	111	15	1	17	2	3	2	0	1	0	0	1	153
2:15	0	11	1	0	0	0	0	0	1	0	0	0	0	13	14:15	0	138	17	1	8	3	0	0	1	0	0	0	0	168
2:30	1	5	5	0	0	1	0	0	1	0	0	0	0	13	14:30	0	161	17	0	6	2	1	0	0	0	0	2	0	189
2:45	0	7	3	0	2	0	0	0	0	0	0	0	0	12	14:45	0	161	21	0	9	3	0	0	2	0	1	1	0	198
3:00	0	4	2	0	2	0	0	0	1	0	0	0	0	9	15:00	0	174	20	0	8	4	2	2	4	1	0	2	1	218
3:15	0	9	3	0	1	0	0	0	0	0	0	0	0	13	15:15	0	154	20	0	12	3	0	3	0	0	1	0	0	193
3:30	0	16	2	0	6	0	0	0	0	0	0	0	0	24	15:30	0	158	22	0	9	4	1	0	1	1	0	1	1	198
3:45	0	12	6	0	3	0	0	0	0	0	0	0	0	21	15:45	0	164	21	0	8	3	0	0	1	0	0	1	3	201
4:00	0	15	8	0	2	0	0	0	2	0	0	0	0	27	16:00	0	172	9	1	12	2	2	0	0	0	0	1	0	199
4:15	0	23	3	0	2	0	0	0	1	0	1	0	0	30	16:15	0	180	19	0	10	3	1	2	2	0	0	2	0	219
4:30	0	33	6	0	6	1	0	0	1	0	0	0	0	47	16:30	0	150	14	0	12	2	0	0	1	1	1	0	0	181
4:45	1	42	10	0	6	0	2	0	0	0	0	0	0	61	16:45	0	151	16	0	10	2	1	1	2	0	0	0	1	184
5:00	0	43	9	0	10	1	0	0	1	0	0	0	0	64	17:00	0	145	14	1	9	1	1	1	1	0	0	0	0	173
5:15	0	40	8	0	13	1	0	1	0	0	0	0	0	63	17:15	0	162	16	0	11	5	0	0	0	0	0	1	1	196
5:30	0	58	15	0	16	2	0	0	2	0	0	0	0	93	17:30	0	185	8	0	4	3	0	0	0	0	0	0	0	200
5:45	0	72	14	0	17	0	0	0	1	0	0	0	1	105	17:45	1	160	16	0	9	2	0	0	2	0	0	0	0	190
6:00	0	74	20	0	22	1	0	0	0	1	0	1	0	119	18:00	0	151	17	0	8	2	0	0	1	0	0	0	0	179
6:15	0	102	14	1	24	2	0	0	0	0	0	0	0	143	18:15	0	157	10	0	11	4	2	0	0	0	0	0	0	184
6:30	1	151	17	0	21	2	0	0	3	0	0	1	0	196	18:30	1	124	12	1	5	1	0	1	0	0	0	0	1	146
6:45	1	199	21	0	22	2	1	0	3	0	0	0	1	250	18:45	0	118	19	0	1	1	0	1	1	0	0	0	0	141
7:00	0	235	20	0	10	2	1	1	0	0	0	0	0	269	19:00	0	95	14	0	14	2	0	0	0	0	0	0	1	126
7:15	1	205	20	1	14	1	1	2	2	0	0	0	1	248	19:15	0	96	10	0	5	2	0	0	0	0	0	0	0	113
7:30	0	220	17	0	12	4	1	0	1	0	0	1	2	258	19:30	0	106	9	0	6	1	0	0	0	0	0	0	0	122
7:45	0	177	23	0	21	3	1	0	2	0	1	0	0	228	19:45	0	82	13	0	6	0	0	0	0	0	0	0	1	102
8:00	1	203	20	2	14	3	0	0	0	1	0	0	2	246	20:00	1	92	10	0	5	0	0	0	0	0	0	0	0	108
8:15	2	180	25	0	12	4	4	1	0	0	0	1	0	229	20:15	0	76	13	1	7	2	1	1	1	0	0	0	0	102
8:30	0	145	22	2	15	3	0	1	5	0	0	0	0	193	20:30	0	75	4	0	1	0	0	0	0	0	0	0	0	80
8:45	1	171	26	1	15	2	1	0	2	0	1	0	0	220	20:45	0	75	6	0	1	0	0	0	0	0	0	0	0	82
9:00	0	122	15	1	14	1	0	1	1	1	0	0	0	156	21:00	0	62	7	0	4	0	0	0	0	0	0	0	0	73
9:15	0	119	10	1	11	3	1	0	4	0	0	0	0	149	21:15	0	66	9	0	3	0	0	0	0	0	0	0	0	78
9:30	0	120	23	0	12	4	0	0	4	0	0	0	0	163	21:30	0	59	5	0	3	1	0	0	0	0	0	0	0	68
9:45	0	104	18	0	8	1	0	0	0	0	0	0	1	132	21:45	0	61	8	0	1	0	0	1	1	0	0	0	0	72
10:00	0	95	12	1	15	1	0	1	4	0	0	0	1	130	22:00	0	78	7	0	1	1	0	0	1	0	0	0	0	88
10:15	0	119	15	0	10	4	1	0	2	0	0	0	0	151	22:15	0	87	6	0	1	1	0	0	2	0	0	0	0	97
10:30	0	88	15	1	11	1	0	0	2	0	0	0	2	120	22:30	0	46	6	0	0	0	0	0	0	0	0	0	0	52
10:45	0	82	14	1	9	1	1	0	3	0	0	0	1	112	22:45	0	39	4	0	0	1	0	0	0	0	0	0	0	44
11:00	1	130	16	2	10	2	0	1	2	0	0	0	1	165	23:00	1	34	5	0	1	1	0	0	0	0	0	0	0	42
11:15	0	82	20	0	13	5	0	1	1	0	1	0	0	123	23:15	0	29	1	0	2	0	0	0	0	0	0	0	0	32
11:30	1	105	19	2	18	2	0	1	3	1	0	0	0	152	23:30	0	27	3	0	1	0	0	0	0	0	0	0	0	31
11:45	0	105	7	0	11	3	0	0	3	0	0	0	1	130	23:45	0	22	1	0	3	0	0	0	1	1	0	0	0	28
TOTAL	11	3,828	537	16	436	64	15	11	58	4	5	4	14	5,003	TOTAL	4	5,255	604	14	335	88	18	19	42	6	5	13	11	6,414

AM PEAK HOUR	6:45 AM	**PM PEAK HOUR**	3:30 PM
AM PEAK VOLUME	1,025	**PM PEAK VOLUME**	817

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	15	9,083	1,141	30	771	152	33	30	100	10	10	17	25	11,417
% OF TOTAL	0.1%	79.6%	10.0%	0.3%	6.8%	1.3%	0.3%	0.3%	0.9%	0.1%	0.1%	0.1%	0.2%	100.0%
Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	567	18,329	2,359	62	1,491	419	80	96	161	35	20	30	43	23,692
% OF TOTAL	5.0%	160.5%	20.7%	0.5%	13.1%	3.7%	0.7%	0.8%	1.4%	0.3%	0.2%	0.3%	0.4%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, May 23, 2019
JOB #: SC2210

LOCATION# Eastvale
CLASS1 Archibald between Providence and Limonite

AM	SOUTHBOUND														PM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	21	4	0	0	1	0	0	0	0	0	0	0	26	12:00	6	108	13	1	8	5	2	0	2	0	0	0	1	146
0:15	2	26	5	0	0	0	0	0	0	0	0	0	0	33	12:15	12	116	9	4	7	3	3	0	0	0	0	0	0	154
0:30	1	13	3	0	0	1	0	0	0	0	0	0	0	18	12:30	14	109	7	1	12	7	1	0	2	1	0	0	0	154
0:45	0	20	1	0	0	0	0	0	0	0	0	0	0	21	12:45	3	101	10	1	10	5	1	0	0	0	0	0	0	131
1:00	2	20	4	0	3	0	0	0	0	0	0	0	0	29	13:00	8	89	11	0	11	1	2	2	1	0	0	0	0	125
1:15	1	17	3	0	2	1	0	0	0	0	0	0	0	24	13:15	12	111	9	0	6	10	0	0	1	1	1	0	0	151
1:30	0	10	2	0	0	0	0	0	0	0	0	0	0	12	13:30	16	126	16	0	14	5	0	2	2	0	0	1	0	182
1:45	1	8	2	0	1	0	0	0	0	0	0	0	0	12	13:45	6	118	15	4	16	5	0	0	0	0	1	0	0	165
2:00	0	13	3	0	1	0	0	1	0	0	0	0	0	18	14:00	3	104	9	2	7	4	1	1	0	0	0	0	0	131
2:15	3	15	1	0	2	0	0	0	0	0	0	0	0	21	14:15	12	104	15	0	7	2	0	3	0	0	0	1	0	144
2:30	0	9	2	0	1	0	0	0	0	0	0	0	0	12	14:30	12	122	22	1	10	1	0	1	0	0	0	1	0	170
2:45	1	16	0	0	0	0	0	0	0	0	0	0	0	17	14:45	7	166	21	0	7	8	1	4	3	1	0	1	0	219
3:00	0	10	1	0	3	0	0	0	1	0	0	0	0	15	15:00	4	162	29	0	11	4	0	1	0	0	0	1	0	212
3:15	0	9	1	0	3	0	0	0	0	0	0	0	0	13	15:15	5	162	24	1	10	2	3	4	0	0	0	1	0	212
3:30	1	14	3	0	1	0	0	0	0	0	0	0	0	19	15:30	11	173	22	0	11	6	1	2	1	1	1	0	0	229
3:45	4	11	1	0	3	0	0	0	0	0	0	1	0	20	15:45	10	169	26	0	15	10	0	2	3	0	0	0	1	236
4:00	2	20	10	0	1	0	0	0	0	1	0	0	0	34	16:00	6	195	20	0	13	2	1	4	1	1	0	0	0	243
4:15	3	25	6	0	5	0	0	0	0	0	0	0	0	39	16:15	12	201	19	1	15	2	0	2	2	0	0	0	0	254
4:30	1	41	5	0	11	3	0	0	0	0	0	0	0	61	16:30	7	204	27	0	14	3	0	1	1	0	0	0	1	258
4:45	3	50	9	0	10	0	0	0	0	0	0	0	0	72	16:45	8	244	20	0	9	7	0	4	1	0	0	0	0	293
5:00	7	76	12	0	17	1	1	0	0	2	0	0	0	116	17:00	6	231	23	1	12	7	2	1	1	0	0	0	0	284
5:15	7	62	16	0	20	1	0	0	0	0	0	0	0	106	17:15	11	222	23	0	6	5	0	1	0	0	0	0	0	268
5:30	14	100	22	0	11	3	0	0	0	0	0	0	0	150	17:30	7	219	30	0	17	5	0	2	0	0	0	0	1	281
5:45	11	105	22	0	14	2	0	0	1	0	0	0	0	155	17:45	11	198	27	0	9	0	0	0	2	1	0	0	0	248
6:00	3	126	14	0	12	4	0	0	1	0	0	0	0	160	18:00	10	198	19	1	2	2	0	0	0	1	0	0	1	234
6:15	6	141	25	0	12	4	0	0	2	0	0	0	1	191	18:15	5	185	24	0	6	4	0	2	1	0	0	0	1	228
6:30	8	136	16	0	12	5	2	3	0	1	0	1	0	184	18:30	5	198	17	0	7	4	2	1	0	0	0	0	1	235
6:45	3	139	16	0	21	4	1	0	0	1	1	0	0	186	18:45	7	140	27	0	11	0	0	1	0	1	0	0	0	187
7:00	8	133	16	1	11	4	1	1	0	0	0	0	0	175	19:00	6	112	9	0	5	2	0	2	1	0	0	0	0	137
7:15	5	129	14	1	9	3	2	0	4	0	0	0	1	168	19:15	7	98	12	0	5	2	0	1	1	0	0	0	0	126
7:30	7	135	14	0	10	5	3	2	3	2	1	0	1	183	19:30	10	69	12	0	8	2	2	0	0	0	0	0	0	103
7:45	9	121	11	0	2	8	1	1	0	2	0	0	1	156	19:45	15	71	7	0	8	4	0	0	0	0	0	0	0	105
8:00	6	118	18	0	6	2	0	1	1	0	0	0	0	152	20:00	6	87	12	0	6	1	0	0	0	0	0	0	0	112
8:15	4	115	17	1	4	8	1	2	1	0	0	0	0	153	20:15	9	67	12	1	4	0	0	0	0	0	0	0	1	94
8:30	5	113	15	0	7	8	3	2	2	2	1	0	0	158	20:30	7	94	12	0	4	0	0	0	0	0	0	0	0	117
8:45	8	137	13	1	10	10	2	1	2	1	0	1	0	186	20:45	5	78	17	0	1	2	1	1	0	0	0	0	0	105
9:00	0	117	16	1	11	5	0	1	1	0	0	0	0	152	21:00	6	74	5	0	4	2	0	0	1	0	0	0	0	92
9:15	3	119	19	0	19	1	0	0	1	1	1	1	0	165	21:15	6	98	13	0	9	2	0	0	1	0	1	0	0	130
9:30	3	120	26	1	12	5	0	1	1	0	0	0	1	170	21:30	7	75	10	0	6	1	1	1	0	0	0	0	0	101
9:45	6	119	18	1	9	4	0	1	0	0	0	0	1	159	21:45	8	61	11	0	3	0	0	0	0	0	0	0	0	83
10:00	4	79	10	1	7	3	0	0	0	0	0	0	0	104	22:00	5	58	8	0	11	6	0	0	0	0	0	0	0	88
10:15	5	78	19	1	13	3	1	0	3	0	0	0	2	125	22:15	4	60	8	0	1	1	0	0	0	0	0	0	0	74
10:30	3	84	16	0	10	1	0	0	2	0	0	0	2	118	22:30	1	53	6	0	2	0	0	1	0	0	0	0	0	63
10:45	5	101	7	4	13	5	1	1	1	0	0	0	0	138	22:45	6	31	7	0	0	0	0	0	0	0	0	0	0	44
11:00	9	80	15	0	10	2	1	0	1	2	1	1	0	122	23:00	1	48	5	0	2	0	0	0	1	0	0	0	0	57
11:15	5	107	10	0	8	4	0	0	0	0	0	1	0	135	23:15	1	31	3	0	4	0	0	0	0	0	0	0	0	39
11:30	12	92	13	0	6	7	3	1	1	1	1	0	0	137	23:30	1	29	4	0	2	0	0	0	0	0	0	0	0	36
11:45	10	91	14	0	9	5	0	0	3	1	0	1	0	134	23:45	4	36	1	0	0	0	0	0	0	0	0	0	0	41
TOTAL	201	3,441	510	13	352	123	23	19	32	17	6	7	10	4,754	TOTAL	351	5,805	708	19	368	144	24	47	29	8	4	6	8	7,521

AM PEAK HOUR	6:15 AM
AM PEAK VOLUME	736

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	1,126

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	552	9,246	1,218	32	720	267	47	66	61	25	10	13	18	12,275
% OF TOTAL	4.5%	75.3%	9.9%	0.3%	5.9%	2.2%	0.4%	0.5%	0.5%	0.2%	0.1%	0.1%	0.1%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, May 23, 2019
JOB #: SC2210

LOCATION# Eastvale
CLASS2 Limonite between Archibald and Harrison

AM	EASTBOUND														PM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	12	4	0	1	0	0	0	0	0	0	0	0	17	12:00	0	38	32	0	11	2	1	0	0	0	0	0	1	85
0:15	0	5	9	0	1	0	0	0	0	0	0	0	0	15	12:15	0	54	32	0	13	1	0	0	1	0	0	0	0	101
0:30	0	3	3	0	1	0	0	0	0	0	0	0	0	7	12:30	0	48	36	1	23	0	0	1	1	0	0	0	0	110
0:45	0	10	3	0	1	0	0	0	0	0	0	0	0	14	12:45	0	41	36	2	18	0	0	0	1	0	0	0	0	98
1:00	0	2	3	0	1	0	0	0	0	0	0	0	0	6	13:00	0	53	42	0	16	1	0	2	0	0	0	0	0	114
1:15	0	2	2	0	1	0	0	0	0	0	1	0	0	6	13:15	0	63	51	0	9	0	0	1	1	0	0	0	1	126
1:30	0	6	7	0	1	0	0	0	0	0	0	0	0	14	13:30	0	41	41	0	9	0	0	1	0	0	0	0	0	92
1:45	0	4	1	0	1	1	0	0	0	0	0	0	0	7	13:45	0	47	29	1	16	1	0	0	0	0	0	0	1	95
2:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2	14:00	1	43	38	0	20	0	1	0	0	0	0	0	0	103
2:15	0	3	2	0	1	0	0	0	0	0	0	0	0	6	14:15	0	65	42	0	12	0	0	0	1	0	0	2	1	123
2:30	0	2	0	0	1	0	0	0	0	0	0	0	0	3	14:30	1	53	45	0	14	0	0	0	0	0	1	0	0	114
2:45	0	2	1	0	1	0	0	0	0	0	0	0	0	4	14:45	0	79	46	0	34	4	1	0	2	0	0	0	0	166
3:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4	15:00	0	84	55	2	20	1	0	0	0	0	1	1	0	164
3:15	0	3	1	0	1	0	0	0	0	0	0	0	0	5	15:15	0	79	35	0	25	0	0	2	1	0	0	0	0	142
3:30	0	3	3	0	1	0	0	0	0	0	0	0	0	7	15:30	0	64	53	0	19	0	1	0	1	0	0	0	0	138
3:45	0	5	8	0	1	0	0	0	0	0	0	0	0	14	15:45	0	88	56	0	18	1	0	0	0	0	0	0	0	163
4:00	0	3	4	0	1	0	0	0	1	0	0	0	0	9	16:00	0	70	49	0	31	1	0	0	0	0	0	0	1	152
4:15	0	6	3	1	1	0	0	0	1	0	1	0	0	13	16:15	0	84	38	0	15	0	0	0	1	0	1	0	0	139
4:30	0	4	4	0	2	0	0	0	0	0	0	0	0	10	16:30	1	66	41	0	22	0	2	0	0	0	0	0	1	133
4:45	0	7	6	0	3	0	0	0	1	0	1	0	0	18	16:45	0	82	48	0	17	1	0	0	0	0	0	0	0	148
5:00	0	10	9	0	5	0	0	0	1	0	0	0	0	25	17:00	0	95	46	0	20	1	0	0	1	0	0	0	0	163
5:15	0	7	6	0	8	1	0	1	1	0	0	0	0	24	17:15	0	84	53	0	25	2	0	0	0	0	0	0	0	164
5:30	0	9	6	0	7	0	0	0	0	0	0	0	0	22	17:30	0	89	56	0	16	0	0	0	1	0	0	0	0	162
5:45	0	9	10	0	7	2	0	0	0	0	0	0	0	28	17:45	0	77	53	0	22	0	0	0	0	0	0	0	0	152
6:00	0	14	11	0	6	2	0	0	0	0	0	0	0	33	18:00	0	84	56	0	14	3	0	0	1	0	0	0	0	158
6:15	0	26	16	1	10	0	0	0	1	0	0	0	0	54	18:15	0	78	52	0	11	0	0	0	0	0	0	0	0	141
6:30	0	29	27	0	10	0	0	0	1	0	0	0	0	67	18:30	1	64	44	0	11	1	0	0	0	0	0	0	0	121
6:45	0	34	15	0	10	0	0	0	0	0	0	0	0	59	18:45	0	61	38	0	11	0	0	2	1	0	0	0	0	113
7:00	0	50	30	1	11	1	0	0	0	0	1	0	0	94	19:00	0	57	33	0	15	0	0	0	0	0	0	0	0	105
7:15	0	42	44	0	17	0	0	1	0	0	0	0	0	104	19:15	0	49	41	0	8	0	0	0	0	0	0	0	0	98
7:30	0	40	42	1	16	0	0	0	0	0	0	1	0	100	19:30	0	58	48	0	9	1	0	0	0	0	0	0	0	116
7:45	0	40	31	1	11	1	0	0	1	0	1	1	0	87	19:45	0	59	33	0	12	1	0	0	0	0	0	0	0	105
8:00	0	47	31	0	7	1	0	1	1	0	0	0	0	88	20:00	0	49	34	0	7	0	0	0	0	0	0	0	0	90
8:15	0	42	39	0	11	0	0	0	0	0	0	0	0	92	20:15	0	54	35	0	20	0	0	0	0	0	0	0	0	109
8:30	0	26	32	0	8	1	0	0	1	0	0	0	1	69	20:30	0	47	35	0	7	0	0	0	0	0	0	0	0	89
8:45	0	33	31	1	15	0	0	0	1	0	0	0	0	81	20:45	0	34	39	1	7	0	0	0	0	0	0	0	0	81
9:00	0	32	26	1	17	0	0	0	1	0	0	0	1	78	21:00	0	26	28	0	8	1	0	0	0	0	0	0	0	63
9:15	1	33	27	3	13	0	2	0	0	0	0	0	0	79	21:15	0	40	33	0	7	0	0	0	0	0	0	0	0	80
9:30	0	34	24	0	9	0	0	0	2	0	0	0	0	69	21:30	0	32	22	0	5	0	0	0	0	0	0	0	0	59
9:45	0	24	23	0	14	0	1	0	0	0	0	0	0	62	21:45	0	33	23	0	1	1	0	0	0	0	0	0	0	58
10:00	1	28	23	0	8	0	1	0	1	0	0	0	0	62	22:00	0	28	22	0	7	0	0	0	1	0	0	0	0	58
10:15	0	30	27	1	10	2	0	1	1	0	0	0	0	72	22:15	0	27	16	0	3	1	0	0	1	0	0	0	0	48
10:30	0	30	26	0	11	0	1	0	0	0	1	0	0	69	22:30	0	27	19	0	2	0	0	0	0	0	0	0	0	48
10:45	0	30	23	0	12	2	0	0	1	0	1	1	0	70	22:45	0	15	14	0	1	0	0	0	0	0	0	0	0	30
11:00	0	31	30	0	14	1	0	0	0	0	0	1	1	78	23:00	0	12	15	0	6	2	0	0	0	0	0	0	0	35
11:15	0	42	21	0	19	1	0	0	0	0	0	0	1	84	23:15	0	8	7	0	2	0	0	0	0	0	0	0	0	17
11:30	0	40	21	1	13	1	1	1	1	0	0	0	0	79	23:30	0	9	11	0	1	0	0	0	0	0	0	0	0	21
11:45	0	50	37	0	17	0	0	0	0	0	0	0	0	104	23:45	0	19	8	0	1	0	0	0	1	0	0	0	0	29
TOTAL	2	947	755	12	337	17	6	5	18	0	7	4	4	2,114	TOTAL	4	2,557	1,759	7	621	27	6	9	17	0	3	3	6	5,019

AM PEAK HOUR	7:00 AM
AM PEAK VOLUME	385

PM PEAK HOUR	5:00 PM
PM PEAK VOLUME	641

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	6	3,504	2,514	19	958	44	12	14	35	0	10	7	10	7,133
% OF TOTAL	0.1%	49.1%	35.2%	0.3%	13.4%	0.6%	0.2%	0.2%	0.5%	0.0%	0.1%	0.1%	0.1%	100.0%
Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	19	10,997	3,403	47	1,449	142	19	30	89	1	19	12	14	16,241
% OF TOTAL	0.3%	154.2%	47.7%	0.7%	20.3%	2.0%	0.3%	0.4%	1.2%	0.0%	0.3%	0.2%	0.2%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, May 23, 2019
JOB #: SC2210

LOCATION# Eastvale
CLASS2 Limonite between Archibald and Harrison

AM	WESTBOUND														PM	WESTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	18	1	0	0	0	0	0	0	0	0	0	0	19	12:00	0	77	21	0	10	3	0	2	0	0	0	0	0	113
0:15	0	5	2	0	1	0	0	0	0	0	0	0	0	8	12:15	0	84	6	2	12	1	0	1	0	0	0	0	0	106
0:30	0	9	1	0	1	0	0	0	0	0	0	0	0	11	12:30	1	97	7	1	6	1	0	0	1	0	0	0	0	114
0:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5	12:45	0	88	14	0	10	1	0	0	1	0	0	0	0	114
1:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10	13:00	0	80	12	0	4	1	0	0	2	0	0	0	0	99
1:15	0	9	0	0	1	0	0	0	0	0	0	0	0	10	13:15	0	106	11	0	12	0	0	0	2	0	0	0	0	131
1:30	0	5	0	0	1	0	0	0	0	0	0	0	0	6	13:30	0	95	19	0	8	1	0	1	2	0	1	0	0	127
1:45	0	8	0	0	0	0	0	0	0	0	0	0	0	8	13:45	1	77	5	0	8	0	0	0	1	0	0	0	0	92
2:00	0	8	2	0	0	0	0	0	0	0	1	0	0	11	14:00	0	78	11	1	3	0	0	0	1	0	1	0	0	95
2:15	0	11	1	0	0	0	0	0	0	0	0	0	0	12	14:15	0	64	9	0	5	1	0	0	1	0	0	0	0	80
2:30	0	9	1	0	0	0	0	0	0	0	0	0	0	10	14:30	0	76	8	0	4	1	0	1	1	0	0	0	0	91
2:45	0	12	0	0	1	0	0	0	1	0	0	0	0	14	14:45	0	79	15	1	7	0	0	1	2	0	0	0	0	105
3:00	0	6	0	0	3	0	0	0	0	0	0	0	0	9	15:00	0	92	15	0	7	2	0	0	0	0	0	0	0	116
3:15	0	10	2	0	0	0	0	0	0	0	0	0	0	12	15:15	0	109	13	0	5	1	0	0	0	0	0	0	0	128
3:30	0	22	2	0	1	0	0	0	0	0	0	0	0	25	15:30	0	119	6	0	9	1	0	1	1	0	0	0	0	137
3:45	0	24	7	1	0	0	0	0	0	0	0	0	0	32	15:45	0	118	8	0	10	0	0	0	0	0	0	0	0	136
4:00	0	29	7	0	1	0	0	0	0	0	0	0	0	37	16:00	0	110	10	0	8	2	0	1	0	0	0	1	0	132
4:15	0	48	9	0	3	0	0	0	0	0	0	0	0	60	16:15	1	112	8	0	5	0	0	0	0	0	0	0	0	126
4:30	0	72	8	0	4	0	0	0	1	0	0	0	0	85	16:30	0	102	10	0	5	0	0	0	0	0	0	0	0	117
4:45	0	73	14	0	9	0	0	0	0	0	0	0	1	97	16:45	0	104	15	0	9	0	1	0	0	0	0	0	0	129
5:00	0	109	24	0	9	3	0	0	0	0	0	0	0	145	17:00	0	123	12	0	3	2	0	0	0	0	0	0	0	140
5:15	1	110	14	0	15	3	0	0	0	0	0	0	0	143	17:15	0	119	10	0	1	0	0	0	0	0	0	0	0	130
5:30	1	140	21	1	14	2	0	0	0	0	0	0	0	179	17:30	0	126	8	0	5	1	1	1	0	0	0	0	0	142
5:45	0	105	24	0	9	1	0	1	2	0	0	0	0	142	17:45	0	111	11	0	3	1	0	0	1	0	0	0	0	127
6:00	1	117	15	2	9	2	0	1	1	0	2	0	0	150	18:00	0	123	9	1	0	0	0	0	0	0	0	0	0	133
6:15	0	108	25	0	11	0	1	0	2	0	0	0	0	147	18:15	0	119	11	1	3	4	0	0	1	0	0	0	0	139
6:30	0	159	26	2	12	4	1	0	0	1	0	0	0	205	18:30	0	109	10	0	4	1	0	0	0	0	0	0	0	124
6:45	0	190	17	1	10	0	1	0	1	0	0	0	0	220	18:45	0	84	7	0	6	2	0	0	1	0	0	0	0	100
7:00	1	147	22	2	11	5	0	0	1	0	0	0	1	190	19:00	0	105	12	0	7	1	0	1	1	0	0	0	0	127
7:15	0	148	15	0	7	5	1	0	0	0	0	0	1	177	19:15	0	86	3	0	3	1	0	0	0	0	0	0	0	93
7:30	0	168	21	1	10	2	0	0	2	0	0	0	1	205	19:30	0	88	3	0	5	0	0	0	0	0	0	0	0	96
7:45	0	139	16	0	9	4	0	0	2	0	0	0	0	170	19:45	2	82	5	0	8	1	0	0	1	0	0	0	0	99
8:00	0	125	13	0	9	3	0	0	1	0	0	0	0	151	20:00	1	88	7	0	4	1	0	0	0	0	0	0	0	101
8:15	0	114	12	1	6	0	0	0	1	0	1	1	0	136	20:15	0	81	4	1	5	0	0	0	0	0	0	0	0	91
8:30	0	109	13	0	5	2	0	0	0	0	1	0	0	130	20:30	0	87	6	0	6	1	0	0	0	0	0	0	0	100
8:45	0	94	19	1	4	1	1	0	1	0	0	0	0	121	20:45	0	80	8	0	5	5	0	0	0	0	0	1	0	99
9:00	0	88	8	1	6	0	0	2	2	0	0	0	0	107	21:00	0	86	4	0	3	1	0	0	0	0	0	0	0	94
9:15	0	66	14	0	9	3	0	0	1	0	0	0	0	93	21:15	0	85	3	0	3	1	0	0	1	0	0	0	0	93
9:30	0	89	20	1	11	0	0	1	1	0	1	1	0	125	21:30	0	81	7	0	4	0	0	0	0	0	0	0	0	92
9:45	0	77	10	2	7	5	0	0	0	0	0	0	0	101	21:45	0	49	1	0	2	0	0	0	0	0	0	0	0	52
10:00	0	76	13	0	3	1	0	1	0	0	0	0	0	94	22:00	0	62	8	0	2	0	0	0	1	0	0	0	0	73
10:15	0	70	20	1	10	0	0	0	2	0	0	0	0	103	22:15	0	45	5	0	0	0	0	0	0	0	0	0	0	50
10:30	0	74	10	0	2	2	0	0	2	0	0	0	0	90	22:30	0	39	1	0	1	0	0	0	0	0	0	0	0	41
10:45	1	80	14	2	9	1	0	0	1	0	0	0	0	108	22:45	0	37	5	0	0	1	0	0	0	0	0	0	0	43
11:00	0	81	10	0	7	2	0	0	2	0	0	1	0	103	23:00	0	29	0	0	0	0	0	0	0	0	0	0	0	29
11:15	2	71	12	0	10	2	0	0	2	0	0	0	0	99	23:15	0	27	0	0	1	0	0	0	0	0	0	0	0	28
11:30	0	103	4	1	5	4	0	0	2	0	1	0	0	120	23:30	0	23	1	0	0	0	0	0	0	0	0	0	0	24
11:45	0	81	14	0	5	1	0	0	1	0	0	0	0	102	23:45	0	21	2	0	0	0	0	0	0	0	0	0	0	23
TOTAL	7	3,431	503	20	260	58	5	6	32	1	7	3	4	4,337	TOTAL	6	4,062	386	8	231	40	2	10	22	0	2	2	0	4,771

AM PEAK HOUR	6:45 AM
AM PEAK VOLUME	792

PM PEAK HOUR	5:30 PM
PM PEAK VOLUME	541

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	13	7,493	889	28	491	98	7	16	54	1	9	5	4	9,108
% OF TOTAL	0.1%	82.3%	9.8%	0.3%	5.4%	1.1%	0.1%	0.2%	0.6%	0.0%	0.1%	0.1%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, May 23, 2019
JOB #: SC2210

LOCATION# Eastvale
CLASS3 Limonite between Hamner and Scholar

AM	EASTBOUND														PM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	23	2	0	0	0	0	0	0	0	0	0	0	25	12:00	1	167	20	0	6	3	0	0	1	0	0	0	0	198
0:15	0	25	1	0	0	0	0	0	0	0	0	0	0	26	12:15	0	145	24	0	7	2	1	1	0	1	0	1	1	183
0:30	0	15	1	0	0	0	0	0	0	0	0	0	0	16	12:30	0	156	26	0	9	2	1	0	1	0	0	0	2	197
0:45	0	14	0	0	0	0	0	0	0	0	0	0	0	14	12:45	0	167	16	1	4	1	0	0	1	0	0	1	0	191
1:00	0	12	0	0	0	0	0	0	0	0	0	0	0	12	13:00	1	154	16	0	8	2	0	0	1	1	0	0	0	183
1:15	0	13	0	0	2	0	0	0	0	0	1	0	0	16	13:15	1	162	11	0	8	5	1	1	0	1	1	1	1	193
1:30	0	11	0	0	1	0	0	0	0	0	0	0	0	12	13:30	0	113	19	0	9	2	0	0	0	0	0	0	1	144
1:45	0	10	0	0	1	0	0	0	0	0	0	0	0	11	13:45	0	160	17	2	8	7	1	1	2	0	0	0	0	198
2:00	0	4	0	0	1	0	0	0	1	0	0	0	0	6	14:00	1	137	10	0	9	5	0	0	1	0	0	0	0	163
2:15	0	12	0	0	0	0	0	0	0	0	0	0	0	12	14:15	0	143	21	0	4	2	1	0	3	0	0	0	0	174
2:30	0	8	1	0	1	0	0	0	0	0	0	0	0	10	14:30	0	155	13	0	9	3	0	0	0	0	1	0	0	181
2:45	0	3	2	1	0	0	0	0	0	0	0	0	0	6	14:45	2	165	13	0	13	3	2	0	1	0	1	0	1	201
3:00	0	7	2	0	1	0	0	0	0	0	0	0	0	10	15:00	0	175	21	0	8	4	1	0	2	1	1	0	1	214
3:15	0	9	1	1	0	0	0	0	0	0	0	0	0	11	15:15	0	191	11	0	10	4	3	1	1	0	1	3	0	225
3:30	0	13	1	0	1	0	0	0	0	0	0	0	0	15	15:30	1	185	20	0	13	7	1	0	1	0	0	1	2	231
3:45	0	24	0	0	2	0	0	0	0	0	0	0	0	26	15:45	0	168	13	0	4	2	2	0	0	0	0	0	1	190
4:00	0	18	5	0	2	0	0	0	0	0	0	0	0	25	16:00	1	178	23	0	13	1	2	0	0	0	1	2	0	221
4:15	0	32	4	0	6	0	0	0	2	0	1	0	0	45	16:15	0	152	16	0	6	4	0	0	0	0	0	1	2	181
4:30	0	39	5	0	2	0	0	0	0	0	0	0	0	46	16:30	0	164	22	0	6	4	2	0	1	0	0	0	0	199
4:45	0	46	6	0	3	0	0	0	1	0	1	0	0	57	16:45	1	182	13	0	11	3	1	0	0	0	0	0	0	211
5:00	0	34	10	0	5	0	0	0	1	0	0	0	0	50	17:00	0	170	15	0	8	4	0	0	0	0	1	1	0	199
5:15	0	41	7	0	6	1	0	1	0	0	0	0	0	56	17:15	0	189	22	0	11	5	1	0	3	0	0	1	0	232
5:30	0	49	14	0	5	0	0	0	0	0	1	1	0	70	17:30	1	216	21	0	7	2	0	0	1	0	1	1	0	250
5:45	0	44	10	0	9	1	0	0	0	0	0	0	0	64	17:45	0	178	18	0	5	1	0	0	0	0	0	1	1	204
6:00	0	71	8	0	5	3	0	0	1	0	0	0	0	88	18:00	0	153	8	0	5	2	0	0	1	0	0	2	0	171
6:15	0	96	10	0	6	4	0	0	0	1	0	1	0	118	18:15	1	190	17	0	8	5	0	0	0	0	0	0	0	221
6:30	2	107	9	0	9	1	0	0	0	0	0	0	0	128	18:30	1	157	15	0	3	3	1	0	0	0	0	0	0	180
6:45	0	116	8	1	4	2	1	0	1	0	1	2	0	136	18:45	0	163	22	0	9	3	0	0	0	1	0	1	1	200
7:00	0	137	11	1	5	3	0	1	2	0	0	0	0	160	19:00	2	155	14	0	9	5	1	0	1	0	0	0	0	187
7:15	0	138	12	0	5	2	0	0	1	0	0	0	0	158	19:15	0	168	17	0	3	3	0	0	0	0	1	0	1	193
7:30	0	156	17	0	4	2	1	0	1	0	0	2	0	183	19:30	0	149	16	0	6	2	0	0	0	0	1	0	0	174
7:45	0	131	12	0	5	1	1	0	2	0	1	1	1	155	19:45	0	140	19	0	9	2	1	0	0	0	0	2	0	173
8:00	1	140	14	0	4	0	1	0	2	1	1	1	1	166	20:00	1	121	18	0	5	3	1	0	0	0	0	0	0	149
8:15	0	147	17	1	6	3	0	0	1	0	0	1	0	176	20:15	0	118	17	0	8	2	0	0	0	0	0	0	0	145
8:30	0	125	13	0	7	2	1	0	1	0	0	0	0	149	20:30	0	145	16	0	6	1	1	0	0	0	0	0	0	169
8:45	0	121	20	1	10	3	0	0	0	0	1	0	0	156	20:45	0	110	9	0	7	2	0	0	0	0	0	0	1	129
9:00	1	109	16	0	12	0	2	1	0	0	0	2	0	143	21:00	0	95	9	0	6	1	0	0	0	0	0	0	0	111
9:15	2	122	20	2	13	0	0	0	2	0	0	1	1	163	21:15	0	92	17	0	8	2	0	0	0	0	0	0	0	119
9:30	0	109	13	0	13	2	0	1	0	0	0	1	1	140	21:30	0	73	9	0	4	0	0	1	1	0	0	0	0	88
9:45	0	127	14	0	7	4	0	0	3	0	0	0	0	155	21:45	0	67	8	0	3	1	0	0	0	0	0	0	0	79
10:00	0	129	22	0	8	0	1	0	1	0	0	0	0	161	22:00	0	81	7	0	3	0	1	0	1	0	0	0	0	93
10:15	0	137	21	1	9	1	1	0	0	0	1	1	1	173	22:15	0	63	5	0	2	0	0	0	2	0	0	0	0	72
10:30	1	128	15	0	11	1	1	0	0	0	0	1	0	158	22:30	0	49	5	0	3	0	0	0	0	0	0	0	0	57
10:45	0	119	12	1	5	3	1	0	1	0	1	3	1	147	22:45	0	48	10	0	3	0	0	0	0	0	0	0	0	61
11:00	0	121	19	1	10	4	3	1	2	0	0	1	0	162	23:00	1	50	6	0	2	1	0	0	0	0	0	0	0	60
11:15	0	146	11	1	10	1	1	0	0	0	0	0	1	171	23:15	0	31	3	0	4	0	0	0	0	0	0	0	0	38
11:30	1	139	12	0	6	3	1	0	1	1	0	0	0	164	23:30	0	26	2	0	0	0	0	0	0	0	0	0	0	28
11:45	1	139	16	0	5	1	0	0	1	0	1	0	0	164	23:45	0	19	5	0	0	0	0	0	1	0	0	0	0	25
TOTAL	9	3,516	414	12	227	48	16	5	28	3	11	19	7	4,315	TOTAL	16	6,435	695	3	312	116	26	5	27	5	10	19	16	7,685

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	680

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	892

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	25	9,951	1,109	15	539	164	42	10	55	8	21	38	23	12,000
% OF TOTAL	0.2%	82.9%	9.2%	0.1%	4.5%	1.4%	0.4%	0.1%	0.5%	0.1%	0.2%	0.3%	0.2%	100.0%
Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	36	18,674	1,981	39	1,201	334	59	20	101	14	36	52	44	22,591
% OF TOTAL	0.3%	155.6%	16.5%	0.3%	10.0%	2.8%	0.5%	0.2%	0.8%	0.1%	0.3%	0.4%	0.4%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, May 23, 2019
JOB #: SC2210

LOCATION# Eastvale
CLASS3 Limonite between Hamner and Scholar

AM	WESTBOUND														PM	WESTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	20	1	0	2	0	0	0	0	0	0	0	0	23	12:00	0	110	8	1	13	5	1	0	0	0	0	0	0	138
0:15	0	19	6	0	1	0	0	0	0	0	0	0	0	26	12:15	0	115	11	1	8	2	1	0	0	0	0	0	1	139
0:30	0	15	2	0	0	0	0	0	1	0	0	0	0	18	12:30	1	159	7	1	13	4	0	0	0	0	1	0	0	186
0:45	0	7	0	0	0	0	0	0	1	0	0	0	0	8	12:45	0	119	13	0	5	1	0	0	2	0	0	0	0	140
1:00	0	15	0	0	0	0	0	0	0	0	0	0	0	15	13:00	0	116	10	0	13	3	0	0	1	0	0	0	0	143
1:15	0	15	0	1	2	0	0	0	0	0	0	0	0	18	13:15	0	131	15	0	9	4	0	0	0	0	1	0	2	162
1:30	0	11	2	0	1	0	0	0	0	0	0	0	0	14	13:30	2	143	10	0	11	2	1	0	1	0	1	1	1	173
1:45	0	7	0	0	0	0	0	0	0	0	0	0	0	7	13:45	0	109	10	0	4	2	1	1	0	1	0	0	1	129
2:00	0	15	1	0	0	0	0	0	0	0	1	0	0	17	14:00	0	119	14	1	4	3	0	0	1	0	0	0	0	142
2:15	0	8	0	0	0	0	0	0	0	0	0	0	0	8	14:15	0	121	10	0	8	0	0	0	0	0	0	0	0	139
2:30	0	12	1	0	0	0	0	0	0	0	0	0	1	14	14:30	1	126	14	0	14	0	1	0	0	0	0	0	0	156
2:45	0	11	2	0	1	0	0	0	0	0	0	0	0	14	14:45	0	130	13	0	8	2	0	0	1	0	0	1	0	155
3:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6	15:00	0	121	11	1	17	2	0	0	0	0	0	1	0	153
3:15	0	11	2	0	0	0	0	0	0	0	0	0	0	13	15:15	0	149	16	0	10	4	1	1	0	1	0	1	0	183
3:30	0	15	1	1	1	0	0	0	0	0	0	0	0	18	15:30	0	117	9	0	13	4	0	0	0	0	0	0	2	145
3:45	0	11	3	0	2	0	0	0	0	0	0	0	0	16	15:45	0	120	14	0	10	2	1	0	0	0	2	0	0	149
4:00	0	20	2	0	1	0	0	0	0	0	0	0	0	23	16:00	0	169	14	0	9	3	0	1	0	0	0	0	0	196
4:15	0	27	3	0	2	0	0	0	0	0	0	0	0	32	16:15	0	158	9	0	9	2	1	0	0	1	0	0	0	180
4:30	0	33	4	0	2	0	0	0	1	0	0	0	0	40	16:30	0	158	19	0	11	1	0	0	0	0	0	0	0	189
4:45	0	51	9	0	5	2	0	0	1	0	0	0	0	68	16:45	1	170	11	0	5	3	0	0	0	0	1	0	1	192
5:00	0	84	10	0	11	2	0	0	0	0	0	0	0	107	17:00	0	146	13	0	13	2	1	0	0	0	0	0	1	176
5:15	0	92	12	0	13	0	0	0	1	0	0	0	0	118	17:15	0	138	11	0	8	5	0	0	0	0	0	0	0	162
5:30	0	99	14	0	7	3	0	0	0	0	0	0	0	123	17:30	0	177	7	0	10	1	0	0	3	0	0	0	0	198
5:45	1	65	12	1	7	7	0	0	2	0	0	0	2	97	17:45	0	187	10	0	7	3	0	1	0	0	0	0	0	208
6:00	0	77	16	2	7	2	0	0	1	0	0	0	2	107	18:00	0	164	14	1	10	1	0	0	0	0	0	0	0	190
6:15	0	80	17	0	19	5	1	0	0	0	0	0	0	122	18:15	0	139	14	0	4	3	1	0	0	0	2	0	1	164
6:30	0	101	16	1	18	1	1	0	1	0	0	0	0	139	18:30	0	158	9	0	6	1	0	0	0	0	0	0	0	174
6:45	0	123	23	3	19	2	0	0	0	1	0	1	0	172	18:45	1	154	5	0	10	1	1	0	0	0	0	1	0	173
7:00	0	105	17	1	11	3	0	0	2	0	0	0	0	139	19:00	0	122	16	0	8	3	1	0	0	0	0	0	1	151
7:15	0	104	9	0	10	0	0	0	1	0	1	0	0	125	19:15	1	151	13	0	6	1	0	0	0	0	0	0	0	172
7:30	0	97	11	0	12	1	0	0	3	1	0	0	0	125	19:30	1	150	5	0	10	3	0	0	0	0	0	0	0	169
7:45	1	98	10	0	11	3	0	0	0	0	1	0	0	124	19:45	0	137	10	0	6	4	0	0	0	0	0	0	1	158
8:00	0	102	6	0	9	1	0	1	2	0	2	0	0	123	20:00	0	162	13	0	4	0	0	0	0	0	0	0	0	179
8:15	0	80	11	1	9	1	0	1	2	0	0	0	0	105	20:15	0	142	11	0	11	2	0	0	0	0	0	0	0	166
8:30	0	76	11	0	10	4	1	0	0	0	0	0	1	103	20:30	0	148	13	0	4	1	0	0	0	0	0	0	0	166
8:45	0	83	7	1	7	1	0	0	3	0	0	0	0	102	20:45	0	139	14	0	7	3	1	0	0	0	0	0	1	165
9:00	0	67	6	1	8	2	0	0	3	0	0	0	0	87	21:00	0	125	7	0	6	7	0	0	0	0	0	0	0	145
9:15	0	58	17	0	10	5	0	0	0	0	0	0	1	91	21:15	0	127	7	0	4	0	0	0	0	1	0	0	0	139
9:30	0	81	14	1	8	1	0	1	0	0	1	1	0	108	21:30	0	114	10	0	6	3	0	0	0	0	0	1	0	134
9:45	0	89	8	1	6	3	0	0	0	0	1	1	0	109	21:45	0	79	8	0	4	1	0	0	1	0	0	0	0	93
10:00	0	65	6	0	8	3	0	1	1	0	0	0	0	84	22:00	0	71	11	0	2	1	0	0	0	0	0	0	0	85
10:15	0	86	14	1	16	1	1	1	0	0	0	0	0	120	22:15	0	58	8	0	4	1	0	0	0	0	0	0	0	71
10:30	0	85	10	1	6	1	0	0	2	0	0	1	0	106	22:30	0	59	2	0	5	2	0	0	0	0	0	0	0	68
10:45	0	101	17	0	11	4	0	0	1	0	0	0	0	134	22:45	0	46	8	0	3	1	0	0	0	0	0	0	0	58
11:00	0	74	8	0	8	2	0	0	2	0	0	1	0	95	23:00	0	53	4	0	1	0	0	0	0	0	0	0	0	58
11:15	1	110	12	0	5	2	0	0	1	0	0	1	0	132	23:15	0	34	8	0	2	0	0	1	0	0	0	0	0	45
11:30	0	97	13	1	7	5	0	0	2	0	0	1	0	126	23:30	0	56	3	0	1	0	0	0	0	0	0	0	0	60
11:45	0	89	11	0	10	4	0	0	2	0	0	1	1	118	23:45	0	30	3	0	3	0	0	0	0	0	0	0	0	36
TOTAL	3	2,797	377	18	303	71	4	5	36	2	7	8	8	3,639	TOTAL	8	5,926	495	6	359	99	13	5	10	4	8	6	13	6,952

AM PEAK HOUR	6:30 AM
AM PEAK VOLUME	575

PM PEAK HOUR	5:30 PM
PM PEAK VOLUME	760

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	11	8,723	872	24	662	170	17	10	46	6	15	14	21	10,591
% OF TOTAL	0.1%	82.4%	8.2%	0.2%	6.3%	1.6%	0.2%	0.1%	0.4%	0.1%	0.1%	0.1%	0.2%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

APPENDIX 3.2:

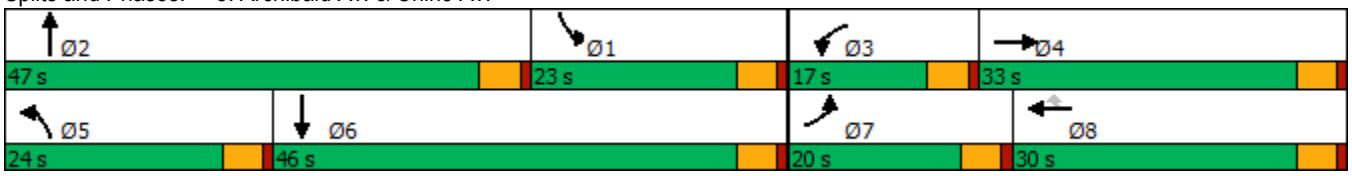
EXISTING (2019) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

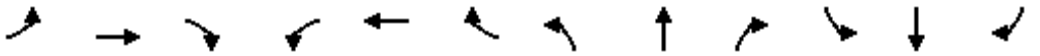
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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	91	26	67	72	239	129	1020	111	663
Future Volume (vph)	91	26	67	72	239	129	1020	111	663
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.5	11.1	9.2	9.9	9.9	12.6	29.1	11.7	24.0
Actuated g/C Ratio	0.14	0.15	0.13	0.13	0.13	0.17	0.40	0.16	0.33
v/c Ratio	0.41	0.25	0.34	0.30	0.59	0.48	0.56	0.45	0.66
Control Delay	40.3	19.1	41.1	37.6	11.6	39.1	22.3	39.5	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	19.1	41.1	37.6	11.6	39.1	22.3	39.5	26.2
LOS	D	B	D	D	B	D	C	D	C
Approach Delay		31.2		21.8			24.2		28.0
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 73.5	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 25.5	Intersection LOS: C
Intersection Capacity Utilization 54.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	26	43	67	72	239	129	1020	34	111	663	50
Future Volume (veh/h)	91	26	43	67	72	239	129	1020	34	111	663	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	94	27	44	69	74	205	133	1052	32	114	684	46
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	118	99	161	97	266	225	170	1695	52	145	1076	72
Arrive On Green	0.07	0.16	0.16	0.06	0.15	0.15	0.10	0.35	0.35	0.09	0.33	0.33
Sat Flow, veh/h	1619	615	1002	1619	1800	1525	1619	4896	149	1619	3252	219
Grp Volume(v), veh/h	94	0	71	69	74	205	133	704	380	114	359	371
Grp Sat Flow(s),veh/h/ln	1619	0	1617	1619	1800	1525	1619	1638	1769	1619	1710	1761
Q Serve(g_s), s	3.1	0.0	2.1	2.2	2.0	4.9	4.3	9.6	9.6	3.7	9.5	9.6
Cycle Q Clear(g_c), s	3.1	0.0	2.1	2.2	2.0	4.9	4.3	9.6	9.6	3.7	9.5	9.6
Prop In Lane	1.00		0.62	1.00		1.00	1.00		0.08	1.00		0.12
Lane Grp Cap(c), veh/h	118	0	260	97	266	225	170	1134	613	145	566	583
V/C Ratio(X)	0.80	0.00	0.27	0.71	0.28	0.91	0.78	0.62	0.62	0.79	0.64	0.64
Avail Cap(c_a), veh/h	465	0	857	375	853	723	586	2593	1400	556	1321	1360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	0.0	19.7	24.7	20.3	10.8	23.4	14.6	14.6	23.9	15.2	15.2
Incr Delay (d2), s/veh	11.4	0.0	0.6	9.2	0.6	13.2	7.6	0.6	1.0	9.0	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.7	1.0	0.8	2.9	1.7	2.6	2.9	1.6	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.8	0.0	20.3	34.0	20.9	24.0	31.0	15.1	15.6	32.8	16.4	16.3
LnGrp LOS	D	A	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		165			348			1217			844	
Approach Delay, s/veh		29.2			25.3			17.0			18.6	
Approach LOS		C			C			B			B	

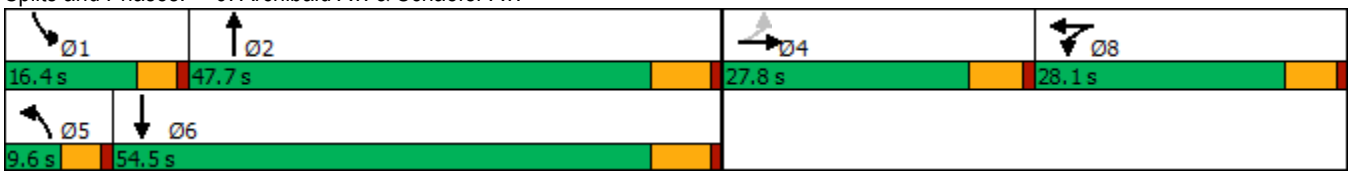
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	23.2	7.8	13.2	10.2	22.3	8.5	12.5
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	5.7	11.6	4.2	4.1	6.3	11.6	5.1	6.9
Green Ext Time (p_c), s	0.2	7.0	0.1	0.3	0.2	4.2	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	88	0	1168	68	626		
Future Volume (vph)	88	0	1168	68	626		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	47.7	16.4	54.5	27.8	9.6
Total Split (%)	23.4%	23.4%	39.8%	13.7%	45.4%	23%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	15.3	15.3	31.9	9.3	41.6		
Actuated g/C Ratio	0.24	0.24	0.51	0.15	0.66		
v/c Ratio	0.23	0.14	0.50	0.30	0.29		
Control Delay	31.4	0.4	18.5	38.0	9.4		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	31.4	0.4	18.5	38.0	9.4		
LOS	C	A	B	D	A		
Approach Delay		15.1	18.5		12.2		
Approach LOS		B	B		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 62.9	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 50.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	88	0	98	0	1168	18	68	626	0
Future Volume (veh/h)	0	0	0	88	0	98	0	1168	18	68	626	0
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	92	0	85	0	1217	19	71	652	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	4	0	302	0	285	3	2008	31	103	1918	0
Arrive On Green	0.00	0.00	0.00	0.19	0.00	0.19	0.00	0.40	0.40	0.06	0.56	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4984	78	1619	3510	0
Grp Volume(v), veh/h	0	0	0	92	0	85	0	800	436	71	652	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1786	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	2.3	0.0	9.4	9.4	2.1	5.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.4	0.0	2.3	0.0	9.4	9.4	2.1	5.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	0	4	0	302	0	285	3	1320	719	103	1918	0
V/C Ratio(X)	0.00	0.00	0.00	0.30	0.00	0.30	0.00	0.61	0.61	0.69	0.34	0.00
Avail Cap(c_a), veh/h	0	813	0	742	0	699	166	2772	1511	392	3372	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	17.1	0.0	17.1	0.0	11.5	11.5	22.3	5.8	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.5	0.8	3.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.8	0.0	0.7	0.0	2.2	2.5	0.7	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	17.6	0.0	17.6	0.0	11.9	12.3	25.4	5.9	0.0
LnGrp LOS	A	A	A	B	A	B	A	B	B	C	A	A
Approach Vol, veh/h		0			177			1236			723	
Approach Delay, s/veh		0.0			17.6			12.1			7.8	
Approach LOS					B			B			A	

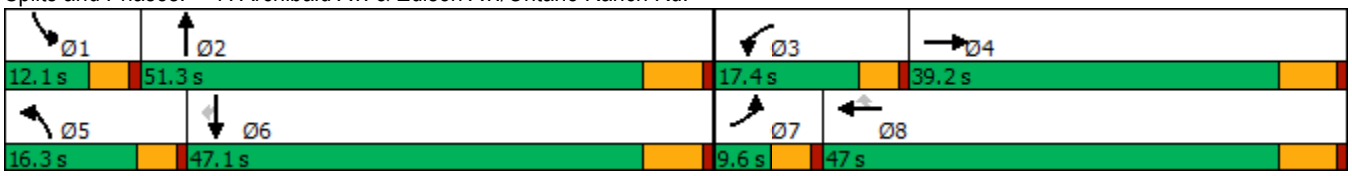
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	26.1		0.0	0.0	33.8		14.9				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	4.1	11.4		0.0	0.0	7.0		4.4				
Green Ext Time (p_c), s	0.0	8.2		0.0	0.0	4.2		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		11.1	
HCM 6th LOS		B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	183	41	299	433	162	149	967	339	62	338	96
Future Volume (vph)	22	183	41	299	433	162	149	967	339	62	338	96
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.3	18.2	94.2	13.3	33.2	33.2	12.3	35.4	94.2	7.1	27.4	27.4
Actuated g/C Ratio	0.06	0.19	1.00	0.14	0.35	0.35	0.13	0.38	1.00	0.08	0.29	0.29
v/c Ratio	0.13	0.28	0.03	0.73	0.70	0.26	0.72	0.77	0.23	0.53	0.35	0.18
Control Delay	53.3	34.2	0.0	54.6	35.9	5.5	65.3	32.0	0.4	64.9	27.3	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	34.2	0.0	54.6	35.9	5.5	65.3	32.0	0.4	64.9	27.3	1.4
LOS	D	C	A	D	D	A	E	C	A	E	C	A
Approach Delay		30.2			36.7			28.1			27.0	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 30.5	Intersection LOS: C
Intersection Capacity Utilization 78.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	183	41	299	433	162	149	967	339	62	338	96
Future Volume (veh/h)	22	183	41	299	433	162	149	967	339	62	338	96
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	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	22	187	0	305	442	123	152	987	0	63	345	65
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	72	638		377	522	442	184	1240		78	1017	453
Arrive On Green	0.02	0.19	0.00	0.13	0.29	0.29	0.11	0.36	0.00	0.05	0.30	0.30
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	22	187	0	305	442	123	152	987	0	63	345	65
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1525
Q Serve(g_s), s	0.6	3.7	0.0	8.0	18.4	5.0	7.3	20.6	0.0	3.1	6.3	2.5
Cycle Q Clear(g_c), s	0.6	3.7	0.0	8.0	18.4	5.0	7.3	20.6	0.0	3.1	6.3	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	638		377	522	442	184	1240		78	1017	453
V/C Ratio(X)	0.31	0.29		0.81	0.85	0.28	0.83	0.80		0.81	0.34	0.14
Avail Cap(c_a), veh/h	186	1418		476	923	782	238	1926		153	1745	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	27.8	0.0	33.8	26.6	21.8	34.5	22.7	0.0	37.5	21.9	20.5
Incr Delay (d2), s/veh	0.9	0.3	0.0	6.4	3.9	0.3	13.4	1.3	0.0	7.4	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.4	0.0	3.0	7.5	1.6	3.3	7.2	0.0	1.3	2.2	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	28.1	0.0	40.2	30.5	22.2	48.0	24.0	0.0	44.9	22.0	20.7
LnGrp LOS	D	C		D	C	C	D	C		D	C	C
Approach Vol, veh/h		209	A		870			1139	A		473	
Approach Delay, s/veh		29.2			32.7			27.2			24.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	35.4	14.7	21.0	13.6	30.1	6.5	29.3
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	5.1	22.6	10.0	5.7	9.3	8.3	2.6	20.4
Green Ext Time (p_c), s	0.0	6.2	0.2	1.0	0.0	2.2	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

Notes

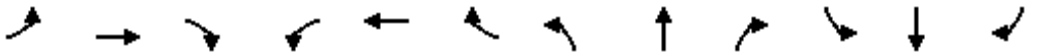
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	59	1396	10	19	658
Future Volume (vph)	6	59	1396	10	19	658
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	13.6%	13.6%	59.1%	59.1%	13.7%	72.9%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.0	5.0	51.3	51.3	5.0	53.1
Actuated g/C Ratio	0.08	0.08	0.79	0.79	0.08	0.82
v/c Ratio	0.02	0.16	0.55	0.01	0.16	0.25
Control Delay	28.5	0.9	7.6	5.9	31.4	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	0.9	7.6	5.9	31.4	3.1
LOS	C	A	A	A	C	A
Approach Delay			7.5			3.9
Approach LOS			A			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 64.6	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	6	0	59	0	1396	10	19	658	0
Future Volume (veh/h)	0	0	0	6	0	59	0	1396	10	19	658	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				6	0	6	0	1485	11	20	700	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, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				48	0	41	0	2340	1022	39	2700	0
Arrive On Green				0.02	0.00	0.02	0.00	0.68	0.68	0.02	0.79	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1494	1619	3510	0
Grp Volume(v), veh/h				6	0	6	0	1485	11	20	700	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1494	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.1	0.0	13.7	0.1	0.7	3.1	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.1	0.0	13.7	0.1	0.7	3.1	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				48	0	41	0	2340	1022	39	2700	0
V/C Ratio(X)				0.13	0.00	0.15	0.00	0.63	0.01	0.52	0.26	0.00
Avail Cap(c_a), veh/h				279	0	238	0	2340	1022	144	2700	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.4	0.0	27.4	0.0	5.0	2.8	27.2	1.6	0.0
Incr Delay (d2), s/veh				1.2	0.0	1.6	0.0	1.3	0.0	3.9	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				0.0	0.0	0.0	0.0	1.7	0.0	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.5	0.0	29.0	0.0	6.3	2.9	31.1	1.8	0.0
LnGrp LOS				C	A	C	A	A	A	C	A	A
Approach Vol, veh/h					12			1496			720	
Approach Delay, s/veh					28.8			6.3			2.6	
Approach LOS					C			A			A	

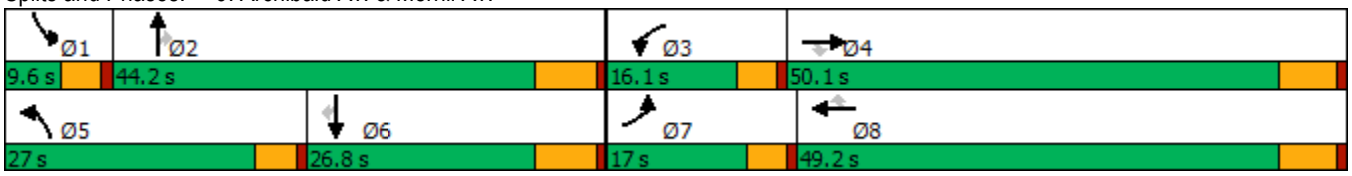
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	5.9	45.1				51.0		5.4				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	2.7	15.7				5.1		2.1				
Green Ext Time (p_c), s	0.0	9.8				4.5		0.0				

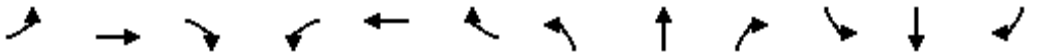
Intersection Summary		
HCM 6th Ctrl Delay		5.2
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	19	90	73	42	120	388	1115	36	37	481	200
Future Volume (vph)	179	19	90	73	42	120	388	1115	36	37	481	200
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.7	21.9	21.9	8.3	15.3	15.3	22.9	40.6	40.6	5.1	18.6	18.6
Actuated g/C Ratio	0.14	0.24	0.24	0.09	0.17	0.17	0.25	0.44	0.44	0.06	0.20	0.20
v/c Ratio	0.83	0.05	0.19	0.52	0.14	0.32	1.00	0.76	0.05	0.23	0.72	0.48
Control Delay	70.8	28.6	1.1	55.6	32.2	4.4	80.8	28.2	0.1	49.6	42.1	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.8	28.6	1.1	55.6	32.2	4.4	80.8	28.2	0.1	49.6	42.1	14.8
LOS	E	C	A	E	C	A	F	C	A	D	D	B
Approach Delay		46.2			25.2			40.8			34.9	
Approach LOS		D			C			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 38.5	Intersection LOS: D
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	19	90	73	42	120	388	1115	36	37	481	200
Future Volume (veh/h)	179	19	90	73	42	120	388	1115	36	37	481	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	185	20	38	75	43	29	400	1149	18	38	496	140
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	219	368	312	93	228	194	433	1438	633	106	646	288
Arrive On Green	0.14	0.20	0.20	0.06	0.13	0.13	0.27	0.42	0.42	0.04	0.19	0.19
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1506	2956	3420	1525
Grp Volume(v), veh/h	185	20	38	75	43	29	400	1149	18	38	496	140
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1506	1478	1710	1525
Q Serve(g_s), s	8.7	0.7	1.6	3.6	1.7	1.3	18.7	22.8	0.5	1.0	10.7	6.4
Cycle Q Clear(g_c), s	8.7	0.7	1.6	3.6	1.7	1.3	18.7	22.8	0.5	1.0	10.7	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	368	312	93	228	194	433	1438	633	106	646	288
V/C Ratio(X)	0.84	0.05	0.12	0.80	0.19	0.15	0.92	0.80	0.03	0.36	0.77	0.49
Avail Cap(c_a), veh/h	258	1015	860	239	994	843	466	1656	729	190	892	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	24.9	25.3	36.2	30.4	30.2	27.7	19.7	13.2	36.6	30.0	28.2
Incr Delay (d2), s/veh	17.2	0.1	0.2	5.9	0.4	0.4	22.4	2.5	0.0	0.8	2.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.3	0.6	1.5	0.7	0.5	9.0	7.9	0.2	0.3	4.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.1	25.0	25.4	42.2	30.8	30.6	50.1	22.2	13.2	37.4	32.7	29.5
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h		243			147			1567			674	
Approach Delay, s/veh		44.2			36.5			29.2			32.3	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	39.2	9.1	22.1	25.4	21.2	15.1	16.1
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.0	24.8	5.6	3.6	20.7	12.7	10.7	3.7
Green Ext Time (p_c), s	0.0	5.8	0.0	0.2	0.1	2.0	0.0	0.3

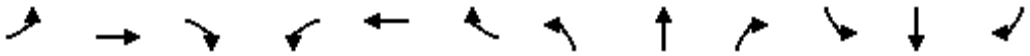
Intersection Summary	
HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	319	478	807	300	127	518
Future Volume (vph)	319	478	807	300	127	518
Turn Type	Prot	pm+ov	NA	pm+ov	Prot	NA
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Detector Phase	8	1	2	8	1	6
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	36.3	11.0	46.3	36.3	11.0	11.0
Total Split (s)	36.3	27.0	56.7	36.3	27.0	83.7
Total Split (%)	30.3%	22.5%	47.3%	30.3%	22.5%	69.8%
Yellow Time (s)	4.3	4.0	4.3	4.3	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.0	5.3	5.3	5.0	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	Min	None	None	Min
Act Effct Green (s)	22.3	40.7	51.9	74.2	13.1	70.3
Actuated g/C Ratio	0.22	0.40	0.50	0.72	0.13	0.68
v/c Ratio	0.85	0.73	0.88	0.25	0.58	0.42
Control Delay	59.7	28.0	37.1	1.0	53.8	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.7	28.0	37.1	1.0	53.8	9.2
LOS	E	C	D	A	D	A
Approach Delay			27.3			17.9
Approach LOS			C			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 29.1	Intersection LOS: C
Intersection Capacity Utilization 80.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	319	0	478	0	807	300	127	518	0
Future Volume (veh/h)	0	0	0	319	0	478	0	807	300	127	518	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h				332	0	379	0	841	213	132	540	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				427	0	529	0	940	1158	168	1224	0
Arrive On Green				0.24	0.00	0.24	0.00	0.49	0.49	0.09	0.64	0.00
Sat Flow, veh/h				1810	0	1610	0	1900	1573	1810	1900	0
Grp Volume(v), veh/h				332	0	379	0	841	213	132	540	0
Grp Sat Flow(s),veh/h/ln				1810	0	1610	0	1900	1573	1810	1900	0
Q Serve(g_s), s				15.2	0.0	18.3	0.0	35.4	3.7	6.3	12.5	0.0
Cycle Q Clear(g_c), s				15.2	0.0	18.3	0.0	35.4	3.7	6.3	12.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				427	0	529	0	940	1158	168	1224	0
V/C Ratio(X)				0.78	0.00	0.72	0.00	0.89	0.18	0.79	0.44	0.00
Avail Cap(c_a), veh/h				635	0	715	0	1106	1295	451	1693	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				31.6	0.0	26.0	0.0	20.2	3.7	39.2	7.8	0.0
Incr Delay (d2), s/veh				1.8	0.0	1.2	0.0	8.9	0.1	7.8	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.3	0.0	6.5	0.0	15.3	2.1	3.0	3.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.4	0.0	27.2	0.0	29.1	3.8	47.0	7.9	0.0
LnGrp LOS				C	A	C	A	C	A	D	A	A
Approach Vol, veh/h					711			1054			672	
Approach Delay, s/veh					30.1			24.0			15.6	
Approach LOS					C			C			B	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.2	49.0				62.2		26.1				
Change Period (Y+Rc), s	5.0	5.3				* 5.3		5.3				
Max Green Setting (Gmax), s	22.0	51.4				* 79		31.0				
Max Q Clear Time (g_c+I1), s	8.3	37.4				14.5		20.3				
Green Ext Time (p_c), s	0.2	6.2				1.8		0.6				

Intersection Summary		
HCM 6th Ctrl Delay		23.4
HCM 6th LOS		C

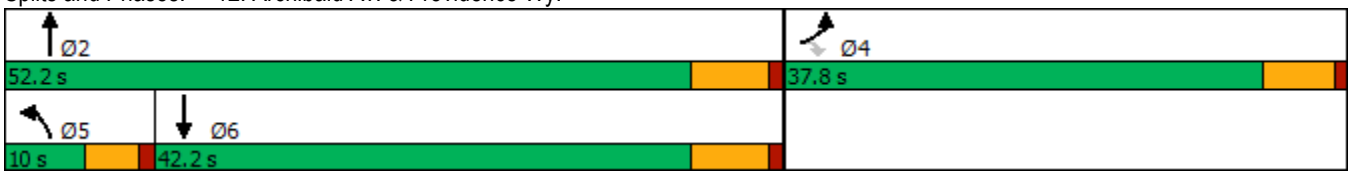
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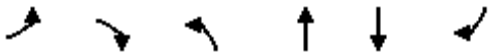
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	4	2	11	1103	803
Future Volume (vph)	4	2	11	1103	803
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	37.8	37.8	9.6	16.2	16.2
Total Split (s)	37.8	37.8	10.0	52.2	42.2
Total Split (%)	42.0%	42.0%	11.1%	58.0%	46.9%
Yellow Time (s)	4.8	4.8	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	6.2	6.2
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Min	Min
Act Effct Green (s)	14.2	14.2	6.2	44.4	43.5
Actuated g/C Ratio	0.29	0.29	0.13	0.92	0.90
v/c Ratio	0.01	0.00	0.05	0.36	0.28
Control Delay	17.8	14.5	30.5	4.2	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.8	14.5	30.5	4.2	5.5
LOS	B	B	C	A	A
Approach Delay	16.7			4.5	5.5
Approach LOS	B			A	A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 48.5	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 4.9	Intersection LOS: A
Intersection Capacity Utilization 48.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Providence Wy.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	2	11	1103	803	34
Future Volume (veh/h)	4	2	11	1103	803	34
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	1	12	1199	873	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	25	22	29	2151	1518	64
Arrive On Green	0.01	0.01	0.02	0.60	0.43	0.43
Sat Flow, veh/h	1810	1610	1810	3705	3624	150
Grp Volume(v), veh/h	4	1	12	1199	447	463
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1805	1805	1873
Q Serve(g_s), s	0.1	0.0	0.2	6.2	5.8	5.8
Cycle Q Clear(g_c), s	0.1	0.0	0.2	6.2	5.8	5.8
Prop In Lane	1.00	1.00	1.00			0.08
Lane Grp Cap(c), veh/h	25	22	29	2151	777	806
V/C Ratio(X)	0.16	0.05	0.42	0.56	0.58	0.58
Avail Cap(c_a), veh/h	1885	1677	318	5405	2115	2195
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	15.0	15.0	15.0	3.8	6.6	6.6
Incr Delay (d2), s/veh	3.0	0.8	3.6	0.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.1	0.8	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.0	15.8	18.6	4.0	7.3	7.3
LnGrp LOS	B	B	B	A	A	A
Approach Vol, veh/h	5			1211	910	
Approach Delay, s/veh	17.6			4.1	7.3	
Approach LOS	B			A	A	

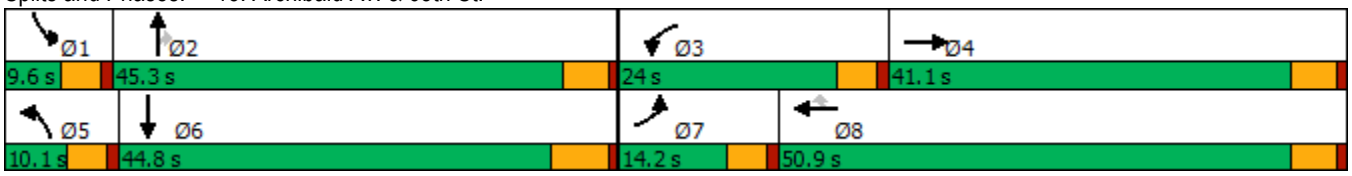
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		24.5		6.2	5.1	19.4
Change Period (Y+Rc), s		6.2		5.8	4.6	6.2
Max Green Setting (Gmax), s		46.0		32.0	5.4	36.0
Max Q Clear Time (g_c+I1), s		8.2		2.1	2.2	7.8
Green Ext Time (p_c), s		9.7		0.0	0.0	5.5

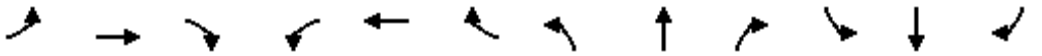
Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	56	46	226	27	59	17	999	134	35	749
Future Volume (vph)	56	46	226	27	59	17	999	134	35	749
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	7.4	14.3	17.1	26.2	26.2	5.4	41.2	41.2	5.1	41.8
Actuated g/C Ratio	0.08	0.15	0.18	0.28	0.28	0.06	0.44	0.44	0.05	0.45
v/c Ratio	0.43	0.20	0.75	0.06	0.12	0.18	0.69	0.19	0.38	0.36
Control Delay	54.5	18.5	53.2	26.5	1.1	52.4	26.4	4.9	59.5	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.5	18.5	53.2	26.5	1.1	52.4	26.4	4.9	59.5	19.9
LOS	D	B	D	C	A	D	C	A	E	B
Approach Delay		31.4		41.0			24.3			21.6
Approach LOS		C		D			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 26.0	Intersection LOS: C
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	46	55	226	27	59	17	999	134	35	749	22
Future Volume (veh/h)	56	46	55	226	27	59	17	999	134	35	749	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	62	51	25	248	30	24	19	1098	111	38	823	15
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	80	288	131	286	443	371	38	1645	724	62	2460	45
Arrive On Green	0.04	0.12	0.12	0.16	0.23	0.23	0.02	0.46	0.46	0.03	0.47	0.47
Sat Flow, veh/h	1810	2404	1097	1810	1900	1589	1810	3610	1589	1810	5245	95
Grp Volume(v), veh/h	62	37	39	248	30	24	19	1098	111	38	542	296
Grp Sat Flow(s),veh/h/ln	1810	1805	1696	1810	1900	1589	1810	1805	1589	1810	1729	1883
Q Serve(g_s), s	3.0	1.6	1.8	11.8	1.1	1.0	0.9	21.0	3.6	1.8	8.7	8.7
Cycle Q Clear(g_c), s	3.0	1.6	1.8	11.8	1.1	1.0	0.9	21.0	3.6	1.8	8.7	8.7
Prop In Lane	1.00		0.65	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	80	216	203	286	443	371	38	1645	724	62	1621	883
V/C Ratio(X)	0.77	0.17	0.19	0.87	0.07	0.06	0.50	0.67	0.15	0.61	0.33	0.33
Avail Cap(c_a), veh/h	197	737	692	398	986	825	113	1645	724	103	1621	883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	34.9	35.0	36.2	26.3	26.3	42.7	18.8	14.1	42.0	14.8	14.8
Incr Delay (d2), s/veh	5.8	0.4	0.5	10.7	0.1	0.1	3.7	2.2	0.4	3.6	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.7	0.7	5.8	0.5	0.4	0.4	8.4	1.3	0.8	3.1	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	35.3	35.4	47.0	26.4	26.4	46.4	20.9	14.5	45.6	15.3	15.8
LnGrp LOS	D	D	D	D	C	C	D	C	B	D	B	B
Approach Vol, veh/h		138			302			1228			876	
Approach Delay, s/veh		40.8			43.3			20.8			16.8	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	46.4	18.5	15.7	6.5	47.6	8.5	25.7
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	3.8	23.0	13.8	3.8	2.9	10.7	5.0	3.1
Green Ext Time (p_c), s	0.0	7.4	0.2	0.3	0.0	5.1	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	23.2
HCM 6th LOS	C

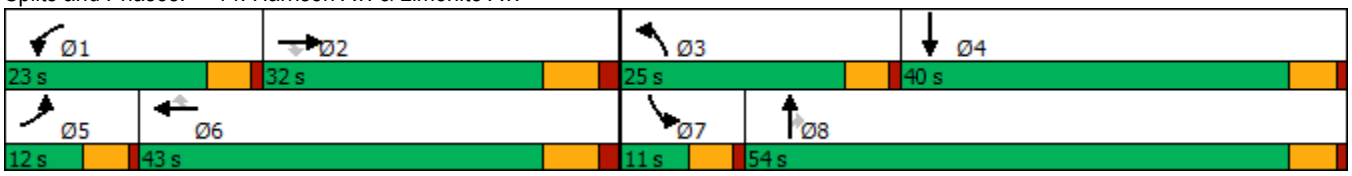
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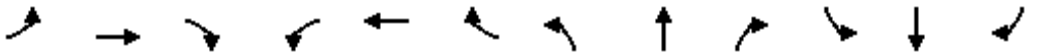
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	39	347	10	158	589	5	107	103	214	21	116
Future Volume (vph)	39	347	10	158	589	5	107	103	214	21	116
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.3	12.1	12.1	11.1	22.9	22.9	9.2	22.0	22.0	5.9	14.2
Actuated g/C Ratio	0.09	0.18	0.18	0.16	0.34	0.34	0.14	0.32	0.32	0.09	0.21
v/c Ratio	0.25	0.40	0.02	0.57	0.36	0.01	0.47	0.18	0.34	0.14	0.44
Control Delay	41.6	29.2	0.1	39.8	21.8	0.0	39.8	19.2	4.8	41.6	27.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	29.2	0.1	39.8	21.8	0.0	39.8	19.2	4.8	41.6	27.4
LOS	D	C	A	D	C	A	D	B	A	D	C
Approach Delay		29.6			25.4			17.2			29.0
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 68.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 49.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	347	10	158	589	5	107	103	214	21	116	47
Future Volume (veh/h)	39	347	10	158	589	5	107	103	214	21	116	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	369	8	168	627	3	114	110	135	22	123	33
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	80	840	261	217	1231	382	152	383	320	48	209	56
Arrive On Green	0.04	0.16	0.16	0.12	0.24	0.24	0.08	0.20	0.20	0.03	0.14	0.14
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	1900	1587	1810	1443	387
Grp Volume(v), veh/h	41	369	8	168	627	3	114	110	135	22	0	156
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	1900	1587	1810	0	1830
Q Serve(g_s), s	1.0	2.9	0.2	4.1	4.8	0.1	2.8	2.2	3.4	0.5	0.0	3.6
Cycle Q Clear(g_c), s	1.0	2.9	0.2	4.1	4.8	0.1	2.8	2.2	3.4	0.5	0.0	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	80	840	261	217	1231	382	152	383	320	48	0	264
V/C Ratio(X)	0.51	0.44	0.03	0.78	0.51	0.01	0.75	0.29	0.42	0.46	0.00	0.59
Avail Cap(c_a), veh/h	278	2849	884	716	4103	1274	795	2033	1698	239	0	1396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.3	17.2	16.1	19.4	15.1	13.3	20.4	15.4	15.9	21.8	0.0	18.2
Incr Delay (d2), s/veh	1.8	0.4	0.0	2.2	0.3	0.0	2.8	0.4	0.9	2.5	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.9	0.1	1.5	1.4	0.0	1.1	0.8	1.0	0.2	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	17.6	16.1	21.7	15.4	13.3	23.2	15.8	16.7	24.3	0.0	20.3
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	A	C
Approach Vol, veh/h		418			798			359			178	
Approach Delay, s/veh		18.1			16.7			18.5			20.8	
Approach LOS		B			B			B			C	

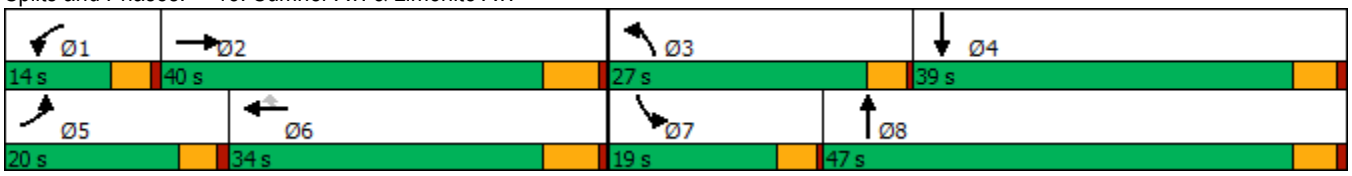
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	14.4	8.8	11.9	7.0	17.8	6.2	14.5
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	6.1	4.9	4.8	5.6	3.0	6.8	2.5	5.4
Green Ext Time (p_c), s	0.1	2.1	0.1	0.8	0.0	4.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	231	396	88	487	37	118	419	84	262
Future Volume (vph)	231	396	88	487	37	118	419	84	262
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.7	20.5	6.4	14.2	14.2	9.6	18.6	8.1	17.3
Actuated g/C Ratio	0.14	0.30	0.09	0.21	0.21	0.14	0.27	0.12	0.25
v/c Ratio	0.50	0.29	0.29	0.49	0.08	0.50	0.62	0.42	0.46
Control Delay	35.4	22.9	38.1	28.4	0.4	40.1	24.7	40.5	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	22.9	38.1	28.4	0.4	40.1	24.7	40.5	21.0
LOS	D	C	D	C	A	D	C	D	C
Approach Delay		27.4		28.1			27.3		24.4
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 69.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 53.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	396	20	88	487	37	118	419	141	84	262	134
Future Volume (veh/h)	231	396	20	88	487	37	118	419	141	84	262	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	246	421	12	94	518	21	126	446	89	89	279	64
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	381	1272	36	208	1018	316	164	690	137	114	592	134
Arrive On Green	0.11	0.25	0.25	0.06	0.20	0.20	0.09	0.23	0.23	0.06	0.20	0.20
Sat Flow, veh/h	3510	5182	147	3510	5187	1610	1810	3002	595	1810	2926	660
Grp Volume(v), veh/h	246	280	153	94	518	21	126	267	268	89	170	173
Grp Sat Flow(s),veh/h/ln	1755	1729	1871	1755	1729	1610	1810	1805	1792	1810	1805	1781
Q Serve(g_s), s	3.3	3.2	3.3	1.3	4.3	0.5	3.3	6.5	6.6	2.3	4.0	4.1
Cycle Q Clear(g_c), s	3.3	3.2	3.3	1.3	4.3	0.5	3.3	6.5	6.6	2.3	4.0	4.1
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.33	1.00		0.37
Lane Grp Cap(c), veh/h	381	849	459	208	1018	316	164	415	412	114	365	360
V/C Ratio(X)	0.65	0.33	0.33	0.45	0.51	0.07	0.77	0.64	0.65	0.78	0.47	0.48
Avail Cap(c_a), veh/h	1123	2426	1313	688	2997	930	859	1564	1553	560	1266	1250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	15.0	15.0	22.0	17.4	15.9	21.5	16.9	16.9	22.4	17.0	17.1
Incr Delay (d2), s/veh	0.7	0.2	0.4	0.6	0.4	0.1	2.8	1.2	1.3	4.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.0	1.1	0.4	1.4	0.2	1.3	2.3	2.3	1.0	1.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	15.2	15.4	22.6	17.8	15.9	24.4	18.1	18.2	26.6	17.7	17.8
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		679			633			661			432	
Approach Delay, s/veh		17.5			18.4			19.3			19.6	
Approach LOS		B			B			B			B	

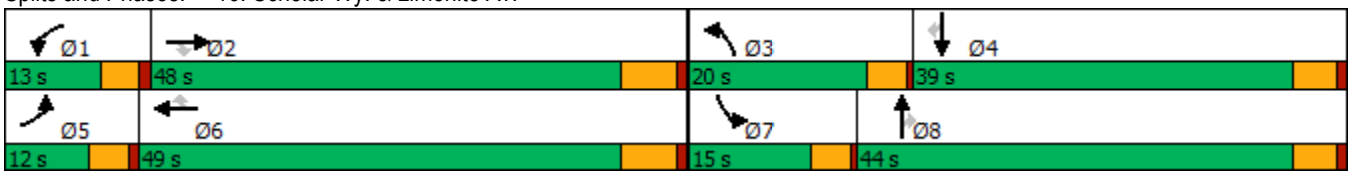
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	17.9	8.4	14.8	9.8	15.5	7.1	16.1
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	3.3	5.3	5.3	6.1	5.3	6.3	4.3	8.6
Green Ext Time (p_c), s	0.0	2.4	0.1	1.4	0.2	3.1	0.0	2.4

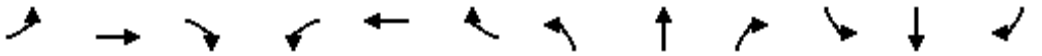
Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	609	62	56	465	35	86	169	99	52	195	31
Future Volume (vph)	38	609	62	56	465	35	86	169	99	52	195	31
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	6.2	19.7	19.7	6.9	20.2	20.2	8.3	16.8	16.8	6.9	13.0	13.0
Actuated g/C Ratio	0.10	0.32	0.32	0.11	0.33	0.33	0.14	0.27	0.27	0.11	0.21	0.21
v/c Ratio	0.22	0.56	0.11	0.30	0.42	0.06	0.37	0.35	0.21	0.27	0.27	0.10
Control Delay	38.8	22.6	0.4	38.6	20.4	0.2	36.7	24.3	6.6	37.7	24.3	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	22.6	0.4	38.6	20.4	0.2	36.7	24.3	6.6	37.7	24.3	24.9
LOS	D	C	A	D	C	A	D	C	A	D	C	C
Approach Delay		21.5			21.0			22.3			26.8	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 61.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 52.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 16: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	609	62	56	465	35	86	169	99	52	195	31
Future Volume (veh/h)	38	609	62	56	465	35	86	169	99	52	195	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	40	648	46	60	495	26	91	180	60	55	207	33
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	63	1083	482	85	1126	501	117	341	285	80	574	247
Arrive On Green	0.03	0.30	0.30	0.05	0.31	0.31	0.06	0.18	0.18	0.04	0.16	0.16
Sat Flow, veh/h	1810	3610	1605	1810	3610	1608	1810	1900	1589	1810	3610	1550
Grp Volume(v), veh/h	40	648	46	60	495	26	91	180	60	55	207	33
Grp Sat Flow(s),veh/h/ln	1810	1805	1605	1810	1805	1608	1810	1900	1589	1810	1805	1550
Q Serve(g_s), s	1.0	7.0	0.9	1.5	5.0	0.5	2.2	3.9	1.5	1.4	2.3	0.8
Cycle Q Clear(g_c), s	1.0	7.0	0.9	1.5	5.0	0.5	2.2	3.9	1.5	1.4	2.3	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	63	1083	482	85	1126	501	117	341	285	80	574	247
V/C Ratio(X)	0.63	0.60	0.10	0.71	0.44	0.05	0.78	0.53	0.21	0.69	0.36	0.13
Avail Cap(c_a), veh/h	299	3340	1485	339	3419	1523	638	1632	1365	438	2704	1160
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	13.6	11.4	21.3	12.5	10.9	20.9	16.9	15.9	21.4	17.0	16.4
Incr Delay (d2), s/veh	3.8	0.5	0.1	4.0	0.3	0.0	4.2	0.9	0.3	3.9	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.1	0.3	0.6	1.4	0.2	1.0	1.5	0.5	0.6	0.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	14.1	11.5	25.4	12.7	11.0	25.1	17.8	16.1	25.3	17.3	16.6
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		734			581			331			295	
Approach Delay, s/veh		14.5			14.0			19.5			18.7	
Approach LOS		B			B			B			B	

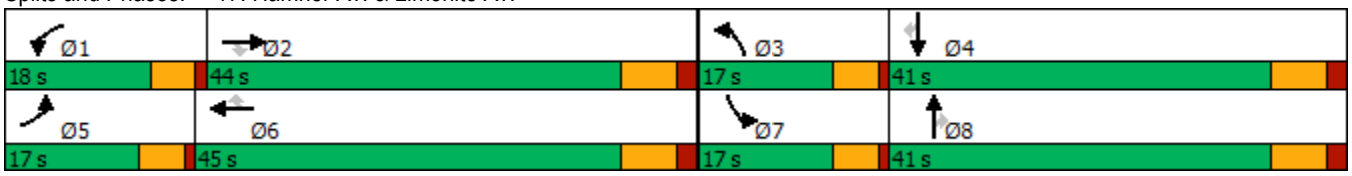
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	19.6	6.9	12.2	6.1	20.2	6.0	13.2
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	3.5	9.0	4.2	4.3	3.0	7.0	3.4	5.9
Green Ext Time (p_c), s	0.0	4.3	0.0	1.1	0.0	3.2	0.0	0.9

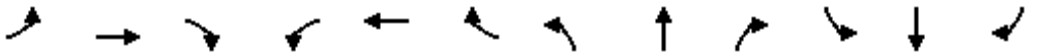
Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	500	30	197	347	97	124	546	285	191	295	91
Future Volume (vph)	153	500	30	197	347	97	124	546	285	191	295	91
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	8.3	19.6	19.6	9.3	20.6	20.6	7.5	22.5	22.5	9.0	24.1	24.1
Actuated g/C Ratio	0.10	0.23	0.23	0.11	0.24	0.24	0.09	0.26	0.26	0.11	0.28	0.28
v/c Ratio	0.49	0.46	0.07	0.56	0.43	0.22	0.44	0.43	0.49	0.56	0.22	0.18
Control Delay	44.7	30.7	0.3	44.7	30.3	4.9	45.0	27.7	7.3	45.3	24.6	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	30.7	0.3	44.7	30.3	4.9	45.0	27.7	7.3	45.3	24.6	3.6
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		32.4			30.9			23.9			28.1	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 85.3	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 28.4	Intersection LOS: C
Intersection Capacity Utilization 55.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	500	30	197	347	97	124	546	285	191	295	91
Future Volume (veh/h)	153	500	30	197	347	97	124	546	285	191	295	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	166	543	23	214	377	68	135	593	146	208	321	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	258	1148	351	312	855	376	237	1303	398	305	1403	430
Arrive On Green	0.07	0.22	0.22	0.09	0.24	0.24	0.07	0.25	0.25	0.09	0.27	0.27
Sat Flow, veh/h	3510	5187	1586	3510	3610	1589	3510	5187	1584	3510	5187	1590
Grp Volume(v), veh/h	166	543	23	214	377	68	135	593	146	208	321	35
Grp Sat Flow(s),veh/h/ln	1755	1729	1586	1755	1805	1589	1755	1729	1584	1755	1729	1590
Q Serve(g_s), s	3.1	6.2	0.8	4.0	6.1	2.3	2.5	6.6	5.2	3.9	3.3	1.1
Cycle Q Clear(g_c), s	3.1	6.2	0.8	4.0	6.1	2.3	2.5	6.6	5.2	3.9	3.3	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	1148	351	312	855	376	237	1303	398	305	1403	430
V/C Ratio(X)	0.64	0.47	0.07	0.69	0.44	0.18	0.57	0.46	0.37	0.68	0.23	0.08
Avail Cap(c_a), veh/h	617	2813	860	669	2010	885	617	2585	789	617	2585	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	23.1	21.0	30.2	22.2	20.8	30.8	21.6	21.1	30.2	19.4	18.6
Incr Delay (d2), s/veh	1.0	0.6	0.2	1.0	0.8	0.5	0.8	0.5	1.2	1.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.3	0.3	1.6	2.4	0.8	1.0	2.4	1.8	1.6	1.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	23.8	21.2	31.2	23.0	21.2	31.6	22.1	22.3	31.2	19.5	18.7
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	B	B
Approach Vol, veh/h		732			659			874			564	
Approach Delay, s/veh		25.5			25.4			23.6			23.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	22.1	9.6	25.5	10.0	23.2	10.9	24.1
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	6.0	8.2	4.5	5.3	5.1	8.1	5.9	8.6
Green Ext Time (p_c), s	0.1	6.9	0.1	4.0	0.1	5.0	0.1	8.3

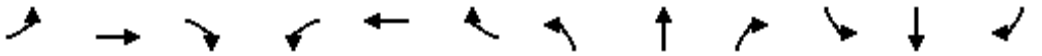
Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	678	424	408	603	85	0	313
Future Volume (vph)	678	424	408	603	85	0	313
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	36.5	36.5	23.5	23.5	23.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.5	73.5	73.5	73.5	6.9	6.9	6.9
Actuated g/C Ratio	0.80	0.80	0.80	0.80	0.08	0.08	0.08
v/c Ratio	0.17	0.32	0.10	0.44	0.34	0.34	0.63
Control Delay	2.2	0.9	2.1	1.2	47.3	47.3	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.2	0.9	2.1	1.2	47.3	47.3	11.0
LOS	A	A	A	A	D	D	B
Approach Delay	1.7		1.6			18.7	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 4.3	Intersection LOS: A
Intersection Capacity Utilization 41.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰	↱↱
Traffic Volume (veh/h)	0	678	424	0	408	603	0	0	0	85	0	313
Future Volume (veh/h)	0	678	424	0	408	603	0	0	0	85	0	313
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	699	400	0	421	622				88	0	115
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4237	1299	0	4237	1315				220	0	195
Arrive On Green	0.00	0.82	0.82	0.00	0.82	0.82				0.06	0.00	0.06
Sat Flow, veh/h	0	5358	1590	0	5358	1610				3619	0	3204
Grp Volume(v), veh/h	0	699	400	0	421	622				88	0	115
Grp Sat Flow(s),veh/h/ln	0	1729	1590	0	1729	1610				1810	0	1602
Q Serve(g_s), s	0.0	2.6	5.5	0.0	1.5	10.4				2.1	0.0	3.1
Cycle Q Clear(g_c), s	0.0	2.6	5.5	0.0	1.5	10.4				2.1	0.0	3.1
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4237	1299	0	4237	1315				220	0	195
V/C Ratio(X)	0.00	0.16	0.31	0.00	0.10	0.47				0.40	0.00	0.59
Avail Cap(c_a), veh/h	0	4237	1299	0	4237	1315				1428	0	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	1.7	2.0	0.0	1.6	2.5				40.7	0.0	41.2
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.0	0.0	1.2				0.4	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.4	1.0	0.0	0.2	1.9				0.9	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.8	2.6	0.0	1.7	3.7				41.1	0.0	42.2
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1099			1043						203	
Approach Delay, s/veh		2.1			2.9						41.7	
Approach LOS		A			A						D	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	79.0	11.0	79.0
Change Period (Y+Rc), s	5.5	5.5	5.5
Max Green Setting (Gmax), s	73.5	35.5	73.5
Max Q Clear Time (g_c+I1), s	7.5	5.1	12.4
Green Ext Time (p_c), s	4.2	0.4	3.2

Intersection Summary	
HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

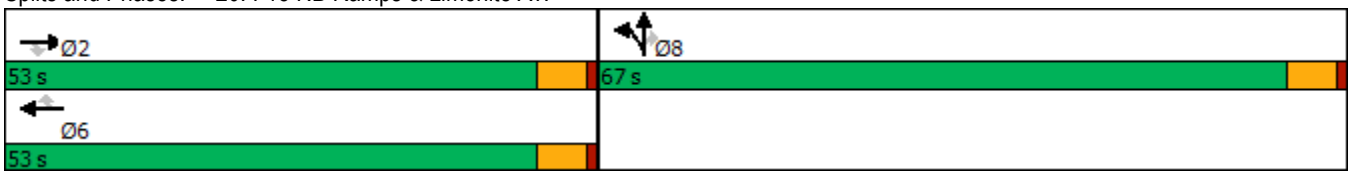
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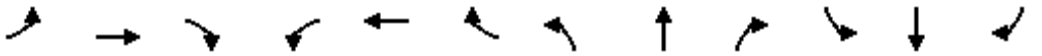
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	280	483	842	238	169	0	286
Future Volume (vph)	280	483	842	238	169	0	286
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.5	47.5	47.5	47.5	9.1	9.1	9.1
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.13	0.13	0.13
v/c Ratio	0.08	0.39	0.24	0.20	0.38	0.38	0.46
Control Delay	3.5	1.4	4.0	1.1	31.3	31.3	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.5	1.4	4.0	1.1	31.3	31.3	6.3
LOS	A	A	A	A	C	C	A
Approach Delay	2.2		3.3			15.6	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 67.6	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 5.4	Intersection LOS: A
Intersection Capacity Utilization 34.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 20: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↕	↱↱			
Traffic Volume (veh/h)	0	280	483	0	842	238	169	0	286	0	0	0
Future Volume (veh/h)	0	280	483	0	842	238	169	0	286	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	286	493	0	859	210	172	0	94			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3831	1188	0	3831	1189	327	0	291			
Arrive On Green	0.00	0.74	0.74	0.00	0.74	0.74	0.09	0.00	0.09			
Sat Flow, veh/h	0	5358	1609	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	286	493	0	859	210	172	0	94			
Grp Sat Flow(s),veh/h/ln	0	1729	1609	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	1.0	7.4	0.0	3.3	2.5	2.9	0.0	1.8			
Cycle Q Clear(g_c), s	0.0	1.0	7.4	0.0	3.3	2.5	2.9	0.0	1.8			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3831	1188	0	3831	1189	327	0	291			
V/C Ratio(X)	0.00	0.07	0.41	0.00	0.22	0.18	0.53	0.00	0.32			
Avail Cap(c_a), veh/h	0	3831	1188	0	3831	1189	3461	0	3080			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	2.3	3.2	0.0	2.6	2.5	27.9	0.0	27.4			
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.0	0.1	0.3	1.3	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	0.2	1.5	0.0	0.6	0.5	1.2	0.0	0.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.4	4.2	0.0	2.8	2.9	29.2	0.0	28.0			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		779			1069			266				
Approach Delay, s/veh		3.5			2.8			28.8				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		11.3				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		9.4				5.3		4.9				
Green Ext Time (p_c), s		2.2				4.7		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			6.3									
HCM 6th LOS			A									

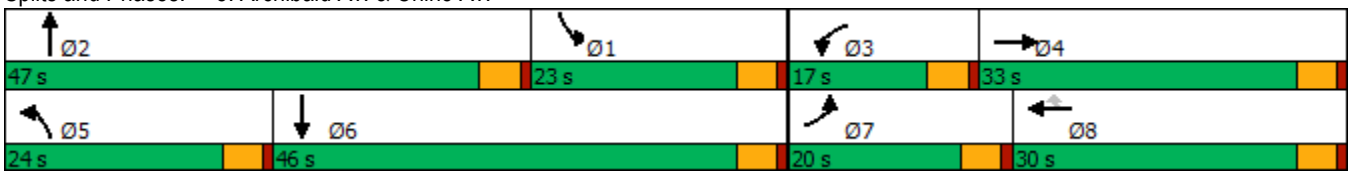
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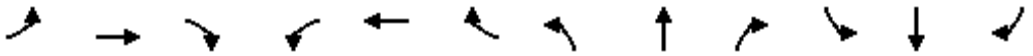
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	122	156	19	43	107	54	717	137	1034
Future Volume (vph)	122	156	19	43	107	54	717	137	1034
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.2	21.0	7.2	10.7	10.7	9.0	21.2	21.9	38.0
Actuated g/C Ratio	0.16	0.25	0.09	0.13	0.13	0.11	0.25	0.26	0.46
v/c Ratio	0.50	0.59	0.14	0.20	0.35	0.32	0.63	0.34	0.73
Control Delay	46.6	34.3	46.3	38.9	6.8	46.4	32.3	31.3	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	34.3	46.3	38.9	6.8	46.4	32.3	31.3	25.7
LOS	D	C	D	D	A	D	C	C	C
Approach Delay		38.3		19.5			33.3		26.3
Approach LOS		D		B			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 29.8	Intersection LOS: C
Intersection Capacity Utilization 65.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	156	96	19	43	107	54	717	36	137	1034	56
Future Volume (veh/h)	122	156	96	19	43	107	54	717	36	137	1034	56
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	127	162	100	20	45	72	56	747	35	143	1077	53
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	161	209	129	38	226	191	81	1192	56	365	1404	69
Arrive On Green	0.10	0.20	0.20	0.02	0.13	0.13	0.05	0.25	0.25	0.23	0.42	0.42
Sat Flow, veh/h	1619	1041	643	1619	1800	1525	1619	4811	225	1619	3317	163
Grp Volume(v), veh/h	127	0	262	20	45	72	56	508	274	143	555	575
Grp Sat Flow(s),veh/h/ln	1619	0	1684	1619	1800	1525	1619	1638	1760	1619	1710	1771
Q Serve(g_s), s	4.7	0.0	9.0	0.7	1.4	1.5	2.1	8.4	8.5	4.6	16.9	16.9
Cycle Q Clear(g_c), s	4.7	0.0	9.0	0.7	1.4	1.5	2.1	8.4	8.5	4.6	16.9	16.9
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.13	1.00		0.09
Lane Grp Cap(c), veh/h	161	0	339	38	226	191	81	812	436	365	724	749
V/C Ratio(X)	0.79	0.00	0.77	0.52	0.20	0.38	0.69	0.63	0.63	0.39	0.77	0.77
Avail Cap(c_a), veh/h	409	0	785	329	750	636	515	2279	1224	489	1161	1203
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	23.0	29.4	23.9	7.9	28.5	20.4	20.4	20.0	15.0	15.0
Incr Delay (d2), s/veh	8.4	0.0	3.8	10.7	0.4	1.2	9.9	0.8	1.5	0.7	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	3.5	0.4	0.6	0.9	0.9	2.7	3.0	1.5	5.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	0.0	26.8	40.1	24.3	9.2	38.3	21.2	21.9	20.7	16.8	16.7
LnGrp LOS	D	A	C	D	C	A	D	C	C	C	B	B
Approach Vol, veh/h		389			137			838			1273	
Approach Delay, s/veh		29.5			18.7			22.6			17.2	
Approach LOS		C			B			C			B	

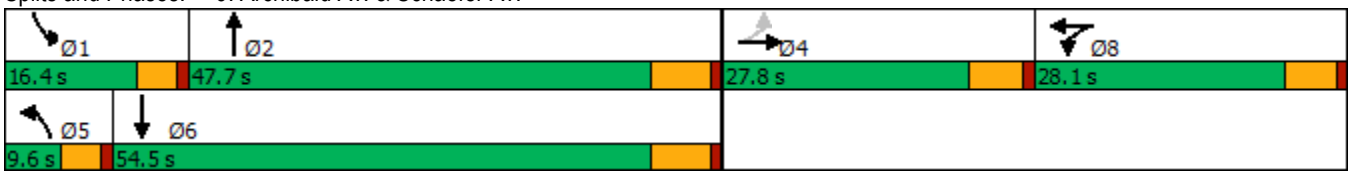
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	19.7	6.0	16.9	7.7	30.4	10.7	12.2
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	6.6	10.5	2.7	11.0	4.1	18.9	6.7	3.5
Green Ext Time (p_c), s	0.2	4.6	0.0	1.3	0.1	6.9	0.2	0.4

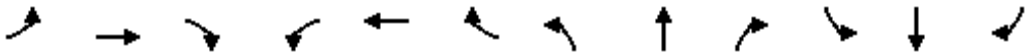
Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	10	0	706	35	1071		
Future Volume (vph)	10	0	706	35	1071		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	47.7	16.4	54.5	27.8	9.6
Total Split (%)	23.4%	23.4%	39.8%	13.7%	45.4%	23%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	16.5	16.5	29.6	8.7	33.0		
Actuated g/C Ratio	0.35	0.35	0.62	0.18	0.69		
v/c Ratio	0.02	0.05	0.25	0.13	0.48		
Control Delay	25.2	0.1	13.7	31.4	11.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	25.2	0.1	13.7	31.4	11.7		
LOS	C	A	B	C	B		
Approach Delay		5.3	13.7		12.4		
Approach LOS		A	B		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 47.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	0	40	0	706	22	35	1071	0
Future Volume (veh/h)	0	0	0	10	0	40	0	706	22	35	1071	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	11	0	26	0	743	22	37	1127	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	5	0	141	0	133	5	1767	52	70	1855	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.36	0.36	0.04	0.54	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4902	145	1619	3510	0
Grp Volume(v), veh/h	0	0	0	11	0	26	0	496	269	37	1127	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1770	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.5	0.0	3.8	3.8	0.7	7.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.2	0.0	0.5	0.0	3.8	3.8	0.7	7.5	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.08	1.00		0.00
Lane Grp Cap(c), veh/h	0	5	0	141	0	133	5	1181	638	70	1855	0
V/C Ratio(X)	0.00	0.00	0.00	0.08	0.00	0.20	0.00	0.42	0.42	0.52	0.61	0.00
Avail Cap(c_a), veh/h	0	1192	0	1087	0	1024	244	4064	2196	575	4943	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	13.9	0.0	14.1	0.0	8.0	8.0	15.5	5.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.7	0.0	0.2	0.4	2.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.6	0.7	0.2	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	14.2	0.0	14.8	0.0	8.2	8.5	17.8	5.5	0.0
LnGrp LOS	A	A	A	B	A	B	A	A	A	B	A	A
Approach Vol, veh/h		0			37			765			1164	
Approach Delay, s/veh		0.0			14.6			8.3			5.9	
Approach LOS					B			A			A	

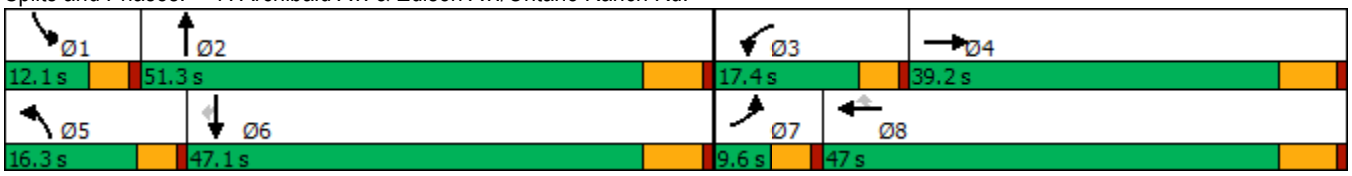
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	18.5		0.0	0.0	24.5		8.7				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	2.7	5.8		0.0	0.0	9.5		2.5				
Green Ext Time (p_c), s	0.0	4.6		0.0	0.0	8.5		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		7.0	
HCM 6th LOS		A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	551	106	260	193	84	51	412	242	127	901	78
Future Volume (vph)	72	551	106	260	193	84	51	412	242	127	901	78
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.3	22.6	96.2	12.2	32.5	32.5	8.0	30.5	96.2	7.9	33.3	33.3
Actuated g/C Ratio	0.06	0.23	1.00	0.13	0.34	0.34	0.08	0.32	1.00	0.08	0.35	0.35
v/c Ratio	0.46	0.71	0.07	0.72	0.33	0.15	0.40	0.39	0.16	0.99	0.78	0.13
Control Delay	60.6	40.4	0.1	55.8	29.0	2.9	56.6	26.3	0.2	127.7	35.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	40.4	0.1	55.8	29.0	2.9	56.6	26.3	0.2	127.7	35.4	0.4
LOS	E	D	A	E	C	A	E	C	A	F	D	A
Approach Delay		36.6			37.9			19.6			43.5	
Approach LOS		D			D			B			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 35.4	Intersection LOS: D
Intersection Capacity Utilization 73.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	551	106	260	193	84	51	412	242	127	901	78
Future Volume (veh/h)	72	551	106	260	193	84	51	412	242	127	901	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	74	568	0	268	199	53	53	425	0	131	929	64
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	150	753		341	513	435	70	1005		153	1180	514
Arrive On Green	0.05	0.22	0.00	0.12	0.28	0.28	0.04	0.29	0.00	0.09	0.35	0.35
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1489
Grp Volume(v), veh/h	74	568	0	268	199	53	53	425	0	131	929	64
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1489
Q Serve(g_s), s	1.9	12.3	0.0	7.0	7.1	2.0	2.6	8.0	0.0	6.3	19.4	2.3
Cycle Q Clear(g_c), s	1.9	12.3	0.0	7.0	7.1	2.0	2.6	8.0	0.0	6.3	19.4	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	150	753		341	513	435	70	1005		153	1180	514
V/C Ratio(X)	0.49	0.75		0.79	0.39	0.12	0.75	0.42		0.86	0.79	0.12
Avail Cap(c_a), veh/h	186	1422		477	925	784	239	1930		153	1749	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	28.9	0.0	34.2	22.8	21.0	37.5	22.6	0.0	35.4	23.4	17.8
Incr Delay (d2), s/veh	0.9	1.6	0.0	3.6	0.5	0.1	6.0	0.3	0.0	33.8	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.7	0.0	2.5	2.7	0.7	1.1	2.8	0.0	3.7	6.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	30.5	0.0	37.8	23.3	21.1	43.5	22.9	0.0	69.3	24.8	17.9
LnGrp LOS	D	C		D	C	C	D	C		E	C	B
Approach Vol, veh/h		642	A		520			478	A		1124	
Approach Delay, s/veh		31.3			30.5			25.2			29.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	29.8	13.8	23.7	8.0	33.9	8.6	28.8
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	8.3	10.0	9.0	14.3	4.6	21.4	3.9	9.1
Green Ext Time (p_c), s	0.0	2.5	0.2	3.2	0.0	5.7	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

Notes

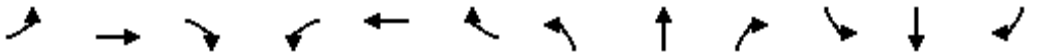
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	18	686	7	50	1217
Future Volume (vph)	3	18	686	7	50	1217
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	13.6%	13.6%	59.1%	59.1%	13.7%	72.9%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.1	5.1	50.9	50.9	5.1	56.4
Actuated g/C Ratio	0.08	0.08	0.84	0.84	0.08	0.93
v/c Ratio	0.01	0.05	0.25	0.01	0.39	0.40
Control Delay	26.3	0.2	4.3	5.7	35.3	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	0.2	4.3	5.7	35.3	2.5
LOS	C	A	A	A	D	A
Approach Delay			4.3			3.8
Approach LOS			A			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 60.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 4.0	Intersection LOS: A
Intersection Capacity Utilization 47.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	3	0	18	0	686	7	50	1217	0
Future Volume (veh/h)	0	0	0	3	0	18	0	686	7	50	1217	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				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				3	0	0	0	707	6	52	1255	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				13	0	11	0	2279	1017	80	2731	0
Arrive On Green				0.00	0.00	0.00	0.00	0.67	0.67	0.05	0.80	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1525	1619	3510	0
Grp Volume(v), veh/h				3	0	0	0	707	6	52	1255	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1525	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.0	0.0	4.8	0.1	1.8	6.5	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.0	0.0	4.8	0.1	1.8	6.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				13	0	11	0	2279	1017	80	2731	0
V/C Ratio(X)				0.23	0.00	0.00	0.00	0.31	0.01	0.65	0.46	0.00
Avail Cap(c_a), veh/h				282	0	241	0	2279	1017	145	2731	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.7	0.0	0.0	0.0	3.9	3.1	26.0	1.8	0.0
Incr Delay (d2), s/veh				9.1	0.0	0.0	0.0	0.4	0.0	3.2	0.6	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				36.7	0.0	0.0	0.0	4.3	3.1	29.2	2.3	0.0
LnGrp LOS				D	A	A	A	A	A	C	A	A
Approach Vol, veh/h					3			713			1307	
Approach Delay, s/veh					36.7			4.3			3.4	
Approach LOS					D			A			A	

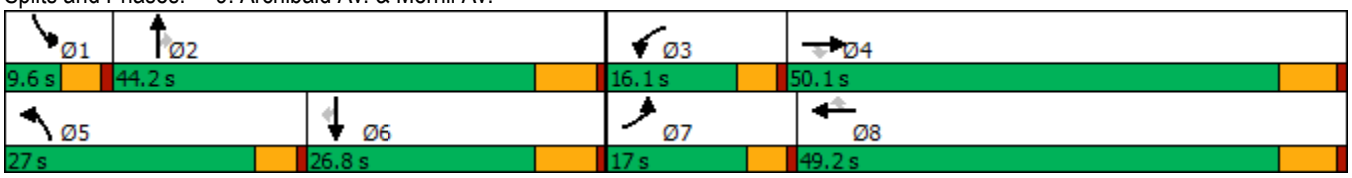
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	7.4	43.6				51.0		4.7				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	3.8	6.8				8.5		2.1				
Green Ext Time (p_c), s	0.0	4.4				9.9		0.0				

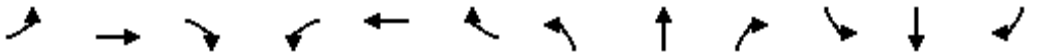
Intersection Summary			
HCM 6th Ctrl Delay			3.8
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	67	396	44	22	51	110	564	38	68	889	156
Future Volume (vph)	234	67	396	44	22	51	110	564	38	68	889	156
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.6	21.6	21.6	7.2	15.4	15.4	10.2	26.7	26.7	5.5	22.3	22.3
Actuated g/C Ratio	0.18	0.28	0.28	0.09	0.20	0.20	0.13	0.35	0.35	0.07	0.29	0.29
v/c Ratio	0.84	0.14	0.56	0.30	0.06	0.12	0.53	0.48	0.06	0.33	0.92	0.29
Control Delay	62.2	23.7	6.0	44.2	26.5	0.6	45.1	24.6	0.2	45.8	46.0	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	23.7	6.0	44.2	26.5	0.6	45.1	24.6	0.2	45.8	46.0	8.4
LOS	E	C	A	D	C	A	D	C	A	D	D	A
Approach Delay		26.5			21.8			26.5			40.7	
Approach LOS		C			C			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 76.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 32.3	Intersection LOS: C
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	67	396	44	22	51	110	564	38	68	889	156
Future Volume (veh/h)	234	67	396	44	22	51	110	564	38	68	889	156
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	241	69	223	45	23	14	113	581	25	70	916	103
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	278	490	415	67	255	216	142	1103	492	156	985	439
Arrive On Green	0.17	0.27	0.27	0.04	0.14	0.14	0.09	0.32	0.32	0.05	0.29	0.29
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	241	69	223	45	23	14	113	581	25	70	916	103
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1525	1478	1710	1525
Q Serve(g_s), s	10.2	2.0	8.8	1.9	0.8	0.6	4.8	9.8	0.8	1.6	18.4	3.6
Cycle Q Clear(g_c), s	10.2	2.0	8.8	1.9	0.8	0.6	4.8	9.8	0.8	1.6	18.4	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	490	415	67	255	216	142	1103	492	156	985	439
V/C Ratio(X)	0.87	0.14	0.54	0.67	0.09	0.06	0.80	0.53	0.05	0.45	0.93	0.23
Avail Cap(c_a), veh/h	285	1121	950	264	1098	931	515	1830	816	210	985	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	19.4	21.9	33.3	26.3	26.2	31.5	19.5	16.4	32.4	24.4	19.1
Incr Delay (d2), s/veh	22.0	0.1	1.1	4.2	0.2	0.1	3.9	0.4	0.0	0.7	14.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.8	3.0	0.8	0.3	0.2	1.8	3.3	0.3	0.5	8.2	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	19.5	22.9	37.5	26.4	26.3	35.4	19.9	16.5	33.1	39.1	19.4
LnGrp LOS	D	B	C	D	C	C	D	B	B	C	D	B
Approach Vol, veh/h		533			82			719			1089	
Approach Delay, s/veh		34.9			32.5			22.2			36.8	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	29.2	7.5	25.4	10.8	26.8	16.7	16.2
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.6	11.8	3.9	10.8	6.8	20.4	12.2	2.8
Green Ext Time (p_c), s	0.0	3.5	0.0	1.0	0.1	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	31.9
HCM 6th LOS	C

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	355	202	492	326	391	938
Future Volume (vph)	355	202	492	326	391	938
Turn Type	Prot	pm+ov	NA	pm+ov	Prot	NA
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Detector Phase	8	1	2	8	1	6
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	36.3	11.0	46.3	36.3	11.0	11.0
Total Split (s)	36.3	27.0	56.7	36.3	27.0	83.7
Total Split (%)	30.3%	22.5%	47.3%	30.3%	22.5%	69.8%
Yellow Time (s)	4.3	4.0	4.3	4.3	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.0	5.3	5.3	5.0	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	Min	None	None	Min
Act Effct Green (s)	23.0	51.2	32.5	55.4	22.7	60.7
Actuated g/C Ratio	0.24	0.54	0.34	0.59	0.24	0.64
v/c Ratio	0.84	0.22	0.78	0.35	0.94	0.80
Control Delay	53.4	2.7	37.1	6.7	69.1	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	2.7	37.1	6.7	69.1	19.3
LOS	D	A	D	A	E	B
Approach Delay			25.0			34.0
Approach LOS			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.3	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 31.5	Intersection LOS: C
Intersection Capacity Utilization 79.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	355	0	202	0	492	326	391	938	0
Future Volume (veh/h)	0	0	0	355	0	202	0	492	326	391	938	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h				370	0	91	0	512	259	407	977	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				411	0	764	0	632	890	447	1219	0
Arrive On Green				0.23	0.00	0.23	0.00	0.33	0.33	0.25	0.64	0.00
Sat Flow, veh/h				1810	0	1610	0	1900	1576	1810	1900	0
Grp Volume(v), veh/h				370	0	91	0	512	259	407	977	0
Grp Sat Flow(s),veh/h/ln				1810	0	1610	0	1900	1576	1810	1900	0
Q Serve(g_s), s				16.1	0.0	2.5	0.0	19.9	7.0	17.7	30.7	0.0
Cycle Q Clear(g_c), s				16.1	0.0	2.5	0.0	19.9	7.0	17.7	30.7	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				411	0	764	0	632	890	447	1219	0
V/C Ratio(X)				0.90	0.00	0.12	0.00	0.81	0.29	0.91	0.80	0.00
Avail Cap(c_a), veh/h				693	0	1015	0	1207	1368	492	1848	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				30.4	0.0	11.8	0.0	24.7	9.4	29.6	10.7	0.0
Incr Delay (d2), s/veh				5.0	0.0	0.0	0.0	3.1	0.2	19.9	0.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.9	0.0	0.8	0.0	8.4	3.5	9.3	8.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.3	0.0	11.9	0.0	27.7	9.6	49.5	11.5	0.0
LnGrp LOS				D	A	B	A	C	A	D	B	A
Approach Vol, veh/h					461			771			1384	
Approach Delay, s/veh					30.7			21.6			22.7	
Approach LOS					C			C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	25.0	32.2				57.2		23.7				
Change Period (Y+Rc), s	5.0	5.3				* 5.3		5.3				
Max Green Setting (Gmax), s	22.0	51.4				* 79		31.0				
Max Q Clear Time (g_c+I1), s	19.7	21.9				32.7		18.1				
Green Ext Time (p_c), s	0.3	5.0				4.3		0.3				

Intersection Summary		
HCM 6th Ctrl Delay		23.8
HCM 6th LOS		C

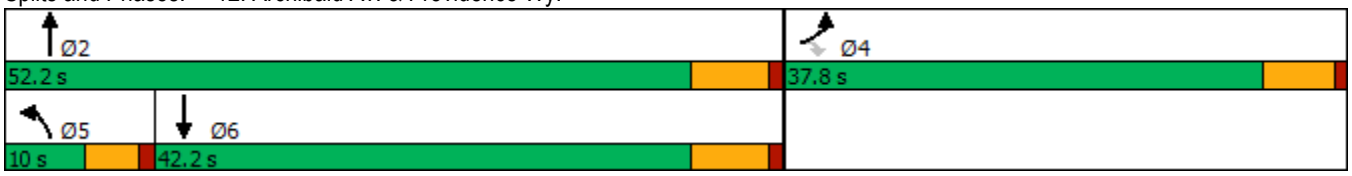
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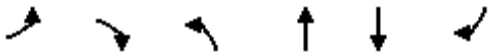
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	51	18	4	767	1288
Future Volume (vph)	51	18	4	767	1288
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	37.8	37.8	9.6	16.2	16.2
Total Split (s)	37.8	37.8	10.0	52.2	42.2
Total Split (%)	42.0%	42.0%	11.1%	58.0%	46.9%
Yellow Time (s)	4.8	4.8	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	6.2	6.2
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Min	Min
Act Effct Green (s)	13.9	13.9	5.6	45.4	44.1
Actuated g/C Ratio	0.23	0.23	0.09	0.76	0.74
v/c Ratio	0.13	0.05	0.02	0.30	0.52
Control Delay	21.6	9.7	34.2	6.6	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	9.7	34.2	6.6	11.5
LOS	C	A	C	A	B
Approach Delay	18.6			6.7	11.5
Approach LOS	B			A	B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 59.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 10.0	Intersection LOS: A
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Providence Wy.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	51	18	4	767	1288	4
Future Volume (veh/h)	51	18	4	767	1288	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	10	4	825	1385	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	221	196	10	2245	1913	6
Arrive On Green	0.12	0.12	0.01	0.62	0.52	0.52
Sat Flow, veh/h	1810	1610	1810	3705	3787	11
Grp Volume(v), veh/h	55	10	4	825	677	712
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1805	1805	1898
Q Serve(g_s), s	1.3	0.3	0.1	5.2	13.5	13.5
Cycle Q Clear(g_c), s	1.3	0.3	0.1	5.2	13.5	13.5
Prop In Lane	1.00	1.00	1.00			0.01
Lane Grp Cap(c), veh/h	221	196	10	2245	935	983
V/C Ratio(X)	0.25	0.05	0.41	0.37	0.72	0.72
Avail Cap(c_a), veh/h	1237	1100	209	3546	1388	1459
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	18.6	18.2	23.2	4.3	8.7	8.7
Incr Delay (d2), s/veh	0.6	0.1	9.8	0.1	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.1	0.6	3.0	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.2	18.3	33.0	4.4	9.8	9.7
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	65			829	1389	
Approach Delay, s/veh	19.1			4.6	9.8	
Approach LOS	B			A	A	

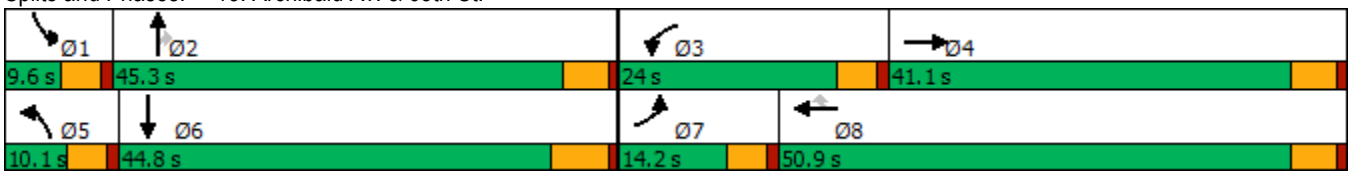
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.3		11.5	4.9	30.5
Change Period (Y+Rc), s		6.2		5.8	4.6	6.2
Max Green Setting (Gmax), s		46.0		32.0	5.4	36.0
Max Q Clear Time (g_c+I1), s		7.2		3.3	2.1	15.5
Green Ext Time (p_c), s		5.8		0.1	0.0	8.7

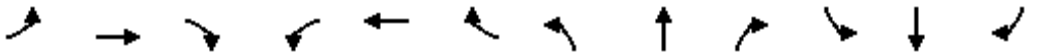
Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	35	28	127	38	33	46	703	221	112	1104
Future Volume (vph)	35	28	127	38	33	46	703	221	112	1104
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	6.6	14.2	12.0	20.5	20.5	5.5	42.5	42.5	5.1	43.3
Actuated g/C Ratio	0.07	0.16	0.13	0.23	0.23	0.06	0.47	0.47	0.06	0.48
v/c Ratio	0.28	0.12	0.56	0.09	0.08	0.44	0.43	0.27	1.16	0.51
Control Delay	49.2	17.3	48.3	27.4	0.3	58.3	19.9	4.0	180.9	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	17.3	48.3	27.4	0.3	58.3	19.9	4.0	180.9	20.7
LOS	D	B	D	C	A	E	B	A	F	C
Approach Delay		28.5		36.3			18.1			34.4
Approach LOS		C		D			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 28.2	Intersection LOS: C
Intersection Capacity Utilization 54.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	28	37	127	38	33	46	703	221	112	1104	90
Future Volume (veh/h)	35	28	37	127	38	33	46	703	221	112	1104	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	29	16	134	40	16	48	740	179	118	1162	79
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	62	274	138	169	338	286	73	1740	766	108	2489	169
Arrive On Green	0.03	0.12	0.12	0.09	0.18	0.18	0.04	0.48	0.48	0.06	0.50	0.50
Sat Flow, veh/h	1810	2309	1163	1810	1900	1610	1810	3610	1590	1810	4960	337
Grp Volume(v), veh/h	37	22	23	134	40	16	48	740	179	118	810	431
Grp Sat Flow(s),veh/h/ln	1810	1805	1668	1810	1900	1610	1810	1805	1590	1810	1729	1839
Q Serve(g_s), s	1.7	0.9	1.0	6.0	1.5	0.7	2.2	11.1	5.5	5.0	12.7	12.7
Cycle Q Clear(g_c), s	1.7	0.9	1.0	6.0	1.5	0.7	2.2	11.1	5.5	5.0	12.7	12.7
Prop In Lane	1.00		0.70	1.00		1.00	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	62	214	198	169	338	286	73	1740	766	108	1735	923
V/C Ratio(X)	0.59	0.10	0.12	0.79	0.12	0.06	0.66	0.43	0.23	1.09	0.47	0.47
Avail Cap(c_a), veh/h	208	779	720	421	1043	884	119	1740	766	108	1735	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	32.8	32.8	37.0	28.8	28.5	39.5	14.1	12.6	39.2	13.5	13.5
Incr Delay (d2), s/veh	3.3	0.2	0.3	3.2	0.2	0.1	3.7	0.8	0.7	112.0	0.9	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.4	0.4	2.7	0.7	0.3	1.0	4.2	1.9	5.5	4.3	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	33.0	33.1	40.2	29.0	28.6	43.2	14.8	13.3	151.2	14.4	15.2
LnGrp LOS	D	C	C	D	C	C	D	B	B	F	B	B
Approach Vol, veh/h		82			190			967			1359	
Approach Delay, s/veh		37.5			36.8			16.0			26.5	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	46.4	12.4	15.0	8.0	48.0	7.5	19.9
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	7.0	13.1	8.0	3.0	4.2	14.7	3.7	3.5
Green Ext Time (p_c), s	0.0	5.8	0.1	0.2	0.0	8.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

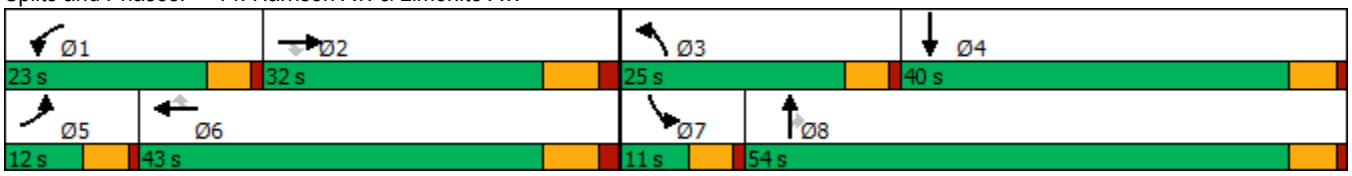
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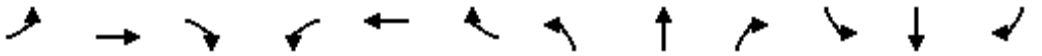
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	59	543	37	231	475	15	39	52	183	16	73
Future Volume (vph)	59	543	37	231	475	15	39	52	183	16	73
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.0	14.5	14.5	16.4	32.8	32.8	6.5	16.8	16.8	5.7	12.1
Actuated g/C Ratio	0.09	0.21	0.21	0.24	0.48	0.48	0.10	0.25	0.25	0.08	0.18
v/c Ratio	0.20	0.54	0.08	0.58	0.21	0.02	0.25	0.12	0.37	0.12	0.33
Control Delay	41.0	28.2	0.3	34.6	14.9	0.1	40.2	21.0	5.6	41.3	25.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	28.2	0.3	34.6	14.9	0.1	40.2	21.0	5.6	41.3	25.9
LOS	D	C	A	C	B	A	D	C	A	D	C
Approach Delay		27.1			20.9			13.5			28.1
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 68.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 22.4	Intersection LOS: C
Intersection Capacity Utilization 46.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	543	37	231	475	15	39	52	183	16	73	27
Future Volume (veh/h)	59	543	37	231	475	15	39	52	183	16	73	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	32	597	31	254	522	13	43	57	127	18	80	11
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	65	1110	337	312	1819	563	81	278	236	40	201	28
Arrive On Green	0.04	0.21	0.21	0.17	0.35	0.35	0.04	0.15	0.15	0.02	0.12	0.12
Sat Flow, veh/h	1810	5187	1575	1810	5187	1606	1810	1900	1610	1810	1628	224
Grp Volume(v), veh/h	32	597	31	254	522	13	43	57	127	18	0	91
Grp Sat Flow(s),veh/h/ln	1810	1729	1575	1810	1729	1606	1810	1900	1610	1810	0	1852
Q Serve(g_s), s	0.9	5.1	0.8	6.8	3.6	0.3	1.2	1.3	3.7	0.5	0.0	2.3
Cycle Q Clear(g_c), s	0.9	5.1	0.8	6.8	3.6	0.3	1.2	1.3	3.7	0.5	0.0	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	65	1110	337	312	1819	563	81	278	236	40	0	229
V/C Ratio(X)	0.49	0.54	0.09	0.81	0.29	0.02	0.53	0.20	0.54	0.45	0.00	0.40
Avail Cap(c_a), veh/h	253	2587	786	650	3725	1153	722	1846	1564	217	0	1282
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	17.5	15.8	20.0	11.7	10.7	23.4	18.8	19.8	24.2	0.0	20.2
Incr Delay (d2), s/veh	2.1	0.4	0.1	2.0	0.1	0.0	2.0	0.4	1.9	2.9	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.7	0.2	2.4	1.0	0.1	0.5	0.5	1.3	0.2	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	17.9	15.9	21.9	11.8	10.7	25.4	19.2	21.7	27.1	0.0	21.4
LnGrp LOS	C	B	B	C	B	B	C	B	C	C	A	C
Approach Vol, veh/h		660			789			227			109	
Approach Delay, s/veh		18.2			15.1			21.8			22.3	
Approach LOS		B			B			C			C	

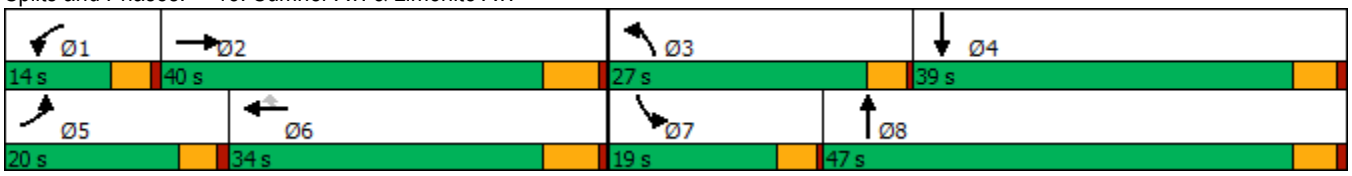
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	17.7	7.3	11.5	6.8	24.6	6.1	12.6
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	8.8	7.1	3.2	4.3	2.9	5.6	2.5	5.7
Green Ext Time (p_c), s	0.1	3.4	0.0	0.4	0.0	3.3	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	204	541	195	483	67	29	224	138	475
Future Volume (vph)	204	541	195	483	67	29	224	138	475
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	8.8	15.7	8.4	15.3	15.3	5.6	13.7	10.1	24.6
Actuated g/C Ratio	0.13	0.23	0.12	0.22	0.22	0.08	0.20	0.15	0.36
v/c Ratio	0.48	0.53	0.48	0.44	0.15	0.21	0.50	0.55	0.55
Control Delay	35.2	25.8	36.7	26.3	0.6	40.3	17.9	39.9	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	25.8	36.7	26.3	0.6	40.3	17.9	39.9	19.6
LOS	D	C	D	C	A	D	B	D	B
Approach Delay		28.2		26.7			19.6		23.0
Approach LOS		C		C			B		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 68.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	541	53	195	483	67	29	224	146	138	475	191
Future Volume (veh/h)	204	541	53	195	483	67	29	224	146	138	475	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	215	569	29	205	508	25	31	236	60	145	500	122
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	343	1084	55	327	1088	333	51	537	134	187	758	184
Arrive On Green	0.10	0.21	0.21	0.09	0.21	0.21	0.03	0.19	0.19	0.10	0.26	0.26
Sat Flow, veh/h	3510	5052	256	3510	5187	1587	1810	2861	712	1810	2880	699
Grp Volume(v), veh/h	215	388	210	205	508	25	31	147	149	145	312	310
Grp Sat Flow(s),veh/h/ln	1755	1729	1850	1755	1729	1587	1810	1805	1768	1810	1805	1774
Q Serve(g_s), s	2.9	4.8	4.9	2.7	4.2	0.6	0.8	3.5	3.6	3.8	7.5	7.6
Cycle Q Clear(g_c), s	2.9	4.8	4.9	2.7	4.2	0.6	0.8	3.5	3.6	3.8	7.5	7.6
Prop In Lane	1.00		0.14	1.00		1.00	1.00		0.40	1.00		0.39
Lane Grp Cap(c), veh/h	343	742	397	327	1088	333	51	339	332	187	475	467
V/C Ratio(X)	0.63	0.52	0.53	0.63	0.47	0.08	0.61	0.43	0.45	0.77	0.66	0.66
Avail Cap(c_a), veh/h	1119	2419	1294	686	2988	914	856	1560	1527	558	1263	1241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	16.9	16.9	21.2	16.8	15.4	23.4	17.5	17.5	21.2	16.0	16.0
Incr Delay (d2), s/veh	0.7	0.6	1.1	0.7	0.3	0.1	4.3	0.7	0.7	2.6	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.5	1.7	1.0	1.3	0.2	0.4	1.2	1.3	1.5	2.6	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	17.5	18.0	22.0	17.1	15.5	27.6	18.1	18.2	23.8	17.1	17.2
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		813			738			327			767	
Approach Delay, s/veh		18.7			18.4			19.1			18.4	
Approach LOS		B			B			B			B	

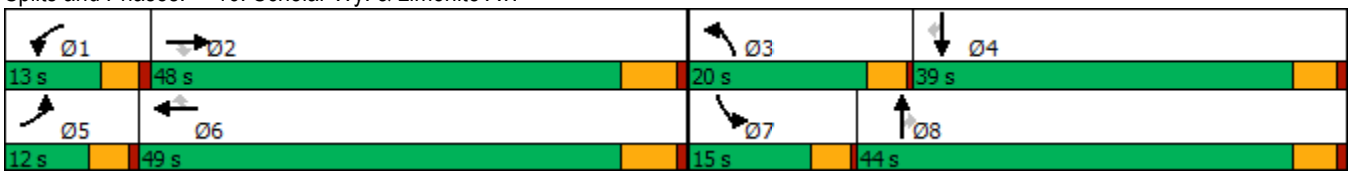
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	16.4	5.4	17.8	9.3	16.2	9.0	14.1
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	4.7	6.9	2.8	9.6	4.9	6.2	5.8	5.6
Green Ext Time (p_c), s	0.1	3.4	0.0	2.8	0.2	3.1	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	764	48	133	685	68	43	70	102	52	144	34
Future Volume (vph)	34	764	48	133	685	68	43	70	102	52	144	34
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	5.8	22.6	22.6	9.4	33.4	33.4	6.3	11.1	11.1	6.6	11.4	11.4
Actuated g/C Ratio	0.09	0.34	0.34	0.14	0.50	0.50	0.09	0.17	0.17	0.10	0.17	0.17
v/c Ratio	0.23	0.66	0.08	0.55	0.40	0.08	0.27	0.23	0.30	0.31	0.25	0.13
Control Delay	40.6	23.0	0.2	43.8	15.5	0.3	39.7	28.2	8.5	39.6	26.4	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.6	23.0	0.2	43.8	15.5	0.3	39.7	28.2	8.5	39.6	26.4	27.1
LOS	D	C	A	D	B	A	D	C	A	D	C	C
Approach Delay		22.4			18.6			21.2			29.5	
Approach LOS		C			B			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 66.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Scholar Wy. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	764	48	133	685	68	43	70	102	52	144	34
Future Volume (veh/h)	34	764	48	133	685	68	43	70	102	52	144	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	36	804	34	140	721	61	45	74	49	55	152	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	1247	547	180	1493	664	67	240	203	77	475	205
Arrive On Green	0.03	0.35	0.35	0.10	0.41	0.41	0.04	0.13	0.13	0.04	0.13	0.13
Sat Flow, veh/h	1810	3610	1583	1810	3610	1606	1810	1900	1610	1810	3610	1560
Grp Volume(v), veh/h	36	804	34	140	721	61	45	74	49	55	152	36
Grp Sat Flow(s),veh/h/ln	1810	1805	1583	1810	1805	1606	1810	1900	1610	1810	1805	1560
Q Serve(g_s), s	1.0	9.5	0.7	3.8	7.4	1.2	1.2	1.8	1.4	1.5	1.9	1.0
Cycle Q Clear(g_c), s	1.0	9.5	0.7	3.8	7.4	1.2	1.2	1.8	1.4	1.5	1.9	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	1247	547	180	1493	664	67	240	203	77	475	205
V/C Ratio(X)	0.63	0.64	0.06	0.78	0.48	0.09	0.67	0.31	0.24	0.71	0.32	0.18
Avail Cap(c_a), veh/h	269	3004	1317	305	3076	1369	574	1468	1244	394	2432	1051
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	13.9	11.0	22.2	10.8	9.0	24.0	20.0	19.9	23.9	19.9	19.5
Incr Delay (d2), s/veh	4.3	0.6	0.0	2.7	0.2	0.1	4.2	0.5	0.5	4.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.9	0.2	1.5	2.1	0.3	0.6	0.7	0.5	0.7	0.7	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	14.5	11.1	24.9	11.1	9.1	28.2	20.6	20.3	28.3	20.1	19.8
LnGrp LOS	C	B	B	C	B	A	C	C	C	C	C	B
Approach Vol, veh/h		874			922			168			243	
Approach Delay, s/veh		14.9			13.1			22.6			21.9	
Approach LOS		B			B			C			C	

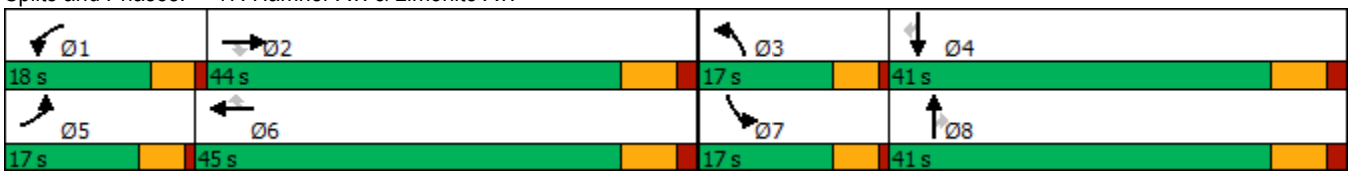
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	23.4	5.9	11.6	6.1	26.9	6.1	11.4
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	5.8	11.5	3.2	3.9	3.0	9.4	3.5	3.8
Green Ext Time (p_c), s	0.0	5.5	0.0	0.8	0.0	5.0	0.0	0.4

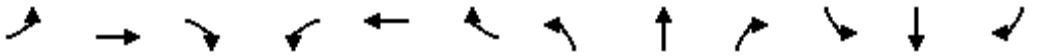
Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	287	564	67	372	453	182	184	528	203	232	663	190
Future Volume (vph)	287	564	67	372	453	182	184	528	203	232	663	190
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	11.1	21.1	21.1	13.3	23.3	23.3	8.9	23.2	23.2	9.9	24.1	24.1
Actuated g/C Ratio	0.12	0.23	0.23	0.14	0.25	0.25	0.10	0.25	0.25	0.11	0.26	0.26
v/c Ratio	0.70	0.49	0.15	0.76	0.51	0.35	0.56	0.42	0.38	0.64	0.50	0.35
Control Delay	50.9	32.7	0.9	51.1	32.7	6.6	48.6	30.1	6.3	49.6	30.5	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.9	32.7	0.9	51.1	32.7	6.6	48.6	30.1	6.3	49.6	30.5	6.1
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		36.1			34.8			28.5			30.3	
Approach LOS		D			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 32.4	Intersection LOS: C
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	564	67	372	453	182	184	528	203	232	663	190
Future Volume (veh/h)	287	564	67	372	453	182	184	528	203	232	663	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	296	581	39	384	467	120	190	544	123	239	684	81
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	379	1209	364	466	930	415	272	1293	389	322	1368	418
Arrive On Green	0.11	0.23	0.23	0.13	0.26	0.26	0.08	0.25	0.25	0.09	0.26	0.26
Sat Flow, veh/h	3510	5187	1562	3510	3610	1608	3510	5187	1559	3510	5187	1586
Grp Volume(v), veh/h	296	581	39	384	467	120	190	544	123	239	684	81
Grp Sat Flow(s),veh/h/ln	1755	1729	1562	1755	1805	1608	1755	1729	1559	1755	1729	1586
Q Serve(g_s), s	6.7	7.9	1.6	8.7	9.0	4.9	4.3	7.2	5.3	5.4	9.2	3.2
Cycle Q Clear(g_c), s	6.7	7.9	1.6	8.7	9.0	4.9	4.3	7.2	5.3	5.4	9.2	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	379	1209	364	466	930	415	272	1293	389	322	1368	418
V/C Ratio(X)	0.78	0.48	0.11	0.82	0.50	0.29	0.70	0.42	0.32	0.74	0.50	0.19
Avail Cap(c_a), veh/h	515	2344	706	557	1675	746	515	2154	647	515	2154	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	27.1	24.7	34.6	25.9	24.4	36.8	25.8	25.1	36.2	25.6	23.4
Incr Delay (d2), s/veh	3.6	0.6	0.3	7.1	0.9	0.8	1.2	0.5	1.0	1.3	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.1	0.6	3.9	3.7	1.8	1.8	2.8	1.9	2.2	3.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	27.7	25.0	41.7	26.8	25.2	38.1	26.2	26.0	37.5	26.2	23.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		916			971			857			1004	
Approach Delay, s/veh		31.3			32.5			28.8			28.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	26.1	11.3	28.6	13.8	28.1	12.5	27.4
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	10.7	9.9	6.3	11.2	8.7	11.0	7.4	9.2
Green Ext Time (p_c), s	0.1	7.4	0.1	8.5	0.1	6.5	0.1	7.4

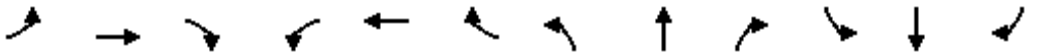
Intersection Summary	
HCM 6th Ctrl Delay	30.3
HCM 6th LOS	C

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	720	360	762	374	161	1	362
Future Volume (vph)	720	360	762	374	161	1	362
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	22.5	22.5	22.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	4.5	4.5	4.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.6	73.6	73.6	73.6	10.9	10.9	10.9
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.12	0.12	0.12
v/c Ratio	0.18	0.28	0.19	0.29	0.42	0.42	0.58
Control Delay	3.1	1.0	3.1	1.0	45.0	45.1	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.1	1.0	3.1	1.0	45.0	45.1	8.8
LOS	A	A	A	A	D	D	A
Approach Delay	2.4		2.4			20.0	
Approach LOS	A		A			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.5	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 5.8	Intersection LOS: A
Intersection Capacity Utilization 35.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰	↱↱
Traffic Volume (veh/h)	0	720	360	0	762	374	0	0	0	161	1	362
Future Volume (veh/h)	0	720	360	0	762	374	0	0	0	161	1	362
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	742	341	0	786	386				167	0	109
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4213	1290	0	4213	1308				279	0	249
Arrive On Green	0.00	0.81	0.81	0.00	0.81	0.81				0.08	0.00	0.08
Sat Flow, veh/h	0	5358	1589	0	5358	1610				3619	0	3220
Grp Volume(v), veh/h	0	742	341	0	786	386				167	0	109
Grp Sat Flow(s),veh/h/ln	0	1729	1589	0	1729	1610				1810	0	1610
Q Serve(g_s), s	0.0	2.8	4.6	0.0	3.0	5.4				4.0	0.0	2.9
Cycle Q Clear(g_c), s	0.0	2.8	4.6	0.0	3.0	5.4				4.0	0.0	2.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4213	1290	0	4213	1308				279	0	249
V/C Ratio(X)	0.00	0.18	0.26	0.00	0.19	0.30				0.60	0.00	0.44
Avail Cap(c_a), veh/h	0	4213	1290	0	4213	1308				1460	0	1299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	1.9	2.0	0.0	1.9	2.1				40.4	0.0	39.9
Incr Delay (d2), s/veh	0.0	0.1	0.5	0.0	0.1	0.6				2.0	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.9	0.0	0.5	1.0				1.8	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.0	2.5	0.0	2.0	2.7				42.4	0.0	41.1
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1083			1172						276	
Approach Delay, s/veh		2.1			2.2						41.9	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		11.5		79.0						
Change Period (Y+Rc), s		5.5		4.5		5.5						
Max Green Setting (Gmax), s		73.5		36.5		73.5						
Max Q Clear Time (g_c+I1), s		6.6		6.0		7.4						
Green Ext Time (p_c), s		4.3		1.0		4.7						

Intersection Summary												
HCM 6th Ctrl Delay			6.5									
HCM 6th LOS			A									

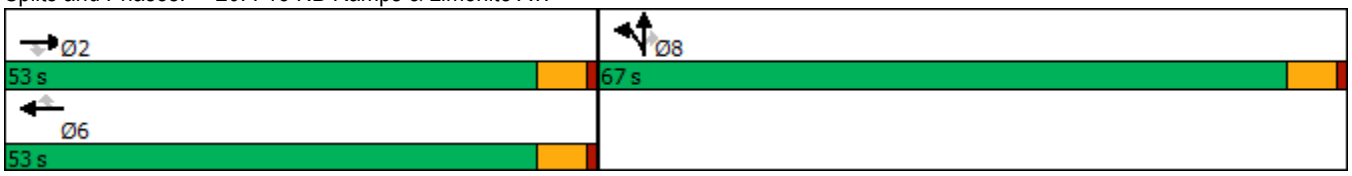
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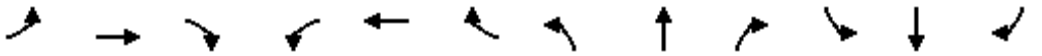
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	642	239	761	106	375	2	683
Future Volume (vph)	642	239	761	106	375	2	683
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.8	47.8	47.8	47.8	23.1	23.1	23.1
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.28	0.28	0.28
v/c Ratio	0.22	0.24	0.26	0.11	0.40	0.40	0.73
Control Delay	9.2	2.2	9.5	2.6	25.7	25.8	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	2.2	9.5	2.6	25.7	25.8	22.6
LOS	A	A	A	A	C	C	C
Approach Delay	7.3		8.6			23.7	
Approach LOS	A		A			C	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 81.9			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 45.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↰	↱↱			
Traffic Volume (veh/h)	0	642	239	0	761	106	375	2	683	0	0	0
Future Volume (veh/h)	0	642	239	0	761	106	375	2	683	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	655	244	0	777	103	384	0	394			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3436	1042	0	3436	1067	667	0	593			
Arrive On Green	0.00	0.66	0.66	0.00	0.66	0.66	0.18	0.00	0.18			
Sat Flow, veh/h	0	5358	1573	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	655	244	0	777	103	384	0	394			
Grp Sat Flow(s),veh/h/ln	0	1729	1573	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	3.5	4.4	0.0	4.3	1.7	6.9	0.0	8.2			
Cycle Q Clear(g_c), s	0.0	3.5	4.4	0.0	4.3	1.7	6.9	0.0	8.2			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3436	1042	0	3436	1067	667	0	593			
V/C Ratio(X)	0.00	0.19	0.23	0.00	0.23	0.10	0.58	0.00	0.66			
Avail Cap(c_a), veh/h	0	3436	1042	0	3436	1067	3104	0	2762			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	4.7	4.8	0.0	4.8	4.4	26.7	0.0	27.2			
Incr Delay (d2), s/veh	0.0	0.1	0.5	0.0	0.2	0.2	0.8	0.0	1.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.9	1.2	0.0	1.2	0.5	2.8	0.0	2.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.8	5.4	0.0	5.0	4.5	27.5	0.0	28.5			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		899			880			778				
Approach Delay, s/veh		5.0			4.9			28.0				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		18.7				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		6.4				6.3		10.2				
Green Ext Time (p_c), s		3.6				4.0		3.1				

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 3.3:

EXISTING (2019) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	699	437	421	622	44	44	323
v/c Ratio	0.17	0.32	0.10	0.44	0.34	0.34	0.63
Control Delay	2.2	0.9	2.1	1.2	47.3	47.3	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.2	0.9	2.1	1.2	47.3	47.3	11.0
Queue Length 50th (ft)	24	0	13	0	26	26	0
Queue Length 95th (ft)	38	16	23	18	61	61	43
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	4172	1367	4172	1420	666	666	1287
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.32	0.10	0.44	0.07	0.07	0.25

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	286	493	859	243	86	86	292
v/c Ratio	0.08	0.39	0.24	0.20	0.38	0.38	0.46
Control Delay	3.5	1.4	4.0	1.1	31.3	31.3	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.5	1.4	4.0	1.1	31.3	31.3	6.3
Queue Length 50th (ft)	10	0	35	0	34	34	0
Queue Length 95th (ft)	20	25	60	18	74	74	32
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3647	1257	3647	1207	1561	1561	2613
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.39	0.24	0.20	0.06	0.06	0.11

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	742	371	786	386	83	84	373
v/c Ratio	0.18	0.28	0.19	0.29	0.42	0.42	0.58
Control Delay	3.1	1.0	3.1	1.0	45.0	45.1	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.1	1.0	3.1	1.0	45.0	45.1	8.8
Queue Length 50th (ft)	30	0	32	0	49	50	4
Queue Length 95th (ft)	61	22	65	22	96	97	47
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	4039	1322	4039	1342	663	665	1318
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.28	0.19	0.29	0.13	0.13	0.28

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	655	244	777	108	191	194	697
v/c Ratio	0.22	0.24	0.26	0.11	0.40	0.40	0.73
Control Delay	9.2	2.2	9.5	2.6	25.7	25.8	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	2.2	9.5	2.6	25.7	25.8	22.6
Queue Length 50th (ft)	53	0	65	0	82	84	126
Queue Length 95th (ft)	95	35	114	24	140	142	189
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200					400
Base Capacity (vph)	3025	1020	3025	987	1295	1298	2198
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.24	0.26	0.11	0.15	0.15	0.32

Intersection Summary

APPENDIX 3.4:

EXISTING (2019) CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4429	7146	0.62	67.7	21.8	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.885	4429	432	7200	2100	0.62	0.21	64.7	60.6	22.8	25.3	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4016	7146	0.56	68.1	19.7	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.917	4686	670	7200	1900	0.65	0.35	61.9	60.0	25.2	23.2	C

Segment 5: Basic

Time	PHF	fHV	Flow Rate	Capacity	d/c	Speed	Density	LOS

Period			(pc/h)	(pc/h)	Ratio	(mi/h)	(pc/mi/ln)	
1	0.92	0.926	4679	7146	0.65	67.2	23.2	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.935	5145	466	7200	2100	0.71	0.22	62.2	60.7	27.6	24.5	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	5150	7146	0.72	65.7	26.1	D

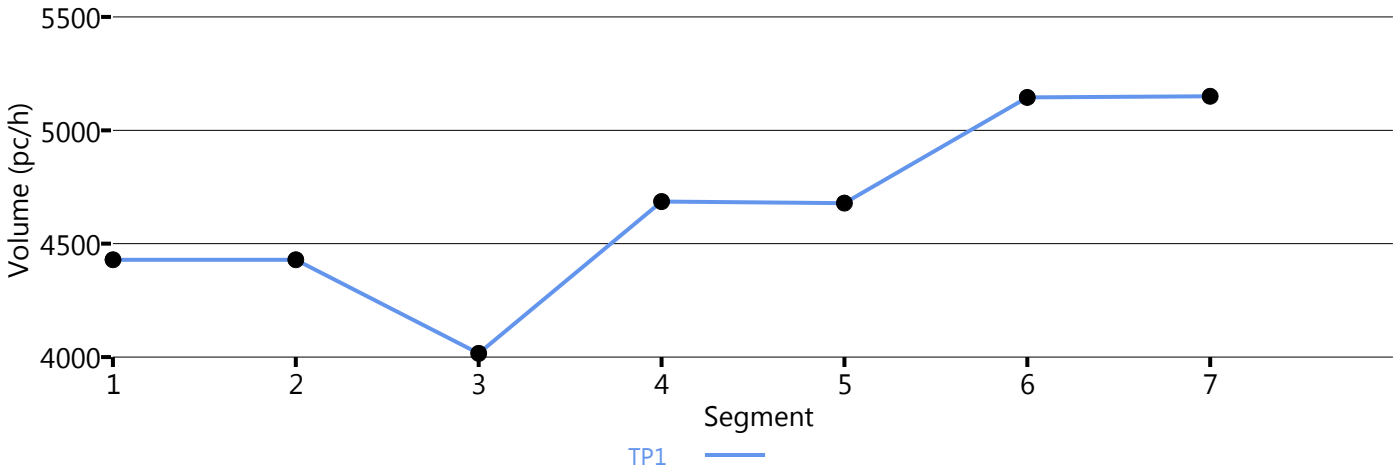
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.3	23.6	21.8	1.7	C

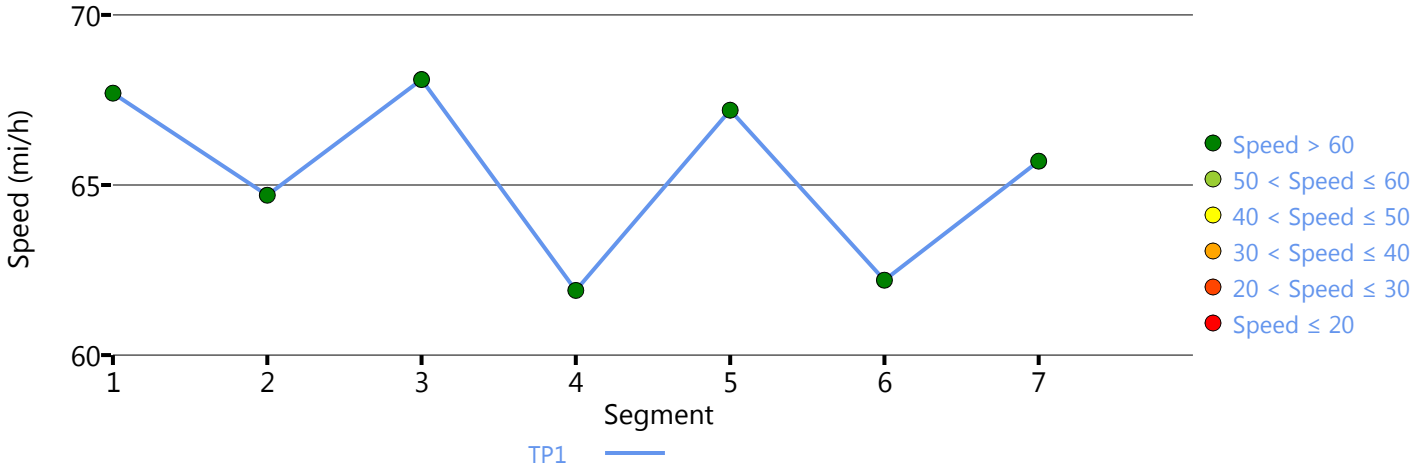
Facility Overall Results

Space Mean Speed, mi/h	65.3	Density, veh/mi/ln	21.8
Average Travel Time, min	1.7	Density, pc/mi/ln	23.6

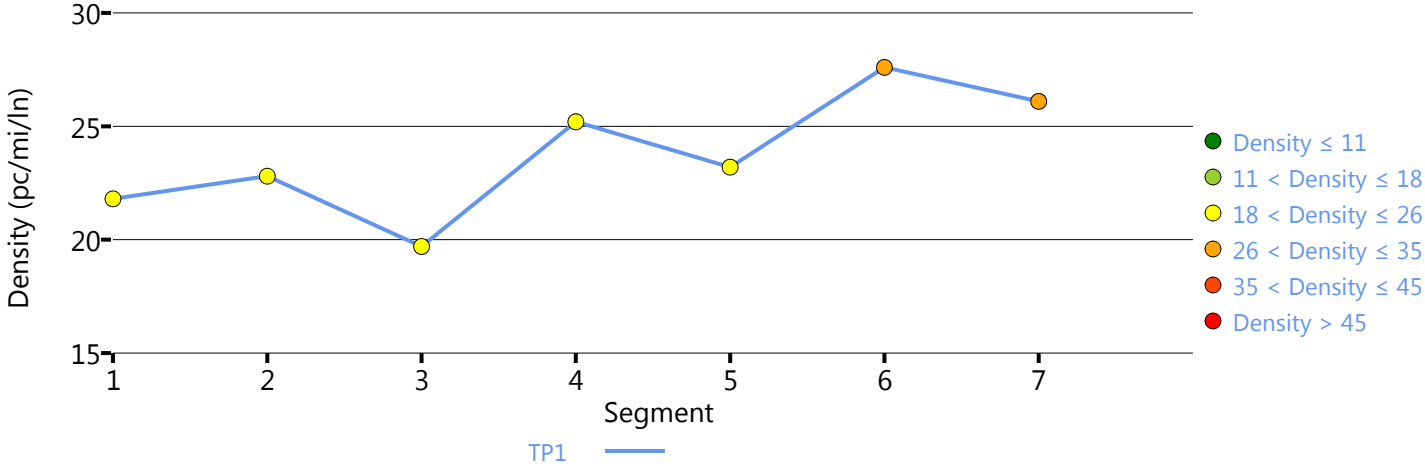
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4168	7146	0.58	68.0	20.4	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.901	4168	509	7200	2100	0.58	0.24	64.6	60.4	21.5	24.6	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3661	7146	0.51	68.2	17.9	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4187	526	7200	1900	0.58	0.28	62.6	60.7	22.3	20.4	C

Segment 5: Basic

Time	PHF	fHV	Flow Rate	Capacity	d/c	Speed	Density	LOS

Period			(pc/h)	(pc/h)	Ratio	(mi/h)	(pc/mi/ln)	
1	0.92	0.980	4183	7146	0.59	68.0	20.5	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4419	236	7200	2100	0.61	0.11	63.8	62.6	23.1	19.0	B

Segment 7: Basic

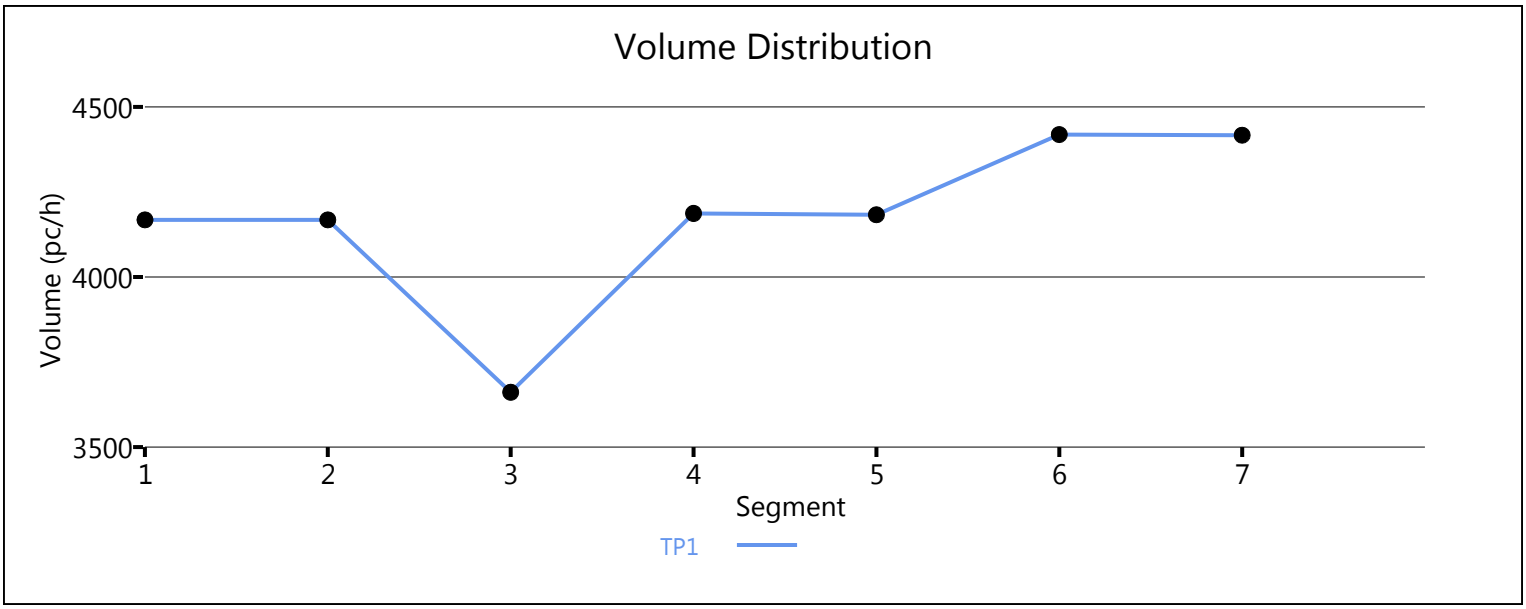
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4417	7146	0.62	67.7	21.7	C

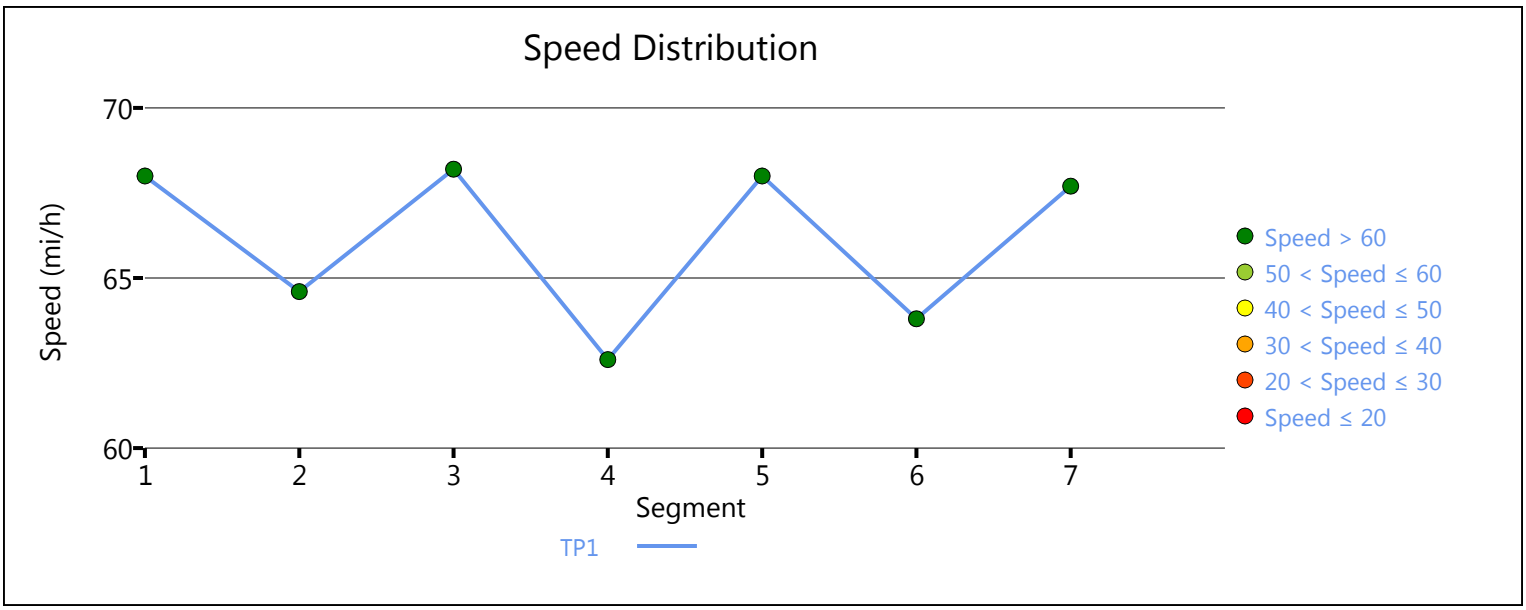
Facility Time Period Results

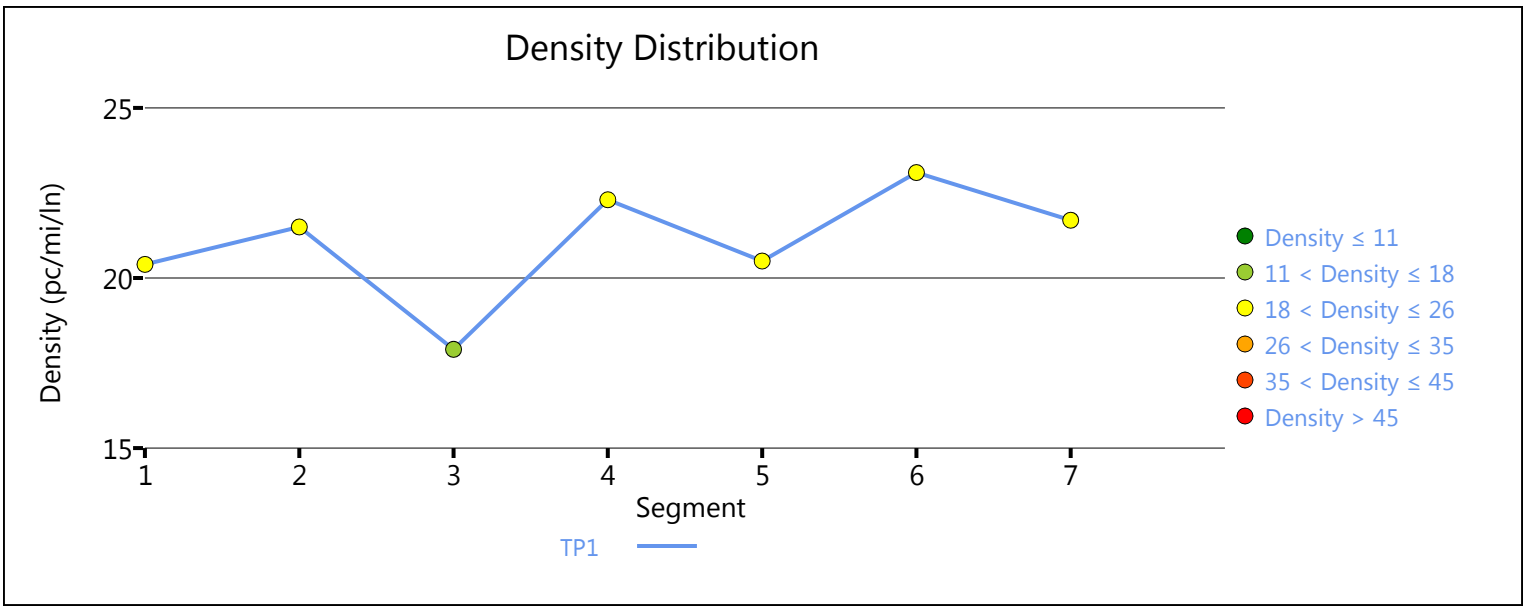
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.0	21.2	20.7	1.5	C

Facility Overall Results

Space Mean Speed, mi/h	66.0	Density, veh/mi/ln	20.7
Average Travel Time, min	1.5	Density, pc/mi/ln	21.2







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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3799	7146	0.53	68.2	18.6	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.971	3799	574	7200	2100	0.53	0.27	64.3	60.2	19.7	22.6	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3213	7146	0.45	68.2	15.7	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.943	3626	413	7200	1900	0.50	0.22	63.2	61.3	19.1	17.5	B

Segment 5: Basic

Time	PHF	fHV	Flow Rate	Capacity	d/c	Speed	Density	LOS

Period			(pc/h)	(pc/h)	Ratio	(mi/h)	(pc/mi/ln)	
1	0.92	0.952	3622	7146	0.51	68.2	17.7	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.980	4018	396	7200	2100	0.56	0.19	63.7	62.2	21.0	19.0	B

Segment 7: Basic

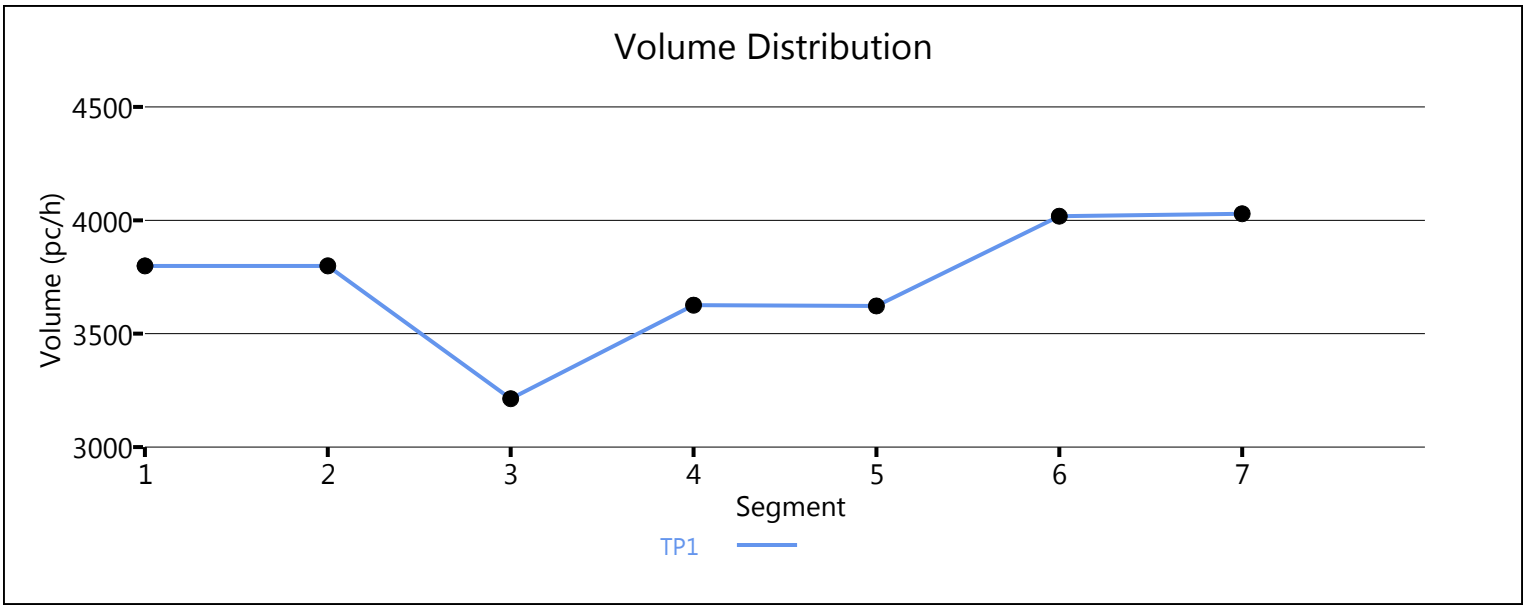
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	4029	7146	0.56	68.1	19.7	C

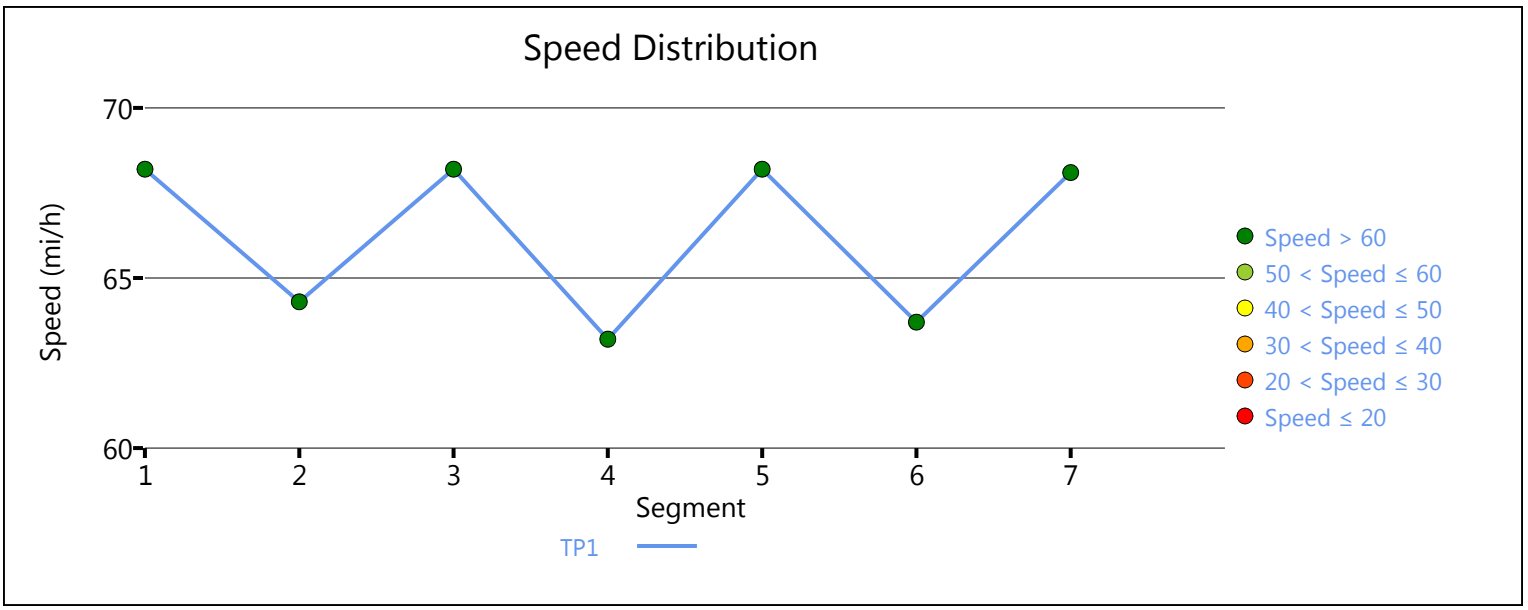
Facility Time Period Results

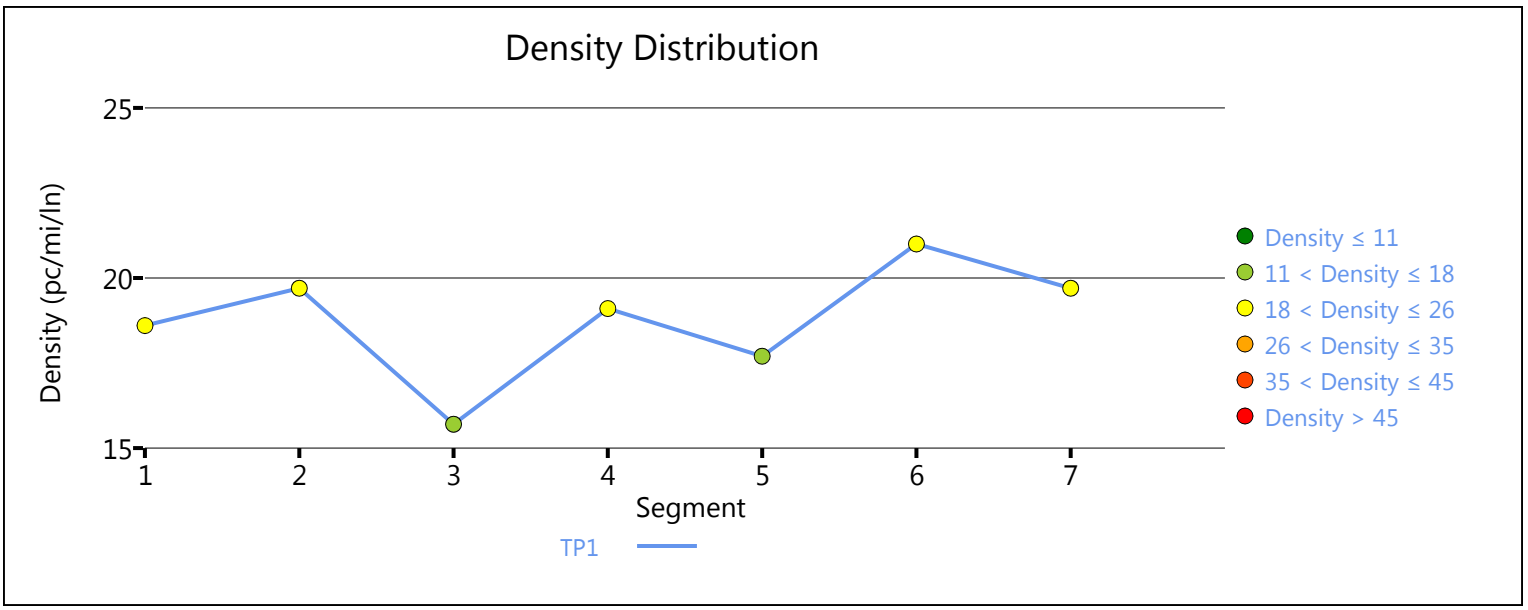
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.3	18.7	17.8	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	66.3	Density, veh/mi/ln	17.8
Average Travel Time, min	1.7	Density, pc/mi/ln	18.7







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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5131	7146	0.72	65.8	26.0	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	5131	1210	7200	2100	0.71	0.58	62.9	58.6	27.2	30.2	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3932	7146	0.55	68.2	19.2	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.962	4194	262	7200	1900	0.58	0.14	62.8	60.9	22.3	19.8	B

Segment 5: Basic

Time	PHF	fHV	Flow Rate	Capacity	d/c	Speed	Density	LOS

Period			(pc/h)	(pc/h)	Ratio	(mi/h)	(pc/mi/ln)	
1	0.92	0.980	4189	7146	0.59	68.0	20.5	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.935	4305	116	7200	2100	0.60	0.06	63.9	62.7	22.5	18.2	B

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4300	7146	0.60	67.9	21.1	C

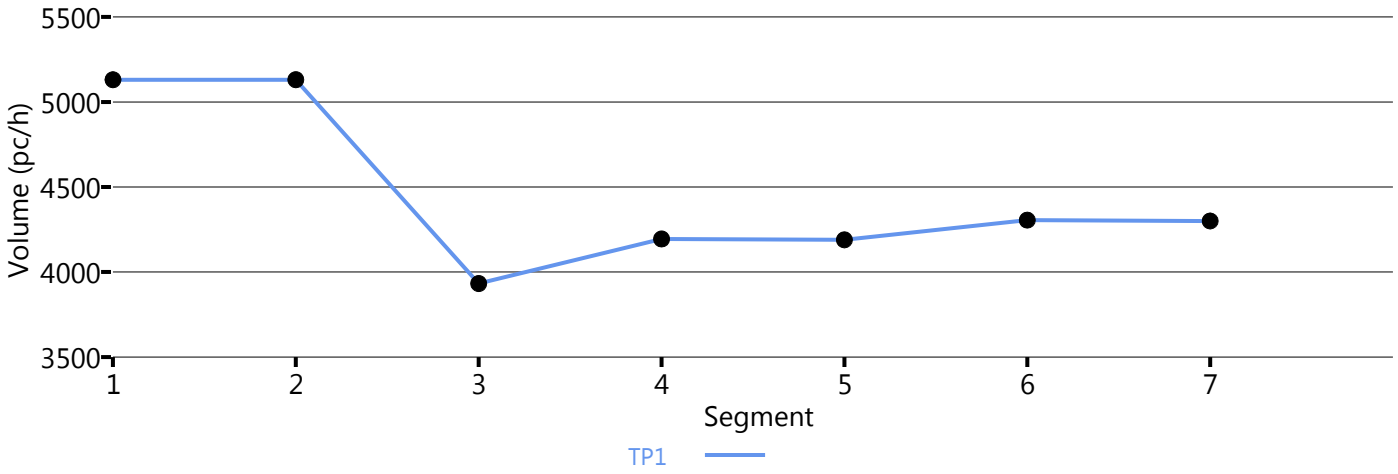
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.4	23.0	22.6	1.6	C

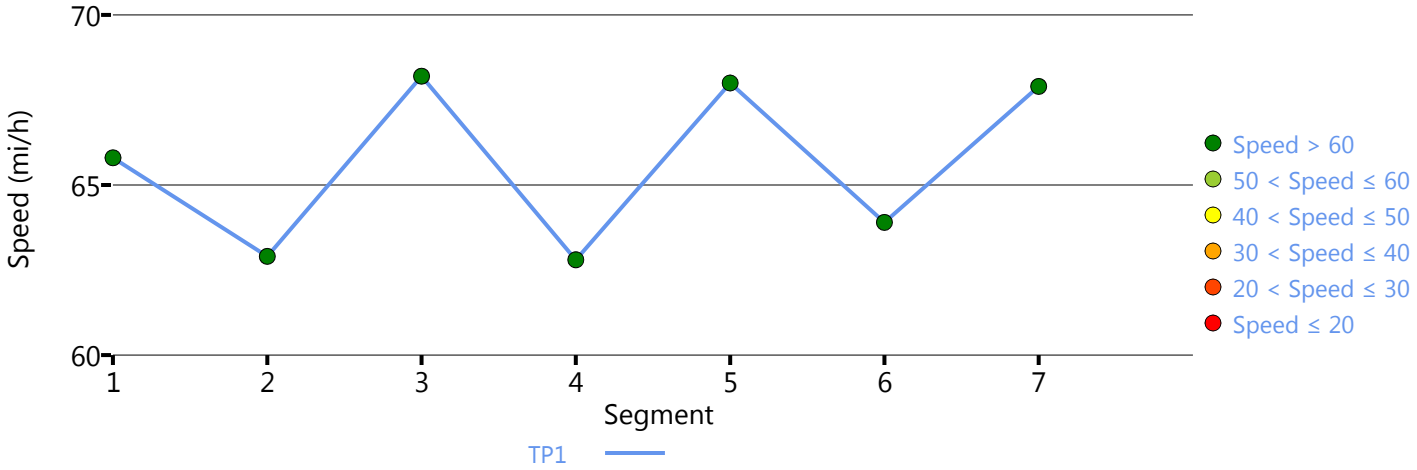
Facility Overall Results

Space Mean Speed, mi/h	65.4	Density, veh/mi/ln	22.6
Average Travel Time, min	1.6	Density, pc/mi/ln	23.0

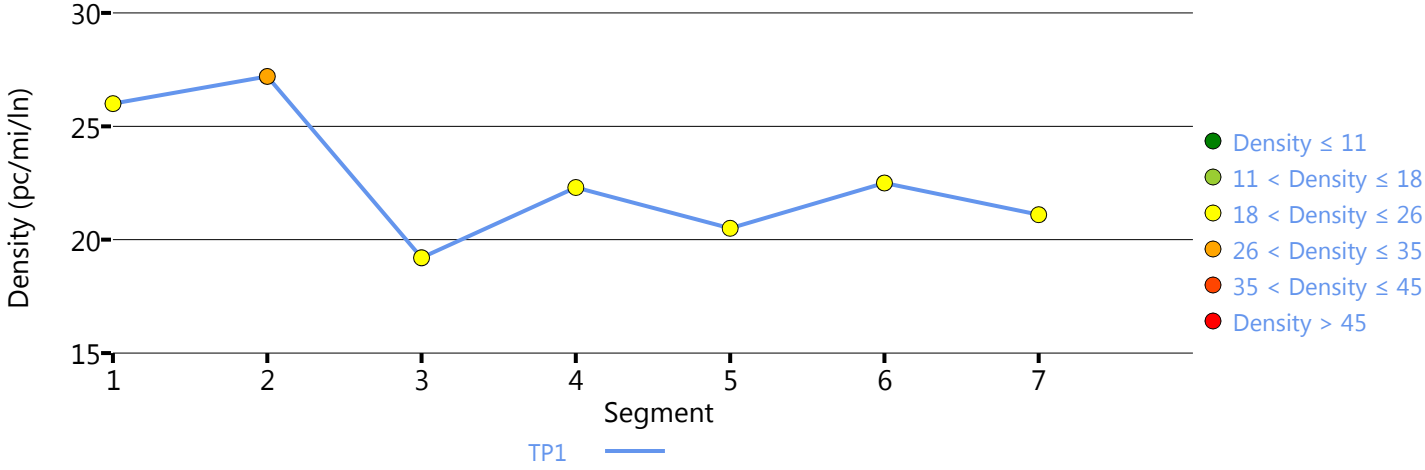
Volume Distribution



Speed Distribution



Density Distribution



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APPENDIX 4.1:

POST PROCESSING WORKSHEETS

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Project: Homestead TIA
Scenario: Horizon Year (2040)

Job #: 12003
Analyst: CP
Date: 4/9/19

LOCATION: Hellman Avenue & Kimball Avenue
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	163	162	16200%	1	192	191	19100%
	Through	2	60	58	2900%	2	48	46	2300%
	Right	1	298	297	29700%	1	430	429	42900%
	NB Total	4	521	517	12925%	4	670	666	16650%
SOUTH BOUND	Left	1	21	20	2000%	1	43	42	4200%
	Through	2	28	26	1300%	2	68	66	3300%
	Right	1	11	10	1000%	1	19	18	1800%
	SB Total	4	60	56	1400%	4	130	126	3150%
EAST BOUND	Left	1	20	19	1900%	1	18	17	1700%
	Through	3	601	598	19933%	3	967	964	32133%
	Right	1	132	131	13100%	1	258	257	25700%
	EB Total	5	753	748	14960%	5	1,243	1,238	24760%
WEST BOUND	Left	1	331	330	33000%	1	483	482	48200%
	Through	3	825	822	27400%	3	809	806	26867%
	Right	1	50	49	4900%	1	34	33	3300%
	WB Total	5	1,206	1,201	24020%	5	1,326	1,321	26420%
TOTAL ENTERING VOLUME		18	2,540	2522	14011%	18	3,369	3351	18617%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	60	130			
North Leg	Outbound	130	100			
North Leg	**TOTAL**	**190**	**230**	**8%**	**9%**	**2,515**
South Leg	Inbound	521	670			
South Leg	Outbound	491	809			
South Leg	**TOTAL**	**1,012**	**1,479**	**7%**	**10%**	**14,860**
East Leg	Inbound	1,206	1,326			
East Leg	Outbound	920	1,440			
East Leg	**TOTAL**	**2,126**	**2,766**	**6%**	**8%**	**33,374**
West Leg	Inbound	753	1,243			
West Leg	Outbound	999	1,020			
West Leg	**TOTAL**	**1,752**	**2,263**	**6%**	**8%**	**27,325**
OVERALL TOTAL		***5,080***	***6,738***	***7%***	***9%***	***78,074***

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Project: Homestead TIA
Scenario: Horizon Year (2040)

Job #: 11963
Analyst: CP
Date: 7/24/19

LOCATION: Archibald Av. & Chino Av.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	129	203	74	57%	54	160	106	196%
	Through	1,020	1,836	817	80%	717	1,088	371	52%
	Right	34	56	23	67%	36	83	47	131%
	NB Total	1,182	2,095	913	77%	807	1,331	524	65%
SOUTH BOUND	Left	111	172	62	56%	137	201	65	47%
	Through	663	950	288	43%	1,034	1,825	791	76%
	Right	50	72	23	45%	56	106	50	89%
	SB Total	823	1,194	372	45%	1,227	2,132	906	74%
EAST BOUND	Left	91	150	59	65%	122	112	-10	-8%
	Through	26	40	14	54%	156	218	62	40%
	Right	43	61	18	42%	96	161	65	68%
	EB Total	160	251	91	57%	374	491	118	31%
WEST BOUND	Left	67	59	-8	-12%	19	44	25	132%
	Through	72	64	-8	-10%	43	106	64	149%
	Right	239	247	9	4%	107	137	31	29%
	WB Total	377	370	-7	-2%	168	287	119	71%
TOTAL ENTERING VOLUME		2,542	3,910	1368.5	54%	2,575	4,241	1666	65%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	1,194	2,132			
North Leg	Outbound	2,233	1,337			
North Leg	**TOTAL**	**3,427**	**3,469**	**10%**	**10%**	**33,066**
South Leg	Inbound	2,095	1,331			
South Leg	Outbound	1,070	2,030			
South Leg	**TOTAL**	**3,165**	**3,361**	**10%**	**10%**	**32,033**
East Leg	Inbound	370	287			
East Leg	Outbound	268	502			
East Leg	**TOTAL**	**638**	**789**	**10%**	**13%**	**6,085**
West Leg	Inbound	251	491			
West Leg	Outbound	339	372			
West Leg	**TOTAL**	**590**	**863**	**7%**	**11%**	**7,954**
OVERALL TOTAL		***7,820***	***8,482***	**10%**	***11%***	***79,138***

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Project:	Homestead TIA	Job #:	11963
Scenario:	Horizon Year (Post-2040)	Analyst:	CP
		Date:	7/24/19

LOCATION: Archibald Avenue / Schaefer Av.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	69	68	6800%	1	7	6	600%
	Through	3	1,502	1,499	49967%	3	862	859	28633%
	Right	1	8	7	700%	1	73	72	7200%
	NB Total	5	1,579	1,574	31480%	5	942	937	18740%
SOUTH BOUND	Left	1	22	21	2100%	1	322	321	32100%
	Through	3	517	514	17133%	3	1,360	1,357	45233%
	Right	1	191	190	19000%	1	29	28	2800%
	SB Total	5	730	725	14500%	5	1,711	1,706	34120%
EAST BOUND	Left	1	9	8	800%	1	351	350	35000%
	Through	2	0	-2	-100%	2	268	266	13300%
	Right	1	1	0	0%	1	126	125	12500%
	EB Total	4	10	6	150%	4	745	741	18525%
WEST BOUND	Left	1	42	41	4100%	1	23	22	2200%
	Through	2	140	138	6900%	2	4	2	100%
	Right	1	339	338	33800%	1	64	63	6300%
	WB Total	4	521	517	12925%	4	91	87	2175%
TOTAL ENTERING VOLUME		18	2,840	2822	15678%	18	3,489	3471	19283%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	730	1,711			
North Leg	Outbound	1,850	1,277			
North Leg	**TOTAL**	**2,580**	**2,988**	**7%**	**8%**	**35,439**
South Leg	Inbound	1,579	942			
South Leg	Outbound	560	1,509			
South Leg	**TOTAL**	**2,139**	**2,451**	**7%**	**8%**	**30,364**
East Leg	Inbound	521	91			
East Leg	Outbound	30	663			
East Leg	**TOTAL**	**551**	**754**	**18%**	**24%**	**3,109**
West Leg	Inbound	10	745			
West Leg	Outbound	400	40			
West Leg	**TOTAL**	**410**	**785**	**28%**	**53%**	**1,487**
OVERALL TOTAL		***5,680***	***6,978***	**8%**	***10%***	***70,399***

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Project:	The Homestead TIA	Job #:	11963
Scenario:	Horizon Year (Post-2040)	Analyst:	CP
		Date:	6/17/19

LOCATION: Archibald Avenue & Ontario Ranch Road
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	502	501	50100%	1	397	396	39600%
	Through	3	826	823	27433%	3	441	438	14600%
	Right	1	172	171	17100%	1	274	273	27300%
	NB Total	5	1,500	1,495	29900%	5	1,112	1,107	22140%
SOUTH BOUND	Left	1	70	69	6900%	1	278	277	27700%
	Through	3	287	284	9467%	3	822	819	27300%
	Right	1	203	202	20200%	1	403	402	40200%
	SB Total	5	560	555	11100%	5	1,503	1,498	29960%
EAST BOUND	Left	1	436	435	43500%	1	322	321	32100%
	Through	2	818	816	40800%	2	1,798	1,796	89800%
	Right	1	375	374	37400%	1	591	590	59000%
	EB Total	4	1,629	1,625	40625%	4	2,711	2,707	67675%
WEST BOUND	Left	1	257	256	25600%	1	288	287	28700%
	Through	2	1,635	1,633	81650%	2	1,270	1,268	63400%
	Right	1	299	298	29800%	1	157	156	15600%
	WB Total	4	2,191	2,187	54675%	4	1,715	1,711	42775%
TOTAL ENTERING VOLUME		18	5,880	5862	32567%	18	7,041	7023	39017%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	560	1,503			
North Leg	Outbound	1,561	920			
North Leg	**TOTAL**	**2,121**	**2,423**	**7%**	**8%**	**30,363**
South Leg	Inbound	1,500	1,112			
South Leg	Outbound	919	1,701			
South Leg	**TOTAL**	**2,419**	**2,813**	**7%**	**8%**	**33,655**
East Leg	Inbound	2,191	1,715			
East Leg	Outbound	1,060	2,350			
East Leg	**TOTAL**	**3,251**	**4,065**	**9%**	**11%**	**36,644**
West Leg	Inbound	1,629	2,711			
West Leg	Outbound	2,340	2,070			
West Leg	**TOTAL**	**3,969**	**4,781**	**8%**	**9%**	**50,661**
OVERALL TOTAL		***11,760***	***14,082***	**8%**	***9%***	***151,323***

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Project:	The Homestead TIA	Job #:	11963
Scenario:	Horizon Year (Post-2040)	Analyst:	CP
		Date:	6/17/19

LOCATION: Archibald Avenue & Eucalyptus Avenue
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	237	236	23600%	1	89	88	8800%
	Through	3	1,296	1,293	43100%	3	833	830	27667%
	Right	1	84	83	8300%	1	160	159	15900%
	NB Total	5	1,617	1,612	32240%	5	1,082	1,077	21540%
SOUTH BOUND	Left	1	60	59	5900%	1	184	183	18300%
	Through	3	695	692	23067%	3	1,412	1,409	46967%
	Right	1	169	168	16800%	1	102	101	10100%
	SB Total	5	924	919	18380%	5	1,698	1,693	33860%
EAST BOUND	Left	1	47	46	4600%	1	207	206	20600%
	Through	2	27	25	1250%	2	358	356	17800%
	Right	1	36	35	3500%	1	305	304	30400%
	EB Total	4	110	106	2650%	4	870	866	21650%
WEST BOUND	Left	1	122	121	12100%	1	107	106	10600%
	Through	2	266	264	13200%	2	70	68	3400%
	Right	1	162	161	16100%	1	73	72	7200%
	WB Total	4	550	546	13650%	4	250	246	6150%
TOTAL ENTERING VOLUME		18	3,201	3183	17683%	18	3,900	3882	21567%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	924	1,698			
North Leg	Outbound	1,505	1,113			
North Leg	**TOTAL**	**2,429**	**2,811**	**7%**	**8%**	**33,655**
South Leg	Inbound	1,617	1,082			
South Leg	Outbound	853	1,824			
South Leg	**TOTAL**	**2,470**	**2,906**	**7%**	**8%**	**34,275**
East Leg	Inbound	550	250			
East Leg	Outbound	171	702			
East Leg	**TOTAL**	**721**	**952**	**9%**	**12%**	**7,897**
West Leg	Inbound	110	870			
West Leg	Outbound	672	261			
West Leg	**TOTAL**	**782**	**1,131**	**13%**	**19%**	**6,069**
OVERALL TOTAL		***6,402***	***7,800***	**8%**	***10%***	***81,896***

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Project: The Homestead TIA
Scenario: Horizon Year (Post-2040)

Job #: 11963
Analyst: CP
Date: 6/17/19

LOCATION: Archibald Avenue & Merrill Avenue
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	481	480	48000%	1	270	269	26900%
	Through	3	1,206	1,203	40100%	3	1,021	1,018	33933%
	Right	1	0	-1	-100%	1	0	-1	-100%
	NB Total	5	1,687	1,682	33640%	5	1,291	1,286	25720%
SOUTH BOUND	Left	1	0	-1	-100%	1	0	-1	-100%
	Through	3	889	886	29533%	3	1,488	1,485	49500%
	Right	1	129	128	12800%	1	70	69	6900%
	SB Total	5	1,018	1,013	20260%	5	1,558	1,553	31060%
EAST BOUND	Left	1	74	73	7300%	1	99	98	9800%
	Through	2	0	-2	-100%	2	0	-2	-100%
	Right	1	201	200	20000%	1	552	551	55100%
	EB Total	4	275	271	6775%	4	651	647	16175%
WEST BOUND	Left	1	0	-1	-100%	1	0	-1	-100%
	Through	2	0	-2	-100%	2	0	-2	-100%
	Right	1	0	-1	-100%	1	0	-1	-100%
	WB Total	4	0	-4	-100%	4	0	-4	-100%
TOTAL ENTERING VOLUME		18	2,980	2962	16456%	18	3,500	3482	19344%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	1,018	1,558			
North Leg	Outbound	1,280	1,120			
North Leg	**TOTAL**	**2,298**	**2,678**	**7%**	**8%**	**32,491**
South Leg	Inbound	1,687	1,291			
South Leg	Outbound	1,090	2,040			
South Leg	**TOTAL**	**2,777**	**3,331**	**7%**	**8%**	**39,403**
East Leg	Inbound	0	0			
East Leg	Outbound	0	0			
East Leg	**TOTAL**	**0**	**0**	**#DIV/0!**	**#DIV/0!**	**-**
West Leg	Inbound	275	651			
West Leg	Outbound	610	340			
West Leg	**TOTAL**	**885**	**991**	**7%**	**8%**	**12,604**
OVERALL TOTAL		***5,960***	***7,000***	***7%***	***8%***	***84,498***

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Project:	The Homestead TIA	Job #:	11963
Scenario:	Horizon Year	Analyst:	CP
		Date:	6/17/19

LOCATION: Archibald Avenue & Limonite Avenue
FORECAST YEAR: 2035

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	131	130	13000%	1	119	118	11800%
	Through	3	1,348	1,345	44833%	3	1,599	1,596	53200%
	Right	1	412	411	41100%	1	406	405	40500%
	NB Total	5	1,891	1,886	37720%	5	2,124	2,119	42380%
SOUTH BOUND	Left	1	845	844	84400%	1	1,112	1,111	111100%
	Through	3	1,036	1,033	34433%	3	1,713	1,710	57000%
	Right	1	268	267	26700%	1	326	325	32500%
	SB Total	5	2,149	2,144	42880%	5	3,151	3,146	62920%
EAST BOUND	Left	1	281	280	28000%	1	316	315	31500%
	Through	2	773	771	38550%	2	722	720	36000%
	Right	1	105	104	10400%	1	124	123	12300%
	EB Total	4	1,159	1,155	28875%	4	1,162	1,158	28950%
WEST BOUND	Left	1	318	317	31700%	1	453	452	45200%
	Through	2	741	739	36950%	2	775	773	38650%
	Right	1	850	849	84900%	1	1,156	1,155	115500%
	WB Total	4	1,909	1,905	47625%	4	2,384	2,380	59500%
TOTAL ENTERING VOLUME		18	7,108	7090	39389%	18	8,821	8803	48906%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	2,149	3,151			
North Leg	Outbound	2,479	3,071			
North Leg	**TOTAL**	**4,628**	**6,222**	**7%**	**10%**	**63,545**
South Leg	Inbound	1,891	2,124			
South Leg	Outbound	1,459	2,290			
South Leg	**TOTAL**	**3,350**	**4,414**	**8%**	**10%**	**44,433**
East Leg	Inbound	1,909	2,384			
East Leg	Outbound	2,030	2,240			
East Leg	**TOTAL**	**3,939**	**4,624**	**7%**	**9%**	**54,064**
West Leg	Inbound	1,159	1,162			
West Leg	Outbound	1,140	1,220			
West Leg	**TOTAL**	**2,299**	**2,382**	**8%**	**8%**	**29,708**
OVERALL TOTAL		***14,216***	***17,642***	***7%***	***9%***	***191,750***

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Project: The Homestead TIA
Scenario: 2040 With Project

Job #: 11963
Analyst: CP
Date: 6/17/19

LOCATION: Archibald Avenue & 65th Street
FORECAST YEAR: 2035

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	17	20	3	18%	46	61	15	33%
	Through	997	1,709	712	71%	703	1,702	999	142%
	Right	134	161	27	20%	221	233	12	5%
	NB Total	1,148	1,890	742	65%	970	1,996	1,026	106%
SOUTH BOUND	Left	35	101	66	189%	100	218	118	118%
	Through	746	1,381	635	85%	997	1,887	890	89%
	Right	22	61	39	177%	81	221	140	173%
	SB Total	803	1,543	740	92%	1,178	2,326	1,148	97%
EAST BOUND	Left	56	155	99	177%	35	111	76	217%
	Through	46	89	43	93%	28	39	11	39%
	Right	55	68	13	24%	37	44	7	19%
	EB Total	157	312	155	99%	100	194	94	94%
WEST BOUND	Left	226	225	-1	0%	127	228	101	80%
	Through	27	40	13	48%	38	98	60	158%
	Right	59	131	72	122%	33	157	124	376%
	WB Total	312	396	84	27%	198	483	285	144%
TOTAL ENTERING VOLUME		2,420	4,141	1721	71%	2,446	4,999	2553	104%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	1,543	2,326			
North Leg	Outbound	1,995	1,970			
North Leg	**TOTAL**	**3,538**	**4,296**	**8%**	**10%**	**44,433**
South Leg	Inbound	1,890	1,996			
South Leg	Outbound	1,674	2,159			
South Leg	**TOTAL**	**3,564**	**4,155**	**10%**	**11%**	**36,353**
East Leg	Inbound	396	483			
East Leg	Outbound	351	490			
East Leg	**TOTAL**	**747**	**973**	**6%**	**7%**	**13,268**
West Leg	Inbound	312	194			
West Leg	Outbound	121	380			
West Leg	**TOTAL**	**433**	**574**	**6%**	**7%**	**7,704**
OVERALL TOTAL		***8,282***	***9,998***	**8%**	***10%***	***101,758***

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Project: The Homestead TIA
Scenario: Horizon Year

Job #: 11963
Analyst: CP
Date: 6/17/19

LOCATION: Harrison Avenue & Limonite Avenue
FORECAST YEAR: 2035

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	128	127	12700%	1	195	194	19400%
	Through	1	50	49	4900%	1	66	65	6500%
	Right	1	163	162	16200%	1	220	219	21900%
	NB Total	3	341	338	11267%	3	481	478	15933%
SOUTH BOUND	Left	1	134	133	13300%	1	88	87	8700%
	Through	1	32	31	3100%	1	104	103	10300%
	Right	1	105	104	10400%	1	78	77	7700%
	SB Total	3	271	268	8933%	3	270	267	8900%
EAST BOUND	Left	1	66	65	6500%	1	65	64	6400%
	Through	2	1,923	1,921	96050%	2	1,931	1,929	96450%
	Right	1	51	50	5000%	1	254	253	25300%
	EB Total	4	2,040	2,036	50900%	4	2,250	2,246	56150%
WEST BOUND	Left	1	57	56	5600%	1	314	313	31300%
	Through	2	1,678	1,676	83800%	2	2,116	2,114	105700%
	Right	1	74	73	7300%	1	80	79	7900%
	WB Total	4	1,809	1,805	45125%	4	2,510	2,506	62650%
TOTAL ENTERING VOLUME		14	4,461	4447	31764%	14	5,511	5497	39264%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	271	270			
North Leg	Outbound	190	211			
North Leg	**TOTAL**	**461**	**481**	**8%**	**8%**	**6,057**
South Leg	Inbound	341	481			
South Leg	Outbound	140	672			
South Leg	**TOTAL**	**481**	**1,153**	**6%**	**15%**	**7,859**
East Leg	Inbound	1,809	2,510			
East Leg	Outbound	2,220	2,239			
East Leg	**TOTAL**	**4,029**	**4,749**	**7%**	**9%**	**55,789**
West Leg	Inbound	2,040	2,250			
West Leg	Outbound	1,911	2,389			
West Leg	**TOTAL**	**3,951**	**4,639**	**7%**	**9%**	**54,064**
OVERALL TOTAL		***8,922***	***11,022***	***7%***	***9%***	***123,769***

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Project: The Homestead TIA
Scenario: Horizon Year

Job #: 11963
Analyst: CP
Date: 6/18/19

LOCATION: Sumner Avenue & Limonite Avenue
FORECAST YEAR: 2035

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	92	91	9100%	1	77	76	7600%
	Through	1	32	31	3100%	1	25	24	2400%
	Right	1	10	9	900%	1	10	9	900%
	NB Total	3	134	131	4367%	3	112	109	3633%
SOUTH BOUND	Left	1	32	31	3100%	1	75	74	7400%
	Through	1	10	9	900%	1	38	37	3700%
	Right	1	288	287	28700%	1	592	591	59100%
	SB Total	3	330	327	10900%	3	705	702	23400%
EAST BOUND	Left	1	522	521	52100%	1	449	448	44800%
	Through	2	1,508	1,506	75300%	2	1,576	1,574	78700%
	Right	1	54	53	5300%	1	89	88	8800%
	EB Total	4	2,084	2,080	52000%	4	2,114	2,110	52750%
WEST BOUND	Left	1	6	5	500%	1	13	12	1200%
	Through	2	1,430	1,428	71400%	2	1,850	1,848	92400%
	Right	1	55	54	5400%	1	66	65	6500%
	WB Total	4	1,491	1,487	37175%	4	1,929	1,925	48125%
TOTAL ENTERING VOLUME		14	4,039	4025	28750%	14	4,860	4846	34614%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	330	705			
North Leg	Outbound	609	540			
North Leg	**TOTAL**	**939**	**1,245**	**9%**	**12%**	**10,009**
South Leg	Inbound	134	112			
South Leg	Outbound	70	140			
South Leg	**TOTAL**	**204**	**252**	**9%**	**12%**	**2,162**
East Leg	Inbound	1,491	1,929			
East Leg	Outbound	1,550	1,661			
East Leg	**TOTAL**	**3,041**	**3,590**	**7%**	**8%**	**44,429**
West Leg	Inbound	2,084	2,114			
West Leg	Outbound	1,810	2,519			
West Leg	**TOTAL**	**3,894**	**4,633**	**7%**	**8%**	**55,789**
OVERALL TOTAL		***8,078***	***9,720***	***7%***	***9%***	***112,389***

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Project:	The Homestead TIA	Job #:	11963
Scenario:	Horizon Year	Analyst:	CP
		Date:	6/17/19

LOCATION: Scholar Way & Limonite Avenue
FORECAST YEAR: 2035

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	99	98	9800%	1	211	210	21000%
	Through	1	19	18	1800%	1	32	31	3100%
	Right	1	46	45	4500%	1	43	42	4200%
	NB Total	3	164	161	5367%	3	286	283	9433%
SOUTH BOUND	Left	1	33	32	3200%	1	37	36	3600%
	Through	1	8	7	700%	1	42	41	4100%
	Right	1	71	70	7000%	1	186	185	18500%
	SB Total	3	112	109	3633%	3	265	262	8733%
EAST BOUND	Left	1	74	73	7300%	1	120	119	11900%
	Through	2	1,621	1,619	80950%	2	1,414	1,412	70600%
	Right	1	45	44	4400%	1	177	176	17600%
	EB Total	4	1,740	1,736	43400%	4	1,711	1,707	42675%
WEST BOUND	Left	1	17	16	1600%	1	42	41	4100%
	Through	2	1,300	1,298	64900%	2	1,669	1,667	83350%
	Right	1	27	26	2600%	1	28	27	2700%
	WB Total	4	1,344	1,340	33500%	4	1,739	1,735	43375%
TOTAL ENTERING VOLUME		14	3,360	3346	23900%	14	4,001	3987	28479%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	112	265			
North Leg	Outbound	120	180			
North Leg	**TOTAL**	**232**	**445**	**7%**	**12%**	**3,562**
South Leg	Inbound	164	286			
South Leg	Outbound	70	261			
South Leg	**TOTAL**	**234**	**547**	**7%**	**16%**	**3,439**
East Leg	Inbound	1,344	1,739			
East Leg	Outbound	1,700	1,494			
East Leg	**TOTAL**	**3,044**	**3,233**	**7%**	**7%**	**43,258**
West Leg	Inbound	1,740	1,711			
West Leg	Outbound	1,470	2,066			
West Leg	**TOTAL**	**3,210**	**3,777**	**7%**	**8%**	**48,501**
OVERALL TOTAL		***6,720***	***8,002***	***7%***	***8%***	***98,760***

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Project:	The Homestead TIA	Job #:	11963
Scenario:	Horizon Year	Analyst:	CP
		Date:	6/17/19

LOCATION: Hamner Avenue & Limonite Avenue
FORECAST YEAR: 2035

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	127	126	12600%	1	156	155	15500%
	Through	2	534	532	26600%	2	823	821	41050%
	Right	1	640	639	63900%	1	522	521	52100%
	NB Total	4	1,301	1,297	32425%	4	1,501	1,497	37425%
SOUTH BOUND	Left	1	597	596	59600%	1	747	746	74600%
	Through	2	456	454	22700%	2	861	859	42950%
	Right	1	118	117	11700%	1	223	222	22200%
	SB Total	4	1,171	1,167	29175%	4	1,831	1,827	45675%
EAST BOUND	Left	1	134	133	13300%	1	200	199	19900%
	Through	2	1,447	1,445	72250%	2	1,144	1,142	57100%
	Right	1	123	122	12200%	1	147	146	14600%
	EB Total	4	1,704	1,700	42500%	4	1,491	1,487	37175%
WEST BOUND	Left	1	443	442	44200%	1	555	554	55400%
	Through	2	1,037	1,035	51750%	2	1,294	1,292	64600%
	Right	1	484	483	48300%	1	759	758	75800%
	WB Total	4	1,964	1,960	49000%	4	2,608	2,604	65100%
TOTAL ENTERING VOLUME		16	6,140	6124	38275%	16	7,431	7415	46344%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	1,171	1,831			
North Leg	Outbound	1,152	1,782			
North Leg	**TOTAL**	**2,323**	**3,613**	**7%**	**11%**	**32,182**
South Leg	Inbound	1,301	1,501			
South Leg	Outbound	1,022	1,563			
South Leg	**TOTAL**	**2,323**	**3,064**	**8%**	**11%**	**28,243**
East Leg	Inbound	1,964	2,608			
East Leg	Outbound	2,684	2,413			
East Leg	**TOTAL**	**4,648**	**5,021**	**7%**	**8%**	**65,190**
West Leg	Inbound	1,704	1,491			
West Leg	Outbound	1,282	1,673			
West Leg	**TOTAL**	**2,986**	**3,164**	**7%**	**7%**	**43,258**
OVERALL TOTAL		***12,280***	***14,862***	***7%***	***9%***	***168,873***

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Project:	The Homestead TIA	Job #:	11963
Scenario:	Horizon Year	Analyst:	CP
		Date:	6/17/19

LOCATION: I-15 Southbound Ramps & Limonite Avenue
FORECAST YEAR: 2035

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	NB Total	0	0	0	#DIV/0!	0	0	0	#DIV/0!
SOUTH BOUND	Left	1	432	431	43100%	1	367	366	36600%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	1	418	417	41700%	1	663	662	66200%
	SB Total	2	850	848	42400%	2	1,030	1,028	51400%
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	2	2,008	2,006	100300%	2	1,613	1,611	80550%
	Right	1	1,062	1,061	106100%	1	1,090	1,089	108900%
	EB Total	3	3,070	3,067	102233%	3	2,703	2,700	90000%
WEST BOUND	Left	1	968	967	96700%	1	860	859	85900%
	Through	2	1,772	1,770	88500%	2	2,297	2,295	114750%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	WB Total	3	2,740	2,737	91233%	3	3,157	3,154	105133%
TOTAL ENTERING VOLUME		8	6,660	6652	83150%	8	6,890	6882	86025%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	850	1,030			
North Leg	Outbound	0	0			
North Leg	**TOTAL**	**850**	**1,030**	**7%**	**8%**	**12,903**
South Leg	Inbound	0	0			
South Leg	Outbound	2,030	1,950			
South Leg	**TOTAL**	**2,030**	**1,950**	**8%**	**8%**	**24,603**
East Leg	Inbound	2,740	3,157			
East Leg	Outbound	2,440	1,980			
East Leg	**TOTAL**	**5,180**	**5,137**	**8%**	**8%**	**68,458**
West Leg	Inbound	3,070	2,703			
West Leg	Outbound	2,190	2,960			
West Leg	**TOTAL**	**5,260**	**5,663**	**7%**	**8%**	**73,201**
OVERALL TOTAL		***13,320***	***13,780***	***7%***	***8%***	***179,165***

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Project: The Homestead TIA
Scenario: Horizon Year

Job #: 11963
Analyst: CP
Date: 6/17/19

LOCATION: I-15 Northbound Ramps & Limonite Avenue
FORECAST YEAR: 2035

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	881	880	88000%	1	806	805	80500%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	1	531	530	53000%	1	874	873	87300%
	NB Total	2	1,412	1,410	70500%	2	1,680	1,678	83900%
SOUTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	SB Total	0	0	0	#DIV/0!	0	0	0	#DIV/0!
EAST BOUND	Left	1	607	606	60600%	1	266	265	26500%
	Through	2	1,823	1,821	91050%	2	1,716	1,714	85700%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	EB Total	3	2,430	2,427	80900%	3	1,982	1,979	65967%
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	2	1,864	1,862	93100%	2	2,344	2,342	117100%
	Right	1	374	373	37300%	1	394	393	39300%
	WB Total	3	2,238	2,235	74500%	3	2,738	2,735	91167%
TOTAL ENTERING VOLUME		8	6,080	6072	75900%	8	6,400	6392	79900%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	0	0			
North Leg	Outbound	981	660			
North Leg	**TOTAL**	**981**	**660**	**9%**	**6%**	**10,904**
South Leg	Inbound	1,412	1,680			
South Leg	Outbound	0	0			
South Leg	**TOTAL**	**1,412**	**1,680**	**7%**	**8%**	**21,700**
East Leg	Inbound	2,238	2,738			
East Leg	Outbound	2,354	2,590			
East Leg	**TOTAL**	**4,592**	**5,328**	**7%**	**8%**	**62,991**
West Leg	Inbound	2,430	1,982			
West Leg	Outbound	2,745	3,150			
West Leg	**TOTAL**	**5,175**	**5,132**	**8%**	**7%**	**68,458**
OVERALL TOTAL		***12,160***	***12,800***	***7%***	***8%***	***164,053***

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APPENDIX 5.1:

E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	6	0	8	0	0	2	3	0	0
Future Vol, veh/h	0	0	0	6	0	8	0	0	2	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	7	0	9	0	0	2	3	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	9	0	0	1	0	0	15	24	1	20	20	5
Stage 1	-	-	-	-	-	-	1	1	-	19	19	-
Stage 2	-	-	-	-	-	-	14	23	-	1	1	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1624	-	-	1635	-	-	1004	873	1089	996	878	1083
Stage 1	-	-	-	-	-	-	1027	899	-	1003	884	-
Stage 2	-	-	-	-	-	-	1010	880	-	1027	899	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1624	-	-	1635	-	-	1001	870	1089	991	874	1083
Mov Cap-2 Maneuver	-	-	-	-	-	-	1001	870	-	991	874	-
Stage 1	-	-	-	-	-	-	1027	899	-	1003	880	-
Stage 2	-	-	-	-	-	-	1006	876	-	1025	899	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.1	8.3	8.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1089	1624	-	-	1635	-	-	991
HCM Lane V/C Ratio	0.002	-	-	-	0.004	-	-	0.003
HCM Control Delay (s)	8.3	0	-	-	7.2	0	-	8.6
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	2.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	4	119	12	10
Demand Flow Rate, veh/h	4	119	12	10
Vehicles Circulating, veh/h	85	0	14	90
Vehicles Exiting, veh/h	15	26	75	29
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	2.8	3.0	2.6	2.8
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	L	TR	LTR	LTR
RT Channelized						
Lane Util	0.500	0.500	0.630	0.370	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
Entry Flow, veh/h	2	2	75	44	12	10
Cap Entry Lane, veh/h	1248	1321	1350	1420	1403	1316
Entry HV Adj Factor	0.940	1.060	1.000	1.000	1.000	1.000
Flow Entry, veh/h	2	2	75	44	12	10
Cap Entry, veh/h	1173	1400	1350	1420	1403	1316
V/C Ratio	0.002	0.002	0.056	0.031	0.009	0.008
Control Delay, s/veh	3.1	2.6	3.1	2.8	2.6	2.8
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	33	38	0	101	27	0	0	11	0	0	9
Future Vol, veh/h	0	33	38	0	101	27	0	0	11	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	36	41	0	110	29	0	0	12	0	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	39	-	-	70
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	1031	0	0	985
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	1031	-	-	985
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.5	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	1031	-	-	-	-	985
HCM Lane V/C Ratio	0.012	-	-	-	-	0.01
HCM Control Delay (s)	8.5	-	-	-	-	8.7
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	6	45	20	4	0
Future Vol, veh/h	0	6	45	20	4	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, %	0	0	0	0	0	0
Mvmt Flow	0	7	49	22	4	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	71	0	-	0	67	60
Stage 1	-	-	-	-	60	-
Stage 2	-	-	-	-	7	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1542	-	-	-	943	1011
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	1021	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1542	-	-	-	943	1011
Mov Cap-2 Maneuver	-	-	-	-	943	-
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	1021	-

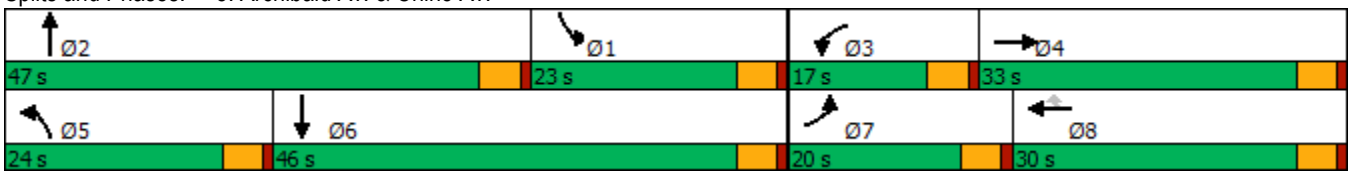
Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

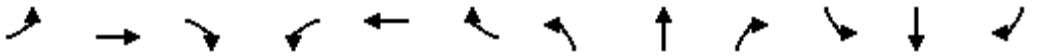
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1542	-	-	-	943
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	91	26	69	72	239	129	1030	111	696
Future Volume (vph)	91	26	69	72	239	129	1030	111	696
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.6	11.0	9.3	9.9	9.9	12.6	30.0	11.8	25.2
Actuated g/C Ratio	0.14	0.15	0.12	0.13	0.13	0.17	0.40	0.16	0.34
v/c Ratio	0.41	0.26	0.35	0.31	0.59	0.49	0.56	0.45	0.67
Control Delay	41.0	19.5	41.9	38.3	11.8	39.9	22.4	39.6	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	19.5	41.9	38.3	11.8	39.9	22.4	39.6	26.2
LOS	D	B	D	D	B	D	C	D	C
Approach Delay		31.8		22.3			24.3		28.0
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 74.7	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 54.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	26	43	69	72	239	129	1030	35	111	696	50
Future Volume (veh/h)	91	26	43	69	72	239	129	1030	35	111	696	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	94	27	44	71	74	205	133	1062	33	114	718	46
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	118	98	160	98	266	225	170	1705	53	145	1088	70
Arrive On Green	0.07	0.16	0.16	0.06	0.15	0.15	0.10	0.35	0.35	0.09	0.33	0.33
Sat Flow, veh/h	1619	615	1002	1619	1800	1525	1619	4893	152	1619	3263	209
Grp Volume(v), veh/h	94	0	71	71	74	205	133	711	384	114	376	388
Grp Sat Flow(s),veh/h/ln	1619	0	1617	1619	1800	1525	1619	1638	1769	1619	1710	1762
Q Serve(g_s), s	3.1	0.0	2.1	2.3	2.0	5.0	4.3	9.7	9.7	3.7	10.1	10.1
Cycle Q Clear(g_c), s	3.1	0.0	2.1	2.3	2.0	5.0	4.3	9.7	9.7	3.7	10.1	10.1
Prop In Lane	1.00		0.62	1.00		1.00	1.00		0.09	1.00		0.12
Lane Grp Cap(c), veh/h	118	0	258	98	266	225	170	1142	616	145	570	587
V/C Ratio(X)	0.80	0.00	0.27	0.72	0.28	0.91	0.78	0.62	0.62	0.79	0.66	0.66
Avail Cap(c_a), veh/h	462	0	852	372	848	719	583	2576	1391	553	1313	1353
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	0.0	19.9	24.9	20.4	10.9	23.5	14.6	14.6	24.0	15.4	15.4
Incr Delay (d2), s/veh	11.4	0.0	0.6	9.6	0.6	13.3	7.7	0.6	1.0	9.0	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.7	1.1	0.8	2.9	1.7	2.7	3.0	1.6	3.2	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.0	0.0	20.5	34.4	21.0	24.2	31.2	15.2	15.7	33.0	16.7	16.6
LnGrp LOS	D	A	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		165			350			1228			878	
Approach Delay, s/veh		29.3			25.6			17.1			18.8	
Approach LOS		C			C			B			B	

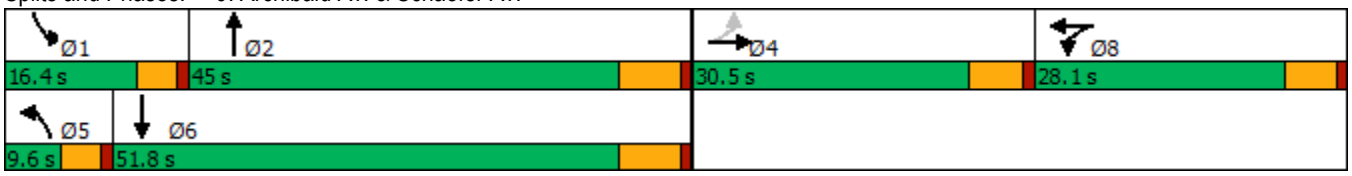
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	23.4	7.9	13.2	10.3	22.6	8.5	12.6
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	5.7	11.7	4.3	4.1	6.3	12.1	5.1	7.0
Green Ext Time (p_c), s	0.2	7.0	0.1	0.3	0.2	4.4	0.1	0.9

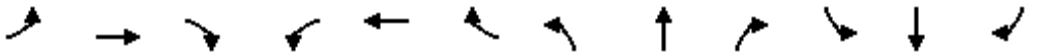
Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	88	0	1179	68	661		
Future Volume (vph)	88	0	1179	68	661		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	45.0	16.4	51.8	30.5	9.6
Total Split (%)	23.4%	23.4%	37.5%	13.7%	43.2%	25%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	14.9	14.9	31.7	9.1	41.3		
Actuated g/C Ratio	0.24	0.24	0.51	0.15	0.66		
v/c Ratio	0.24	0.14	0.50	0.30	0.31		
Control Delay	31.0	0.4	18.7	37.7	9.6		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	31.0	0.4	18.7	37.7	9.6		
LOS	C	A	B	D	A		
Approach Delay		14.9	18.7		12.3		
Approach LOS		B	B		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 62.6	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 16.2	Intersection LOS: B
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	88	0	98	0	1179	18	68	661	0
Future Volume (veh/h)	0	0	0	88	0	98	0	1179	18	68	661	0
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	92	0	85	0	1228	19	71	689	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	4	0	302	0	285	3	2007	31	103	1917	0
Arrive On Green	0.00	0.00	0.00	0.19	0.00	0.19	0.00	0.40	0.40	0.06	0.56	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4985	77	1619	3510	0
Grp Volume(v), veh/h	0	0	0	92	0	85	0	807	440	71	689	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1786	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	2.3	0.0	9.5	9.5	2.1	5.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.4	0.0	2.3	0.0	9.5	9.5	2.1	5.4	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	0	4	0	302	0	285	3	1319	719	103	1917	0
V/C Ratio(X)	0.00	0.00	0.00	0.30	0.00	0.30	0.00	0.61	0.61	0.69	0.36	0.00
Avail Cap(c_a), veh/h	0	913	0	742	0	699	166	2591	1413	393	3183	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	17.1	0.0	17.0	0.0	11.5	11.5	22.3	5.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.5	0.8	3.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.8	0.0	0.7	0.0	2.3	2.5	0.7	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	17.6	0.0	17.6	0.0	12.0	12.4	25.4	6.0	0.0
LnGrp LOS	A	A	A	B	A	B	A	B	B	C	A	A
Approach Vol, veh/h		0			177			1247			760	
Approach Delay, s/veh		0.0			17.6			12.1			7.8	
Approach LOS					B			B			A	

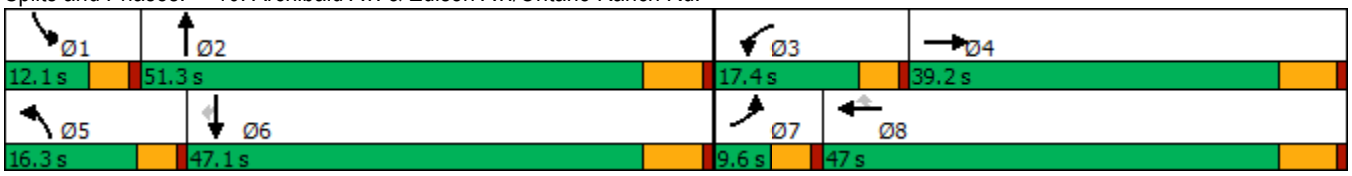
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	26.1		0.0	0.0	33.8		14.9				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	38.5		24.7	5.0	45.3		22.3				
Max Q Clear Time (g_c+I1), s	4.1	11.5		0.0	0.0	7.4		4.4				
Green Ext Time (p_c), s	0.0	8.1		0.0	0.0	4.4		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		11.1	
HCM 6th LOS		B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	183	43	305	433	162	150	978	341	62	373	96
Future Volume (vph)	22	183	43	305	433	162	150	978	341	62	373	96
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.3	18.3	94.9	13.5	33.5	33.5	12.3	35.8	94.9	7.1	27.8	27.8
Actuated g/C Ratio	0.06	0.19	1.00	0.14	0.35	0.35	0.13	0.38	1.00	0.07	0.29	0.29
v/c Ratio	0.13	0.28	0.03	0.74	0.70	0.26	0.73	0.77	0.23	0.53	0.38	0.18
Control Delay	53.6	34.4	0.0	55.4	36.1	5.5	66.6	32.3	0.4	65.5	27.7	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	34.4	0.0	55.4	36.1	5.5	66.6	32.3	0.4	65.5	27.7	1.4
LOS	D	C	A	E	D	A	E	C	A	E	C	A
Approach Delay		30.1			37.1			28.4			27.3	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 30.8	Intersection LOS: C
Intersection Capacity Utilization 79.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	183	43	305	433	162	150	978	341	62	373	96
Future Volume (veh/h)	22	183	43	305	433	162	150	978	341	62	373	96
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	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	22	187	0	311	442	123	153	998	0	63	381	65
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	631		382	521	442	185	1250		78	1024	457
Arrive On Green	0.02	0.18	0.00	0.13	0.29	0.29	0.11	0.37	0.00	0.05	0.30	0.30
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	22	187	0	311	442	123	153	998	0	63	381	65
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1525
Q Serve(g_s), s	0.6	3.8	0.0	8.2	18.5	5.0	7.4	21.0	0.0	3.1	7.0	2.5
Cycle Q Clear(g_c), s	0.6	3.8	0.0	8.2	18.5	5.0	7.4	21.0	0.0	3.1	7.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	631		382	521	442	185	1250		78	1024	457
V/C Ratio(X)	0.31	0.30		0.81	0.85	0.28	0.83	0.80		0.81	0.37	0.14
Avail Cap(c_a), veh/h	184	1407		472	916	776	236	1910		151	1731	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	28.2	0.0	34.0	26.8	22.0	34.8	22.8	0.0	37.8	22.2	20.6
Incr Delay (d2), s/veh	0.9	0.3	0.0	7.1	3.9	0.3	14.1	1.4	0.0	7.3	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.4	0.0	3.1	7.6	1.7	3.4	7.4	0.0	1.3	2.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	28.5	0.0	41.1	30.8	22.4	48.9	24.2	0.0	45.2	22.4	20.7
LnGrp LOS	D	C		D	C	C	D	C		D	C	C
Approach Vol, veh/h		209	A		876			1151	A		509	
Approach Delay, s/veh		29.6			33.3			27.5			25.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	35.8	15.0	21.0	13.7	30.5	6.5	29.4
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	5.1	23.0	10.2	5.8	9.4	9.0	2.6	20.5
Green Ext Time (p_c), s	0.0	6.3	0.2	1.0	0.0	2.4	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Notes

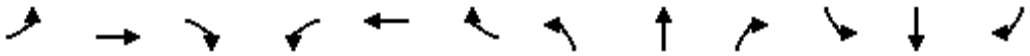
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	59	1410	10	19	701
Future Volume (vph)	6	59	1410	10	19	701
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	13.6%	13.6%	59.1%	59.1%	13.7%	72.9%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.0	5.0	51.3	51.3	5.0	53.1
Actuated g/C Ratio	0.08	0.08	0.79	0.79	0.08	0.82
v/c Ratio	0.02	0.16	0.55	0.01	0.16	0.27
Control Delay	28.5	0.9	7.7	5.9	31.4	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	0.9	7.7	5.9	31.4	3.2
LOS	C	A	A	A	C	A
Approach Delay			7.7			3.9
Approach LOS			A			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 64.6	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 54.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	6	0	59	0	1410	10	19	701	0
Future Volume (veh/h)	0	0	0	6	0	59	0	1410	10	19	701	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				6	0	6	0	1500	11	20	746	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, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				48	0	41	0	2340	1022	39	2700	0
Arrive On Green				0.02	0.00	0.02	0.00	0.68	0.68	0.02	0.79	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1494	1619	3510	0
Grp Volume(v), veh/h				6	0	6	0	1500	11	20	746	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1494	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.1	0.0	13.9	0.1	0.7	3.3	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.1	0.0	13.9	0.1	0.7	3.3	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				48	0	41	0	2340	1022	39	2700	0
V/C Ratio(X)				0.13	0.00	0.15	0.00	0.64	0.01	0.52	0.28	0.00
Avail Cap(c_a), veh/h				279	0	238	0	2340	1022	144	2700	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.4	0.0	27.4	0.0	5.0	2.8	27.2	1.6	0.0
Incr Delay (d2), s/veh				1.2	0.0	1.6	0.0	1.4	0.0	3.9	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				0.0	0.0	0.0	0.0	1.7	0.0	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.5	0.0	29.0	0.0	6.4	2.9	31.1	1.8	0.0
LnGrp LOS				C	A	C	A	A	A	C	A	A
Approach Vol, veh/h					12			1511			766	
Approach Delay, s/veh					28.8			6.3			2.6	
Approach LOS					C			A			A	

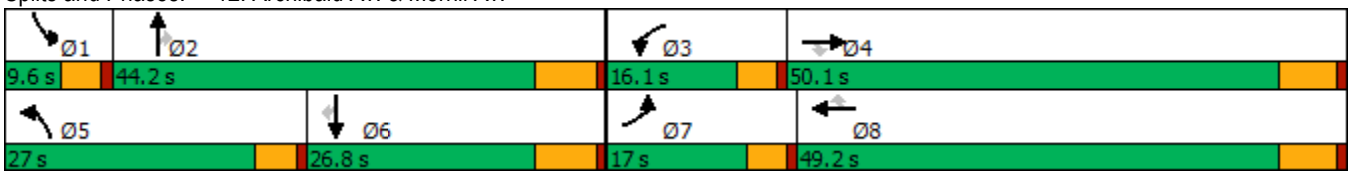
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	5.9	45.1				51.0		5.4				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	2.7	15.9				5.3		2.1				
Green Ext Time (p_c), s	0.0	9.8				4.9		0.0				

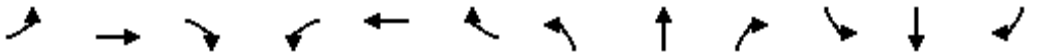
Intersection Summary		
HCM 6th Ctrl Delay		5.2
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	19	111	74	42	120	395	1129	36	37	524	200
Future Volume (vph)	179	19	111	74	42	120	395	1129	36	37	524	200
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.6	21.8	21.8	8.3	15.3	15.3	22.8	41.6	41.6	5.1	19.7	19.7
Actuated g/C Ratio	0.14	0.24	0.24	0.09	0.17	0.17	0.25	0.45	0.45	0.06	0.21	0.21
v/c Ratio	0.84	0.05	0.24	0.53	0.15	0.32	1.03	0.76	0.05	0.24	0.74	0.46
Control Delay	72.7	28.7	2.6	56.3	32.4	4.4	88.9	28.2	0.1	49.8	42.8	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.7	28.7	2.6	56.3	32.4	4.4	88.9	28.2	0.1	49.8	42.8	14.5
LOS	E	C	A	E	C	A	F	C	A	D	D	B
Approach Delay		44.9			25.6			42.9			35.7	
Approach LOS		D			C			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 39.8	Intersection LOS: D
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	19	111	74	42	120	395	1129	36	37	524	200
Future Volume (veh/h)	179	19	111	74	42	120	395	1129	36	37	524	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	185	20	59	76	43	29	407	1164	18	38	540	140
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	218	360	305	95	223	189	438	1483	653	105	679	303
Arrive On Green	0.13	0.20	0.20	0.06	0.12	0.12	0.27	0.43	0.43	0.04	0.20	0.20
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1506	2956	3420	1525
Grp Volume(v), veh/h	185	20	59	76	43	29	407	1164	18	38	540	140
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1506	1478	1710	1525
Q Serve(g_s), s	9.0	0.7	2.6	3.7	1.7	1.4	19.7	23.5	0.6	1.0	12.1	6.5
Cycle Q Clear(g_c), s	9.0	0.7	2.6	3.7	1.7	1.4	19.7	23.5	0.6	1.0	12.1	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	360	305	95	223	189	438	1483	653	105	679	303
V/C Ratio(X)	0.85	0.06	0.19	0.80	0.19	0.15	0.93	0.79	0.03	0.36	0.80	0.46
Avail Cap(c_a), veh/h	250	983	833	232	963	816	451	1604	706	184	864	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	26.0	26.8	37.4	31.6	31.5	28.6	19.5	13.0	37.9	30.6	28.4
Incr Delay (d2), s/veh	18.9	0.1	0.3	5.8	0.4	0.4	24.8	2.5	0.0	0.8	4.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.3	0.9	1.6	0.8	0.5	9.7	8.1	0.2	0.3	4.8	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	26.1	27.1	43.2	32.0	31.8	53.4	22.0	13.1	38.6	34.7	29.5
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h		264			148			1589			718	
Approach Delay, s/veh		45.0			37.7			29.9			33.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	41.3	9.3	22.3	26.3	22.5	15.4	16.1
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.0	25.5	5.7	4.6	21.7	14.1	11.0	3.7
Green Ext Time (p_c), s	0.0	5.7	0.0	0.2	0.1	1.9	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1306	701	8
Future Vol, veh/h	0	3	0	1306	701	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	1420	762	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	386	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	618	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	618	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

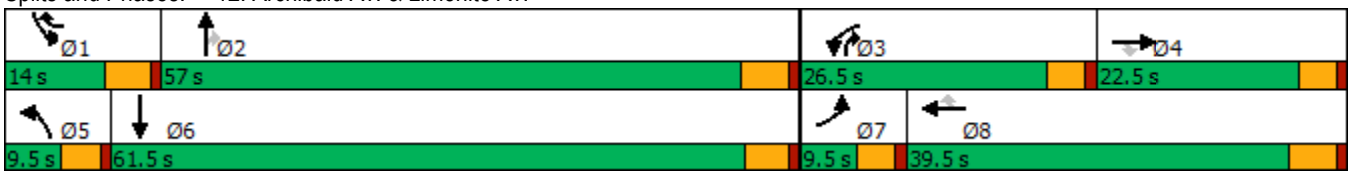
Approach	EB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

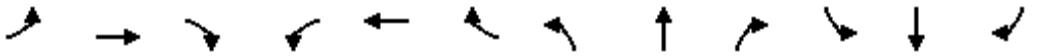
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	618	-	-
HCM Lane V/C Ratio	-	0.005	-	-
HCM Control Delay (s)	-	10.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	19	17	7	319	55	478	28	808	300	128	532
Future Volume (vph)	19	17	7	319	55	478	28	808	300	128	532
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	11.0	9.5	46.3	9.5	11.0	11.0
Total Split (s)	9.5	22.5	22.5	26.5	39.5	14.0	9.5	57.0	26.5	14.0	61.5
Total Split (%)	7.9%	18.8%	18.8%	22.1%	32.9%	11.7%	7.9%	47.5%	22.1%	11.7%	51.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	4.0	3.5	4.3	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	5.0	4.5	5.3	4.5	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	5.0	8.2	8.2	22.1	26.0	40.4	5.0	52.0	75.0	9.1	61.0
Actuated g/C Ratio	0.05	0.08	0.08	0.21	0.24	0.38	0.05	0.49	0.71	0.09	0.57
v/c Ratio	0.12	0.06	0.03	0.89	0.12	0.72	0.34	0.91	0.26	0.87	0.29
Control Delay	53.7	46.5	0.1	67.8	32.7	27.8	63.4	41.2	1.3	94.7	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	46.5	0.1	67.8	32.7	27.8	63.4	41.2	1.3	94.7	13.9
LOS	D	D	A	E	C	C	E	D	A	F	B
Approach Delay		42.5			43.1			31.2			28.6
Approach LOS		D			D			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 34.4	Intersection LOS: C
Intersection Capacity Utilization 88.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	17	7	319	55	478	28	808	300	128	532	45
Future Volume (veh/h)	19	17	7	319	55	478	28	808	300	128	532	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	20	18	7	332	57	379	29	842	213	133	554	47
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	74	204	91	361	447	516	49	891	1059	154	1791	152
Arrive On Green	0.02	0.06	0.06	0.20	0.24	0.24	0.03	0.47	0.47	0.08	0.53	0.53
Sat Flow, veh/h	3510	3610	1610	1810	1900	1610	1810	1900	1573	1810	3368	285
Grp Volume(v), veh/h	20	18	7	332	57	379	29	842	213	133	296	305
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1900	1610	1810	1900	1573	1810	1805	1849
Q Serve(g_s), s	0.6	0.5	0.4	19.1	2.5	22.2	1.7	44.8	5.5	7.7	9.7	9.8
Cycle Q Clear(g_c), s	0.6	0.5	0.4	19.1	2.5	22.2	1.7	44.8	5.5	7.7	9.7	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	74	204	91	361	447	516	49	891	1059	154	960	983
V/C Ratio(X)	0.27	0.09	0.08	0.92	0.13	0.73	0.59	0.94	0.20	0.87	0.31	0.31
Avail Cap(c_a), veh/h	166	613	274	376	613	657	85	927	1089	154	963	986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	47.4	47.4	41.6	31.9	32.0	51.0	26.8	6.7	47.9	13.9	13.9
Incr Delay (d2), s/veh	2.0	0.2	0.4	26.6	0.0	2.1	10.8	17.5	0.1	36.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.2	10.7	1.1	8.3	0.9	22.2	1.5	4.9	3.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	47.6	47.7	68.2	32.0	34.1	61.8	44.4	6.8	84.8	14.0	14.0
LnGrp LOS	D	D	D	E	C	C	E	D	A	F	B	B
Approach Vol, veh/h		45			768			1084			734	
Approach Delay, s/veh		50.0			48.7			37.5			26.8	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	55.0	25.7	11.3	7.4	61.6	6.7	30.2
Change Period (Y+Rc), s	5.0	5.3	4.5	* 5.3	4.5	* 5.3	4.5	5.3
Max Green Setting (Gmax), s	9.0	51.7	22.0	* 18	5.0	* 57	5.0	34.2
Max Q Clear Time (g_c+I1), s	9.7	46.8	21.1	2.5	3.7	11.8	2.6	24.2
Green Ext Time (p_c), s	0.0	2.9	0.1	0.0	0.0	1.8	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	38.0
HCM 6th LOS	D

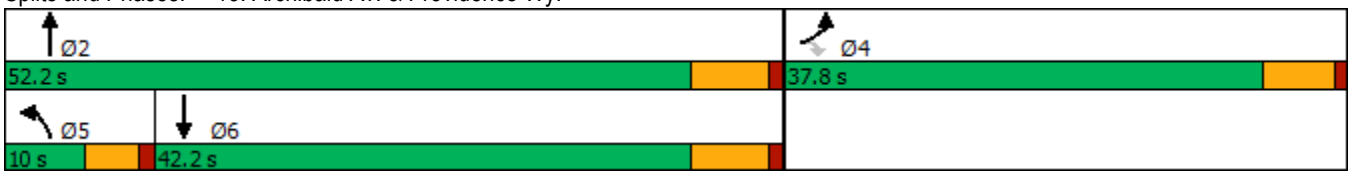
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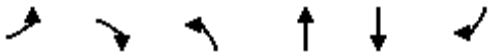
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	5	5	19	1131	812
Future Volume (vph)	5	5	19	1131	812
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	37.8	37.8	9.6	16.2	16.2
Total Split (s)	37.8	37.8	10.0	52.2	42.2
Total Split (%)	42.0%	42.0%	11.1%	58.0%	46.9%
Yellow Time (s)	4.8	4.8	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	6.2	6.2
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Min	Min
Act Effct Green (s)	13.9	13.9	6.0	43.0	42.0
Actuated g/C Ratio	0.29	0.29	0.13	0.91	0.89
v/c Ratio	0.01	0.01	0.09	0.38	0.29
Control Delay	15.8	11.2	28.5	4.8	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	11.2	28.5	4.8	6.2
LOS	B	B	C	A	A
Approach Delay	13.5			5.2	6.2
Approach LOS	B			A	A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 47.4	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 49.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & Providence Wy.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	5	19	1131	812	47
Future Volume (veh/h)	5	5	19	1131	812	47
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	4	21	1229	883	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	43	39	48	2174	1499	87
Arrive On Green	0.02	0.02	0.03	0.60	0.43	0.43
Sat Flow, veh/h	1810	1610	1810	3705	3564	200
Grp Volume(v), veh/h	5	4	21	1229	459	475
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1805	1805	1864
Q Serve(g_s), s	0.1	0.1	0.4	6.6	6.2	6.2
Cycle Q Clear(g_c), s	0.1	0.1	0.4	6.6	6.2	6.2
Prop In Lane	1.00	1.00	1.00			0.11
Lane Grp Cap(c), veh/h	43	39	48	2174	780	806
V/C Ratio(X)	0.12	0.10	0.44	0.57	0.59	0.59
Avail Cap(c_a), veh/h	1804	1605	304	5173	2024	2090
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	15.3	15.3	15.4	3.9	6.9	6.9
Incr Delay (d2), s/veh	1.2	1.2	2.3	0.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	0.1	1.0	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.5	16.5	17.7	4.1	7.7	7.6
LnGrp LOS	B	B	B	A	A	A
Approach Vol, veh/h	9			1250	934	
Approach Delay, s/veh	16.5			4.3	7.6	
Approach LOS	B			A	A	

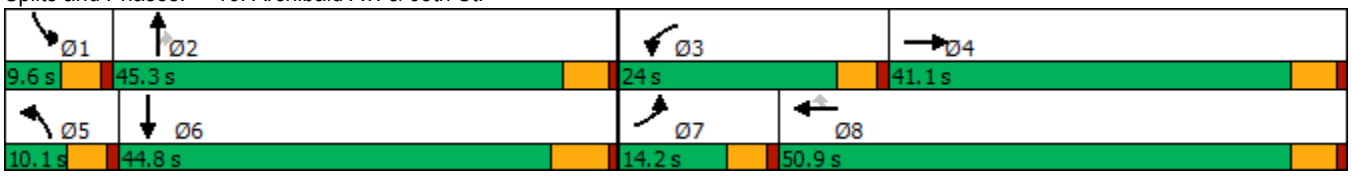
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		25.5		6.6	5.5	20.1
Change Period (Y+Rc), s		6.2		5.8	4.6	6.2
Max Green Setting (Gmax), s		46.0		32.0	5.4	36.0
Max Q Clear Time (g_c+I1), s		8.6		2.1	2.4	8.2
Green Ext Time (p_c), s		10.0		0.0	0.0	5.6

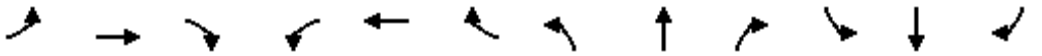
Intersection Summary	
HCM 6th Ctrl Delay	5.8
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	57	46	226	27	64	17	1029	134	37	759
Future Volume (vph)	57	46	226	27	64	17	1029	134	37	759
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	7.5	14.3	17.1	26.2	26.2	5.4	41.2	41.2	5.1	41.8
Actuated g/C Ratio	0.08	0.15	0.18	0.28	0.28	0.06	0.44	0.44	0.05	0.45
v/c Ratio	0.44	0.20	0.75	0.06	0.13	0.18	0.71	0.19	0.41	0.37
Control Delay	54.7	18.5	53.2	26.6	1.6	52.4	26.9	4.9	60.9	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.7	18.5	53.2	26.6	1.6	52.4	26.9	4.9	60.9	19.9
LOS	D	B	D	C	A	D	C	A	E	B
Approach Delay		31.6		40.5			24.8			21.8
Approach LOS		C		D			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 26.2	Intersection LOS: C
Intersection Capacity Utilization 59.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	46	55	226	27	64	17	1029	134	37	759	22
Future Volume (veh/h)	57	46	55	226	27	64	17	1029	134	37	759	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	63	51	25	248	30	29	19	1131	111	41	834	15
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	287	131	286	442	369	38	1642	723	65	2463	44
Arrive On Green	0.05	0.12	0.12	0.16	0.23	0.23	0.02	0.45	0.45	0.04	0.47	0.47
Sat Flow, veh/h	1810	2404	1097	1810	1900	1589	1810	3610	1589	1810	5247	94
Grp Volume(v), veh/h	63	37	39	248	30	29	19	1131	111	41	549	300
Grp Sat Flow(s),veh/h/ln	1810	1805	1696	1810	1900	1589	1810	1805	1589	1810	1729	1883
Q Serve(g_s), s	3.0	1.6	1.8	11.8	1.1	1.3	0.9	22.0	3.6	2.0	8.9	8.9
Cycle Q Clear(g_c), s	3.0	1.6	1.8	11.8	1.1	1.3	0.9	22.0	3.6	2.0	8.9	8.9
Prop In Lane	1.00		0.65	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	82	216	203	286	442	369	38	1642	723	65	1624	884
V/C Ratio(X)	0.77	0.17	0.19	0.87	0.07	0.08	0.50	0.69	0.15	0.63	0.34	0.34
Avail Cap(c_a), veh/h	196	735	691	397	984	823	113	1642	723	102	1624	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	35.0	35.1	36.3	26.5	26.5	42.8	19.1	14.1	42.0	14.8	14.8
Incr Delay (d2), s/veh	5.7	0.4	0.5	10.8	0.1	0.1	3.7	2.4	0.5	3.7	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.7	0.7	5.8	0.5	0.5	0.4	8.8	1.3	0.9	3.1	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	35.4	35.5	47.1	26.5	26.6	46.5	21.5	14.6	45.8	15.4	15.8
LnGrp LOS	D	D	D	D	C	C	D	C	B	D	B	B
Approach Vol, veh/h		139			307			1261			890	
Approach Delay, s/veh		40.9			43.2			21.3			16.9	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	46.4	18.6	15.7	6.5	47.7	8.6	25.6
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	4.0	24.0	13.8	3.8	2.9	10.9	5.0	3.3
Green Ext Time (p_c), s	0.0	7.4	0.2	0.3	0.0	5.2	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

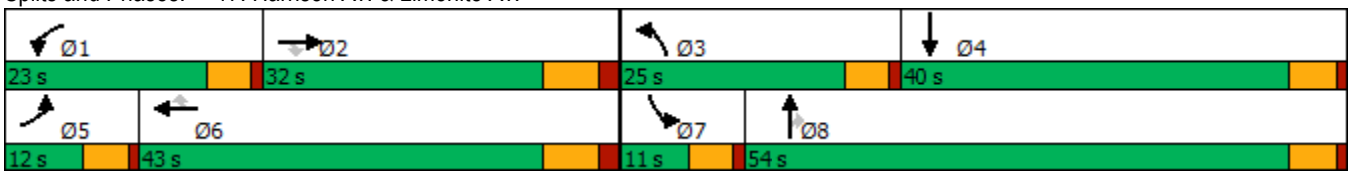
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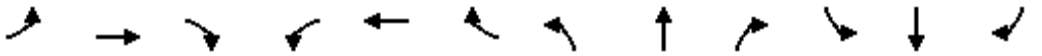
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	39	364	10	158	642	5	108	103	214	21	116
Future Volume (vph)	39	364	10	158	642	5	108	103	214	21	116
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.3	12.4	12.4	11.1	23.1	23.1	9.2	22.1	22.1	5.8	14.2
Actuated g/C Ratio	0.09	0.18	0.18	0.16	0.34	0.34	0.13	0.32	0.32	0.08	0.21
v/c Ratio	0.25	0.41	0.02	0.57	0.39	0.01	0.48	0.18	0.34	0.14	0.45
Control Delay	41.8	29.3	0.1	40.0	22.0	0.0	40.1	19.3	4.8	41.9	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	29.3	0.1	40.0	22.0	0.0	40.1	19.3	4.8	41.9	27.6
LOS	D	C	A	D	C	A	D	B	A	D	C
Approach Delay		29.7			25.4			17.3			29.2
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 68.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 24.9	Intersection LOS: C
Intersection Capacity Utilization 50.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	364	10	158	642	5	108	103	214	21	116	48
Future Volume (veh/h)	39	364	10	158	642	5	108	103	214	21	116	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	387	8	168	683	3	115	110	135	22	123	34
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	80	912	283	216	1303	404	150	380	318	48	206	57
Arrive On Green	0.04	0.18	0.18	0.12	0.25	0.25	0.08	0.20	0.20	0.03	0.14	0.14
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	1900	1587	1810	1433	396
Grp Volume(v), veh/h	41	387	8	168	683	3	115	110	135	22	0	157
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	1900	1587	1810	0	1829
Q Serve(g_s), s	1.0	3.1	0.2	4.2	5.3	0.1	2.9	2.3	3.5	0.6	0.0	3.8
Cycle Q Clear(g_c), s	1.0	3.1	0.2	4.2	5.3	0.1	2.9	2.3	3.5	0.6	0.0	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	80	912	283	216	1303	404	150	380	318	48	0	263
V/C Ratio(X)	0.51	0.42	0.03	0.78	0.52	0.01	0.77	0.29	0.42	0.46	0.00	0.60
Avail Cap(c_a), veh/h	271	2779	863	698	4001	1242	776	1983	1656	233	0	1360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.8	17.1	15.9	19.9	15.1	13.1	21.0	15.8	16.3	22.4	0.0	18.7
Incr Delay (d2), s/veh	1.9	0.3	0.0	2.3	0.3	0.0	3.0	0.4	0.9	2.5	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	0.1	1.5	1.6	0.0	1.1	0.8	1.1	0.2	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	17.4	16.0	22.2	15.4	13.1	24.0	16.3	17.2	24.9	0.0	20.9
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	A	C
Approach Vol, veh/h		436			854			360			179	
Approach Delay, s/veh		18.0			16.7			19.1			21.4	
Approach LOS		B			B			B			C	

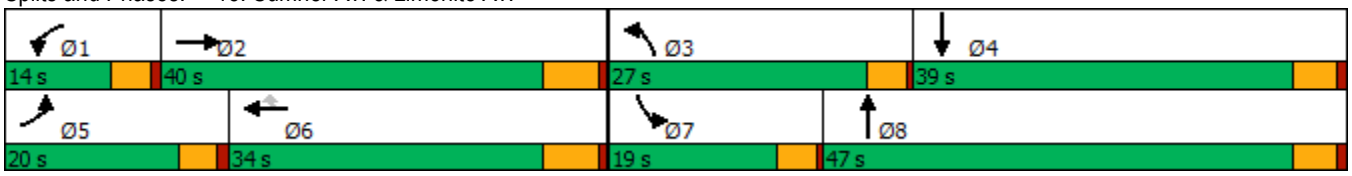
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	15.2	8.9	12.0	7.1	18.7	6.2	14.6
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	6.2	5.1	4.9	5.8	3.0	7.3	2.6	5.5
Green Ext Time (p_c), s	0.1	2.2	0.1	0.8	0.0	4.4	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	231	412	88	539	37	119	419	84	262
Future Volume (vph)	231	412	88	539	37	119	419	84	262
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.7	20.8	6.3	14.9	14.9	9.7	21.0	8.1	16.8
Actuated g/C Ratio	0.13	0.29	0.09	0.21	0.21	0.13	0.29	0.11	0.23
v/c Ratio	0.52	0.31	0.31	0.53	0.08	0.52	0.57	0.44	0.49
Control Delay	36.4	23.1	38.9	29.1	0.4	41.4	24.1	41.9	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	23.1	38.9	29.1	0.4	41.4	24.1	41.9	22.0
LOS	D	C	D	C	A	D	C	D	C
Approach Delay		27.7		28.9			27.1		25.5
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 71.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 27.4	Intersection LOS: C
Intersection Capacity Utilization 54.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 18: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	412	20	88	539	37	119	419	141	84	262	135
Future Volume (veh/h)	231	412	20	88	539	37	119	419	141	84	262	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	246	438	12	94	573	21	127	446	89	89	279	65
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	378	1341	37	205	1085	337	165	683	135	114	582	133
Arrive On Green	0.11	0.26	0.26	0.06	0.21	0.21	0.09	0.23	0.23	0.06	0.20	0.20
Sat Flow, veh/h	3510	5189	141	3510	5187	1610	1810	3002	595	1810	2916	668
Grp Volume(v), veh/h	246	291	159	94	573	21	127	267	268	89	171	173
Grp Sat Flow(s),veh/h/ln	1755	1729	1872	1755	1729	1610	1810	1805	1792	1810	1805	1780
Q Serve(g_s), s	3.3	3.4	3.4	1.3	4.9	0.5	3.4	6.7	6.8	2.4	4.2	4.3
Cycle Q Clear(g_c), s	3.3	3.4	3.4	1.3	4.9	0.5	3.4	6.7	6.8	2.4	4.2	4.3
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.33	1.00		0.38
Lane Grp Cap(c), veh/h	378	894	484	205	1085	337	165	411	408	114	360	355
V/C Ratio(X)	0.65	0.33	0.33	0.46	0.53	0.06	0.77	0.65	0.66	0.78	0.47	0.49
Avail Cap(c_a), veh/h	1094	2364	1280	671	2920	907	837	1524	1513	546	1234	1217
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	14.9	14.9	22.6	17.5	15.8	22.1	17.4	17.4	22.9	17.6	17.6
Incr Delay (d2), s/veh	0.7	0.2	0.4	0.6	0.4	0.1	2.8	1.3	1.3	4.2	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.0	1.2	0.5	1.6	0.2	1.4	2.4	2.4	1.0	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	15.1	15.3	23.2	17.9	15.8	24.9	18.7	18.8	27.2	18.3	18.4
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		696			688			662			433	
Approach Delay, s/veh		17.6			18.5			19.9			20.2	
Approach LOS		B			B			B			C	

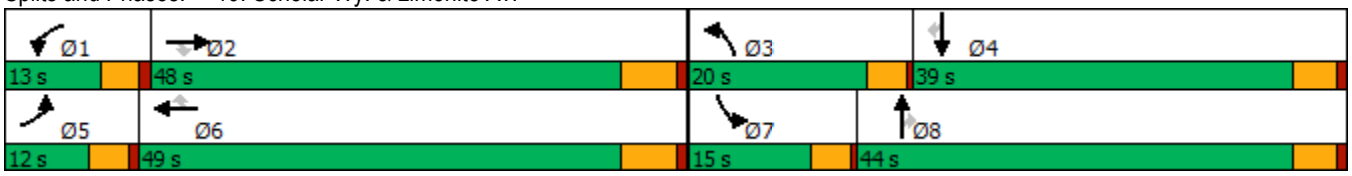
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	18.9	8.5	14.9	9.9	16.4	7.1	16.3
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	3.3	5.4	5.4	6.3	5.3	6.9	4.4	8.8
Green Ext Time (p_c), s	0.0	2.5	0.1	1.4	0.2	3.4	0.0	2.4

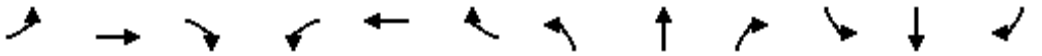
Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	624	63	56	513	35	88	169	99	52	195	33
Future Volume (vph)	39	624	63	56	513	35	88	169	99	52	195	33
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	6.3	20.1	20.1	6.9	20.5	20.5	8.5	16.8	16.8	6.9	13.0	13.0
Actuated g/C Ratio	0.10	0.32	0.32	0.11	0.33	0.33	0.14	0.27	0.27	0.11	0.21	0.21
v/c Ratio	0.22	0.57	0.11	0.30	0.46	0.06	0.38	0.35	0.21	0.27	0.27	0.11
Control Delay	39.2	22.7	0.4	39.0	20.7	0.2	36.9	24.5	6.6	38.0	24.7	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	22.7	0.4	39.0	20.7	0.2	36.9	24.5	6.6	38.0	24.7	25.4
LOS	D	C	A	D	C	A	D	C	A	D	C	C
Approach Delay		21.6			21.3			22.6			27.2	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 61.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 52.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	624	63	56	513	35	88	169	99	52	195	33
Future Volume (veh/h)	39	624	63	56	513	35	88	169	99	52	195	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	664	47	60	546	26	94	180	60	55	207	35
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	64	1101	489	84	1141	508	121	340	284	80	564	242
Arrive On Green	0.04	0.30	0.30	0.05	0.32	0.32	0.07	0.18	0.18	0.04	0.16	0.16
Sat Flow, veh/h	1810	3610	1605	1810	3610	1608	1810	1900	1589	1810	3610	1549
Grp Volume(v), veh/h	41	664	47	60	546	26	94	180	60	55	207	35
Grp Sat Flow(s),veh/h/ln	1810	1805	1605	1810	1805	1608	1810	1900	1589	1810	1805	1549
Q Serve(g_s), s	1.0	7.2	1.0	1.5	5.6	0.5	2.3	3.9	1.5	1.4	2.4	0.9
Cycle Q Clear(g_c), s	1.0	7.2	1.0	1.5	5.6	0.5	2.3	3.9	1.5	1.4	2.4	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	1101	489	84	1141	508	121	340	284	80	564	242
V/C Ratio(X)	0.64	0.60	0.10	0.71	0.48	0.05	0.78	0.53	0.21	0.69	0.37	0.14
Avail Cap(c_a), veh/h	296	3309	1472	336	3388	1509	632	1617	1352	434	2679	1149
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	13.6	11.4	21.5	12.6	10.9	21.0	17.1	16.0	21.6	17.3	16.7
Incr Delay (d2), s/veh	3.9	0.5	0.1	4.1	0.3	0.0	4.0	0.9	0.3	3.9	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.1	0.3	0.6	1.6	0.2	1.0	1.5	0.5	0.6	0.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.7	14.1	11.5	25.6	12.9	10.9	25.0	18.0	16.3	25.5	17.6	16.9
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		752			632			334			297	
Approach Delay, s/veh		14.6			14.1			19.7			19.0	
Approach LOS		B			B			B			B	

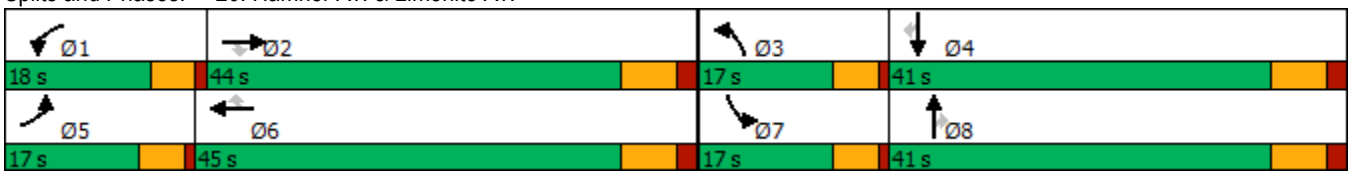
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	20.0	7.1	12.2	6.1	20.5	6.0	13.2
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	3.5	9.2	4.3	4.4	3.0	7.6	3.4	5.9
Green Ext Time (p_c), s	0.0	4.5	0.0	1.1	0.0	3.5	0.0	0.9

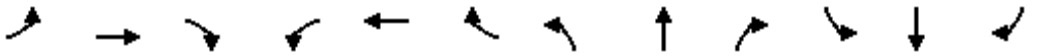
Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	513	32	197	388	97	129	546	285	191	295	93
Future Volume (vph)	154	513	32	197	388	97	129	546	285	191	295	93
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	8.3	19.8	19.8	9.3	20.8	20.8	7.7	22.6	22.6	9.1	24.0	24.0
Actuated g/C Ratio	0.10	0.23	0.23	0.11	0.24	0.24	0.09	0.26	0.26	0.11	0.28	0.28
v/c Ratio	0.49	0.47	0.08	0.56	0.48	0.22	0.45	0.43	0.49	0.56	0.22	0.19
Control Delay	44.9	30.7	0.3	44.9	31.0	4.8	45.1	27.8	7.5	45.4	24.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	30.7	0.3	44.9	31.0	4.8	45.1	27.8	7.5	45.4	24.8	3.8
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		32.4			31.3			24.1			28.2	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 85.6	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 28.6	Intersection LOS: C
Intersection Capacity Utilization 55.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 20: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	513	32	197	388	97	129	546	285	191	295	93
Future Volume (veh/h)	154	513	32	197	388	97	129	546	285	191	295	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	167	558	25	214	422	68	140	593	146	208	321	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	258	1170	358	311	869	383	238	1297	396	304	1395	428
Arrive On Green	0.07	0.23	0.23	0.09	0.24	0.24	0.07	0.25	0.25	0.09	0.27	0.27
Sat Flow, veh/h	3510	5187	1586	3510	3610	1589	3510	5187	1584	3510	5187	1590
Grp Volume(v), veh/h	167	558	25	214	422	68	140	593	146	208	321	37
Grp Sat Flow(s),veh/h/ln	1755	1729	1586	1755	1805	1589	1755	1729	1584	1755	1729	1590
Q Serve(g_s), s	3.2	6.4	0.9	4.1	6.9	2.3	2.7	6.7	5.2	4.0	3.3	1.2
Cycle Q Clear(g_c), s	3.2	6.4	0.9	4.1	6.9	2.3	2.7	6.7	5.2	4.0	3.3	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	1170	358	311	869	383	238	1297	396	304	1395	428
V/C Ratio(X)	0.65	0.48	0.07	0.69	0.49	0.18	0.59	0.46	0.37	0.68	0.23	0.09
Avail Cap(c_a), veh/h	613	2791	853	664	1995	878	613	2564	783	613	2564	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	23.1	21.0	30.4	22.4	20.7	31.1	21.8	21.3	30.5	19.6	18.8
Incr Delay (d2), s/veh	1.0	0.6	0.2	1.0	0.9	0.5	0.9	0.5	1.2	1.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.4	0.3	1.6	2.7	0.8	1.1	2.5	1.9	1.6	1.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	23.8	21.1	31.4	23.3	21.2	32.0	22.4	22.5	31.5	19.8	19.0
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	B	B
Approach Vol, veh/h		750			704			879			566	
Approach Delay, s/veh		25.5			25.6			23.9			24.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	22.5	9.7	25.5	10.1	23.6	11.0	24.2
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	6.1	8.4	4.7	5.3	5.2	8.9	6.0	8.7
Green Ext Time (p_c), s	0.1	7.1	0.1	4.0	0.1	5.6	0.1	8.3

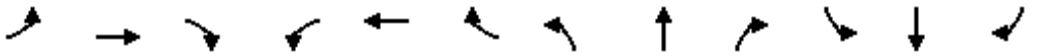
Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	686	429	429	603	85	0	332
Future Volume (vph)	686	429	429	603	85	0	332
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	36.5	36.5	23.5	23.5	23.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.5	73.5	73.5	73.5	6.9	6.9	6.9
Actuated g/C Ratio	0.80	0.80	0.80	0.80	0.08	0.08	0.08
v/c Ratio	0.17	0.32	0.11	0.44	0.34	0.34	0.65
Control Delay	2.2	0.9	2.1	1.2	47.3	47.3	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.2	0.9	2.1	1.2	47.3	47.3	11.0
LOS	A	A	A	A	D	D	B
Approach Delay	1.7		1.6			18.4	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 4.4	Intersection LOS: A
Intersection Capacity Utilization 41.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↲	↱↱
Traffic Volume (veh/h)	0	686	429	0	429	603	0	0	0	85	0	332
Future Volume (veh/h)	0	686	429	0	429	603	0	0	0	85	0	332
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	707	405	0	442	622				88	0	134
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4209	1290	0	4209	1307				243	0	215
Arrive On Green	0.00	0.81	0.81	0.00	0.81	0.81				0.07	0.00	0.07
Sat Flow, veh/h	0	5358	1590	0	5358	1610				3619	0	3206
Grp Volume(v), veh/h	0	707	405	0	442	622				88	0	134
Grp Sat Flow(s),veh/h/ln	0	1729	1590	0	1729	1610				1810	0	1603
Q Serve(g_s), s	0.0	2.7	5.8	0.0	1.6	10.7				2.1	0.0	3.7
Cycle Q Clear(g_c), s	0.0	2.7	5.8	0.0	1.6	10.7				2.1	0.0	3.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4209	1290	0	4209	1307				243	0	215
V/C Ratio(X)	0.00	0.17	0.31	0.00	0.11	0.48				0.36	0.00	0.62
Avail Cap(c_a), veh/h	0	4209	1290	0	4209	1307				1418	0	1257
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	1.9	2.2	0.0	1.8	2.6				40.4	0.0	41.1
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.0	0.1	1.2				0.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	1.1	0.0	0.3	2.1				0.9	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	1.9	2.8	0.0	1.8	3.9				40.7	0.0	42.2
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1112			1064						222	
Approach Delay, s/veh		2.3			3.0						41.6	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		11.6		79.0						
Change Period (Y+Rc), s		5.5		5.5		5.5						
Max Green Setting (Gmax), s		73.5		35.5		73.5						
Max Q Clear Time (g_c+I1), s		7.8		5.7		12.7						
Green Ext Time (p_c), s		4.3		0.4		3.3						

Intersection Summary												
HCM 6th Ctrl Delay			6.2									
HCM 6th LOS			A									

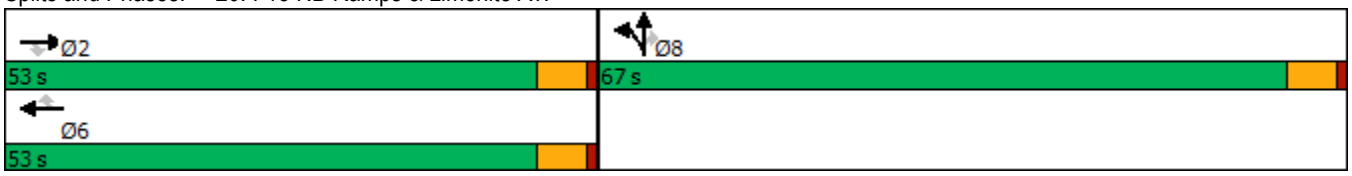
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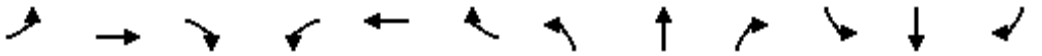
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	282	489	847	238	185	0	286
Future Volume (vph)	282	489	847	238	185	0	286
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.6	47.6	47.6	47.6	9.4	9.4	9.4
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.14	0.14	0.14
v/c Ratio	0.08	0.40	0.24	0.20	0.40	0.40	0.45
Control Delay	3.6	1.5	4.1	1.1	31.6	31.7	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.6	1.5	4.1	1.1	31.6	31.7	6.1
LOS	A	A	A	A	C	C	A
Approach Delay	2.3		3.4			16.2	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 68	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 35.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 20: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↰	↱↱			
Traffic Volume (veh/h)	0	282	489	0	847	238	185	0	286	0	0	0
Future Volume (veh/h)	0	282	489	0	847	238	185	0	286	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	288	499	0	864	210	189	0	94			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3809	1182	0	3809	1182	346	0	308			
Arrive On Green	0.00	0.73	0.73	0.00	0.73	0.73	0.10	0.00	0.10			
Sat Flow, veh/h	0	5358	1609	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	288	499	0	864	210	189	0	94			
Grp Sat Flow(s),veh/h/ln	0	1729	1609	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	1.0	7.7	0.0	3.4	2.6	3.2	0.0	1.8			
Cycle Q Clear(g_c), s	0.0	1.0	7.7	0.0	3.4	2.6	3.2	0.0	1.8			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3809	1182	0	3809	1182	346	0	308			
V/C Ratio(X)	0.00	0.08	0.42	0.00	0.23	0.18	0.55	0.00	0.31			
Avail Cap(c_a), veh/h	0	3809	1182	0	3809	1182	3441	0	3062			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	2.4	3.3	0.0	2.7	2.6	27.9	0.0	27.2			
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.0	0.1	0.3	1.3	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	0.2	1.6	0.0	0.6	0.5	1.3	0.0	0.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.5	4.4	0.0	2.9	3.0	29.3	0.0	27.8			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		787			1074			283				
Approach Delay, s/veh		3.7			2.9			28.8				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		11.7				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		9.7				5.4		5.2				
Green Ext Time (p_c), s		2.2				4.8		1.0				

Intersection Summary	
HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	2	0	3	0	0	6	9	0	0
Future Vol, veh/h	0	0	0	2	0	3	0	0	6	9	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	2	0	3	0	0	7	10	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3	0	0	1	0	0	5	8	1	7	7	2
Stage 1	-	-	-	-	-	-	1	1	-	6	6	-
Stage 2	-	-	-	-	-	-	4	7	-	1	1	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1632	-	-	1635	-	-	1020	891	1089	1017	892	1088
Stage 1	-	-	-	-	-	-	1027	899	-	1020	895	-
Stage 2	-	-	-	-	-	-	1023	894	-	1027	899	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1632	-	-	1635	-	-	1019	890	1089	1010	891	1088
Mov Cap-2 Maneuver	-	-	-	-	-	-	1019	890	-	1010	891	-
Stage 1	-	-	-	-	-	-	1027	899	-	1020	894	-
Stage 2	-	-	-	-	-	-	1022	893	-	1021	899	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.9	8.3	8.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1089	1632	-	-	1635	-	-	1010
HCM Lane V/C Ratio	0.006	-	-	-	0.001	-	-	0.01
HCM Control Delay (s)	8.3	0	-	-	7.2	0	-	8.6
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	2.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	16	78	42	35
Demand Flow Rate, veh/h	16	78	42	35
Vehicles Circulating, veh/h	96	0	51	66
Vehicles Exiting, veh/h	5	93	61	12
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	2.9	2.9	2.9	2.9
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	L	TR	LTR	LTR
RT Channelized						
Lane Util	0.500	0.500	0.782	0.218	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
Entry Flow, veh/h	8	8	61	17	42	35
Cap Entry Lane, veh/h	1236	1309	1350	1420	1360	1343
Entry HV Adj Factor	0.940	1.060	1.000	1.000	1.000	1.000
Flow Entry, veh/h	8	8	61	17	42	35
Cap Entry, veh/h	1162	1387	1350	1420	1360	1343
V/C Ratio	0.006	0.006	0.045	0.012	0.031	0.026
Control Delay, s/veh	3.2	2.6	3.0	2.6	2.9	2.9
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	118	17	0	41	11	0	0	39	0	0	31
Future Vol, veh/h	0	118	17	0	41	11	0	0	39	0	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	128	18	0	45	12	0	0	42	0	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	73	-	-	29
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	981	0	0	1046
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	981	-	-	1046
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.8	8.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	981	-	-	-	-	1046
HCM Lane V/C Ratio	0.043	-	-	-	-	0.032
HCM Control Delay (s)	8.8	-	-	-	-	8.6
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	68	8	8	14	0
Future Vol, veh/h	0	68	8	8	14	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, %	0	0	0	0	0	0
Mvmt Flow	0	74	9	9	15	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	18	0	-	0	88	14
Stage 1	-	-	-	-	14	-
Stage 2	-	-	-	-	74	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1612	-	-	-	918	1072
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	954	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1612	-	-	-	918	1072
Mov Cap-2 Maneuver	-	-	-	-	918	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	954	-

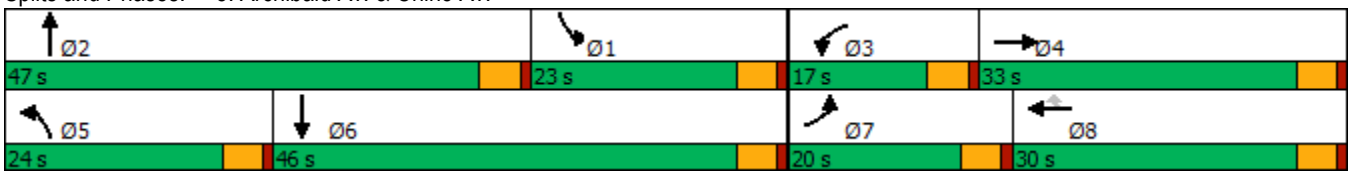
Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

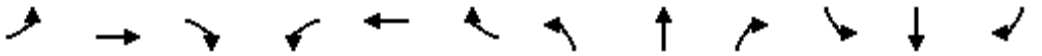
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1612	-	-	-	918
HCM Lane V/C Ratio	-	-	-	-	0.017
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	122	156	20	43	107	54	754	137	1046
Future Volume (vph)	122	156	20	43	107	54	754	137	1046
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.1	21.0	7.2	10.7	10.7	8.9	22.4	21.6	38.9
Actuated g/C Ratio	0.16	0.25	0.09	0.13	0.13	0.11	0.27	0.26	0.46
v/c Ratio	0.51	0.60	0.15	0.20	0.35	0.33	0.63	0.35	0.73
Control Delay	47.2	34.7	46.5	39.1	6.7	46.8	31.8	32.3	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	34.7	46.5	39.1	6.7	46.8	31.8	32.3	25.7
LOS	D	C	D	D	A	D	C	C	C
Approach Delay		38.8		19.7			32.8		26.4
Approach LOS		D		B			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.3	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 29.8	Intersection LOS: C
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	156	96	20	43	107	54	754	38	137	1046	56
Future Volume (veh/h)	122	156	96	20	43	107	54	754	38	137	1046	56
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	127	162	100	21	45	72	56	785	37	143	1090	53
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	161	209	129	40	227	192	81	1240	58	353	1414	69
Arrive On Green	0.10	0.20	0.20	0.02	0.13	0.13	0.05	0.26	0.26	0.22	0.43	0.43
Sat Flow, veh/h	1619	1041	643	1619	1800	1525	1619	4809	226	1619	3320	161
Grp Volume(v), veh/h	127	0	262	21	45	72	56	534	288	143	561	582
Grp Sat Flow(s),veh/h/ln	1619	0	1684	1619	1800	1525	1619	1638	1759	1619	1710	1771
Q Serve(g_s), s	4.7	0.0	9.1	0.8	1.4	1.5	2.1	8.9	8.9	4.7	17.3	17.3
Cycle Q Clear(g_c), s	4.7	0.0	9.1	0.8	1.4	1.5	2.1	8.9	8.9	4.7	17.3	17.3
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.13	1.00		0.09
Lane Grp Cap(c), veh/h	161	0	338	40	227	192	81	845	454	353	729	755
V/C Ratio(X)	0.79	0.00	0.78	0.53	0.20	0.38	0.69	0.63	0.64	0.40	0.77	0.77
Avail Cap(c_a), veh/h	405	0	777	326	742	629	510	2255	1211	484	1149	1190
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	0.0	23.3	29.7	24.1	8.3	28.8	20.3	20.3	20.6	15.1	15.1
Incr Delay (d2), s/veh	8.4	0.0	3.8	10.5	0.4	1.2	10.0	0.8	1.5	0.7	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	3.6	0.4	0.6	0.9	0.9	2.9	3.2	1.6	5.4	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	0.0	27.1	40.2	24.6	9.5	38.8	21.1	21.8	21.4	16.9	16.8
LnGrp LOS	D	A	C	D	C	A	D	C	C	C	B	B
Approach Vol, veh/h		389			138			878			1286	
Approach Delay, s/veh		29.9			19.1			22.4			17.3	
Approach LOS		C			B			C			B	

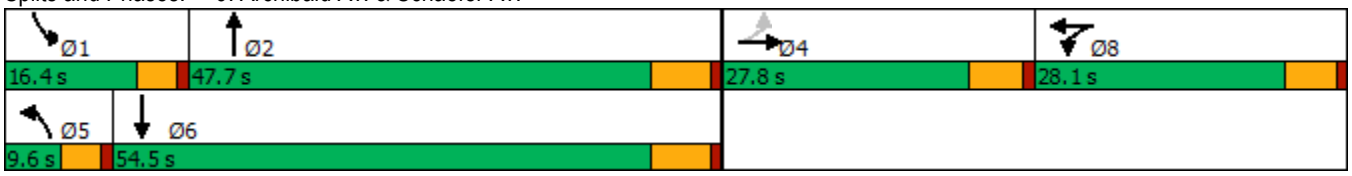
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	20.5	6.1	17.0	7.7	30.8	10.7	12.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	6.7	10.9	2.8	11.1	4.1	19.3	6.7	3.5
Green Ext Time (p_c), s	0.2	4.9	0.0	1.3	0.1	7.0	0.2	0.4

Intersection Summary	
HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	10	0	745	35	1084		
Future Volume (vph)	10	0	745	35	1084		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	47.7	16.4	54.5	27.8	9.6
Total Split (%)	23.4%	23.4%	39.8%	13.7%	45.4%	23%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	16.4	16.4	29.9	8.6	33.3		
Actuated g/C Ratio	0.34	0.34	0.62	0.18	0.69		
v/c Ratio	0.02	0.05	0.27	0.13	0.48		
Control Delay	25.3	0.1	13.7	31.5	11.8		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	25.3	0.1	13.7	31.5	11.8		
LOS	C	A	B	C	B		
Approach Delay		5.4	13.7		12.4		
Approach LOS		A	B		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 48	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	0	40	0	745	22	35	1084	0
Future Volume (veh/h)	0	0	0	10	0	40	0	745	22	35	1084	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	11	0	26	0	784	22	37	1141	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	5	0	141	0	133	5	1795	50	70	1868	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.37	0.37	0.04	0.55	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4910	137	1619	3510	0
Grp Volume(v), veh/h	0	0	0	11	0	26	0	523	283	37	1141	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1772	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.5	0.0	4.0	4.1	0.8	7.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.2	0.0	0.5	0.0	4.0	4.1	0.8	7.6	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.08	1.00		0.00
Lane Grp Cap(c), veh/h	0	5	0	141	0	133	5	1198	648	70	1868	0
V/C Ratio(X)	0.00	0.00	0.00	0.08	0.00	0.20	0.00	0.44	0.44	0.53	0.61	0.00
Avail Cap(c_a), veh/h	0	1181	0	1077	0	1014	241	4025	2177	570	4895	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.1	0.0	14.2	0.0	8.0	8.0	15.7	5.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.7	0.0	0.3	0.5	2.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.6	0.7	0.2	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	14.3	0.0	14.9	0.0	8.3	8.5	18.0	5.5	0.0
LnGrp LOS	A	A	A	B	A	B	A	A	A	B	A	A
Approach Vol, veh/h		0			37			806			1178	
Approach Delay, s/veh		0.0			14.7			8.4			5.9	
Approach LOS					B			A			A	

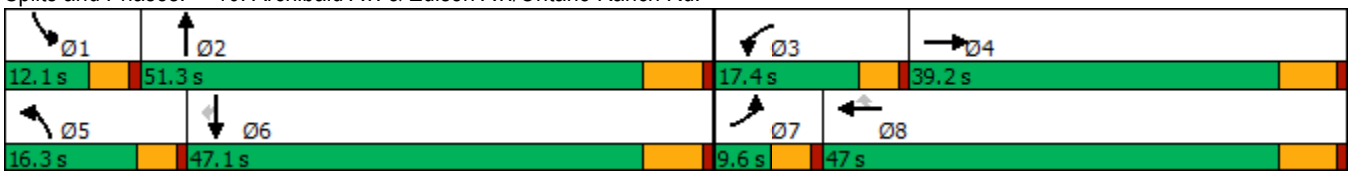
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	18.8		0.0	0.0	24.8		8.7				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	2.8	6.1		0.0	0.0	9.6		2.5				
Green Ext Time (p_c), s	0.0	4.9		0.0	0.0	8.7		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		7.0	
HCM 6th LOS		A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	551	107	263	193	84	53	451	249	127	914	78
Future Volume (vph)	72	551	107	263	193	84	53	451	249	127	914	78
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.3	22.7	97.0	12.3	32.7	32.7	8.0	31.1	97.0	7.9	33.9	33.9
Actuated g/C Ratio	0.05	0.23	1.00	0.13	0.34	0.34	0.08	0.32	1.00	0.08	0.35	0.35
v/c Ratio	0.47	0.71	0.07	0.72	0.33	0.15	0.41	0.42	0.17	1.00	0.79	0.13
Control Delay	61.2	40.8	0.1	56.4	29.2	3.0	57.4	26.7	0.2	130.6	35.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.2	40.8	0.1	56.4	29.2	3.0	57.4	26.7	0.2	130.6	35.6	0.4
LOS	E	D	A	E	C	A	E	C	A	F	D	A
Approach Delay		36.9			38.3			20.1			43.9	
Approach LOS		D			D			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 35.6	Intersection LOS: D
Intersection Capacity Utilization 74.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	551	107	263	193	84	53	451	249	127	914	78
Future Volume (veh/h)	72	551	107	263	193	84	53	451	249	127	914	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	74	568	0	271	199	53	55	465	0	131	942	64
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	149	751		343	513	435	71	1021		151	1190	518
Arrive On Green	0.05	0.22	0.00	0.12	0.29	0.29	0.04	0.30	0.00	0.09	0.35	0.35
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1490
Grp Volume(v), veh/h	74	568	0	271	199	53	55	465	0	131	942	64
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1490
Q Serve(g_s), s	2.0	12.5	0.0	7.2	7.1	2.1	2.7	8.9	0.0	6.4	19.9	2.4
Cycle Q Clear(g_c), s	2.0	12.5	0.0	7.2	7.1	2.1	2.7	8.9	0.0	6.4	19.9	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	751		343	513	435	71	1021		151	1190	518
V/C Ratio(X)	0.50	0.76		0.79	0.39	0.12	0.77	0.46		0.87	0.79	0.12
Avail Cap(c_a), veh/h	184	1405		471	914	775	236	1907		151	1729	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	29.3	0.0	34.6	23.1	21.3	38.0	22.9	0.0	35.9	23.6	17.8
Incr Delay (d2), s/veh	1.0	1.6	0.0	4.1	0.5	0.1	6.5	0.3	0.0	36.3	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.8	0.0	2.6	2.8	0.7	1.1	3.2	0.0	3.8	7.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	30.9	0.0	38.7	23.5	21.4	44.5	23.2	0.0	72.3	25.2	18.0
LnGrp LOS	D	C		D	C	C	D	C		E	C	B
Approach Vol, veh/h		642	A		523			520	A		1137	
Approach Delay, s/veh		31.8			31.2			25.4			30.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	30.5	13.9	23.8	8.1	34.4	8.6	29.1
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	8.4	10.9	9.2	14.5	4.7	21.9	4.0	9.1
Green Ext Time (p_c), s	0.0	2.8	0.2	3.1	0.0	5.7	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

Notes

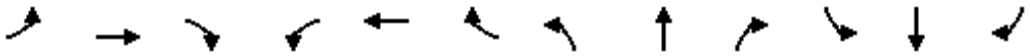
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	18	735	7	50	1233
Future Volume (vph)	3	18	735	7	50	1233
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	13.6%	13.6%	59.1%	59.1%	13.7%	72.9%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.1	5.1	50.9	50.9	5.1	56.4
Actuated g/C Ratio	0.08	0.08	0.84	0.84	0.08	0.93
v/c Ratio	0.01	0.05	0.26	0.01	0.39	0.40
Control Delay	26.3	0.2	4.3	5.7	35.3	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	0.2	4.3	5.7	35.3	2.6
LOS	C	A	A	A	D	A
Approach Delay			4.4			3.9
Approach LOS			A			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 60.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 4.0	Intersection LOS: A
Intersection Capacity Utilization 48.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	3	0	18	0	735	7	50	1233	0
Future Volume (veh/h)	0	0	0	3	0	18	0	735	7	50	1233	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				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				3	0	0	0	758	6	52	1271	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				13	0	11	0	2279	1017	80	2731	0
Arrive On Green				0.00	0.00	0.00	0.00	0.67	0.67	0.05	0.80	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1525	1619	3510	0
Grp Volume(v), veh/h				3	0	0	0	758	6	52	1271	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1525	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.0	0.0	5.3	0.1	1.8	6.6	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.0	0.0	5.3	0.1	1.8	6.6	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				13	0	11	0	2279	1017	80	2731	0
V/C Ratio(X)				0.23	0.00	0.00	0.00	0.33	0.01	0.65	0.47	0.00
Avail Cap(c_a), veh/h				282	0	241	0	2279	1017	145	2731	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.7	0.0	0.0	0.0	4.0	3.1	26.0	1.8	0.0
Incr Delay (d2), s/veh				9.1	0.0	0.0	0.0	0.4	0.0	3.2	0.6	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.0	0.0	0.0	0.0	0.7	0.0	0.6	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				36.7	0.0	0.0	0.0	4.4	3.1	29.2	2.4	0.0
LnGrp LOS				D	A	A	A	A	A	C	A	A
Approach Vol, veh/h					3			764			1323	
Approach Delay, s/veh					36.7			4.4			3.4	
Approach LOS					D			A			A	

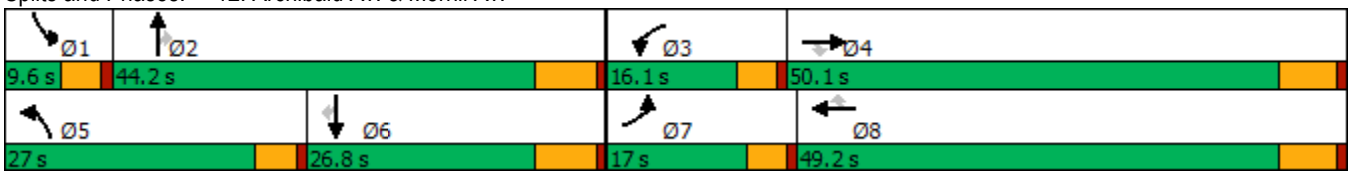
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	7.4	43.6				51.0		4.7				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	3.8	7.3				8.6		2.1				
Green Ext Time (p_c), s	0.0	4.8				10.1		0.0				

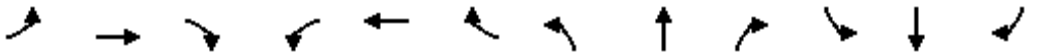
Intersection Summary		
HCM 6th Ctrl Delay		3.8
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	67	404	44	22	51	134	613	39	68	905	156
Future Volume (vph)	234	67	404	44	22	51	134	613	39	68	905	156
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.2	21.4	21.4	7.1	15.1	15.1	11.4	30.4	30.4	5.3	21.6	21.6
Actuated g/C Ratio	0.17	0.27	0.27	0.09	0.19	0.19	0.14	0.38	0.38	0.07	0.27	0.27
v/c Ratio	0.91	0.14	0.58	0.31	0.07	0.13	0.60	0.48	0.06	0.36	1.01	0.31
Control Delay	73.8	24.6	6.3	45.8	27.5	0.6	46.8	24.1	0.2	47.6	64.8	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.8	24.6	6.3	45.8	27.5	0.6	46.8	24.1	0.2	47.6	64.8	8.6
LOS	E	C	A	D	C	A	D	C	A	D	E	A
Approach Delay		30.5			22.5			26.8			56.0	
Approach LOS		C			C			C			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 79.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 39.6	Intersection LOS: D
Intersection Capacity Utilization 71.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	67	404	44	22	51	134	613	39	68	905	156
Future Volume (veh/h)	234	67	404	44	22	51	134	613	39	68	905	156
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	241	69	231	45	23	14	138	632	26	70	933	103
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	277	483	410	67	249	211	171	1144	510	154	962	429
Arrive On Green	0.17	0.27	0.27	0.04	0.14	0.14	0.11	0.33	0.33	0.05	0.28	0.28
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	241	69	231	45	23	14	138	632	26	70	933	103
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1525	1478	1710	1525
Q Serve(g_s), s	10.5	2.1	9.4	2.0	0.8	0.6	6.0	10.9	0.8	1.7	19.5	3.8
Cycle Q Clear(g_c), s	10.5	2.1	9.4	2.0	0.8	0.6	6.0	10.9	0.8	1.7	19.5	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	483	410	67	249	211	171	1144	510	154	962	429
V/C Ratio(X)	0.87	0.14	0.56	0.68	0.09	0.07	0.81	0.55	0.05	0.45	0.97	0.24
Avail Cap(c_a), veh/h	278	1095	928	258	1072	909	502	1786	797	205	962	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	20.1	22.8	34.1	27.1	27.0	31.6	19.6	16.3	33.2	25.6	20.0
Incr Delay (d2), s/veh	23.3	0.1	1.2	4.4	0.2	0.1	3.4	0.4	0.0	0.8	22.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.8	3.3	0.8	0.3	0.2	2.3	3.7	0.3	0.6	9.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.4	20.2	24.0	38.5	27.3	27.2	34.9	20.0	16.3	34.0	47.6	20.3
LnGrp LOS	D	C	C	D	C	C	C	C	B	C	D	C
Approach Vol, veh/h		541			82			796			1106	
Approach Delay, s/veh		36.2			33.4			22.5			44.2	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	30.7	7.6	25.6	12.2	26.8	17.0	16.2
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.7	12.9	4.0	11.4	8.0	21.5	12.5	2.8
Green Ext Time (p_c), s	0.0	3.8	0.0	1.1	0.1	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	9	0	768	1351	3
Future Vol, veh/h	0	9	0	768	1351	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	10	0	835	1468	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	736	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	366	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	366	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

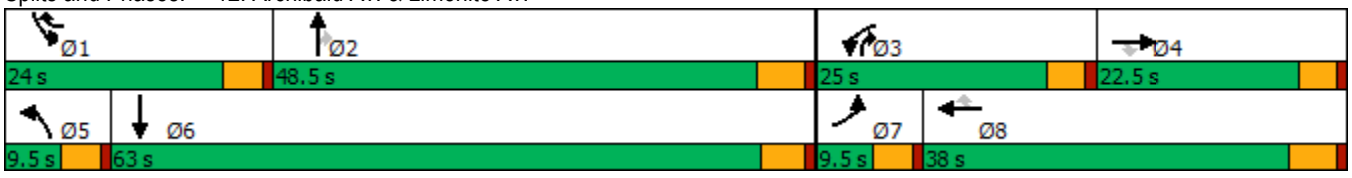
Approach	EB	NB	SB
HCM Control Delay, s	15.1	0	0
HCM LOS	C		

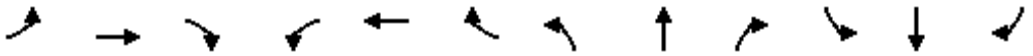
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	366	-	-
HCM Lane V/C Ratio	-	0.027	-	-
HCM Control Delay (s)	-	15.1	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	69	61	27	355	22	202	12	497	326	394	948
Future Volume (vph)	69	61	27	355	22	202	12	497	326	394	948
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	5.0	6.0	5.0	5.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	9.5	9.5	46.3	9.5	9.5	11.0
Total Split (s)	9.5	22.5	22.5	25.0	38.0	24.0	9.5	48.5	25.0	24.0	63.0
Total Split (%)	7.9%	18.8%	18.8%	20.8%	31.7%	20.0%	7.9%	40.4%	20.8%	20.0%	52.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	3.5	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	4.5	4.5	5.3	4.5	4.5	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	10.7	8.8	8.8	21.0	20.4	43.5	5.1	31.4	53.3	20.0	54.8
Actuated g/C Ratio	0.11	0.09	0.09	0.21	0.21	0.44	0.05	0.32	0.54	0.20	0.56
v/c Ratio	0.19	0.20	0.09	0.95	0.06	0.26	0.14	0.85	0.33	1.11	0.50
Control Delay	48.7	45.5	0.6	77.1	33.0	5.9	54.5	45.6	2.1	119.5	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	45.5	0.6	77.1	33.0	5.9	54.5	45.6	2.1	119.5	15.4
LOS	D	D	A	E	C	A	D	D	A	F	B
Approach Delay		39.3			50.6			28.7			45.6
Approach LOS		D			D			C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 41.4	Intersection LOS: D
Intersection Capacity Utilization 86.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	61	27	355	22	202	12	497	326	394	948	17
Future Volume (veh/h)	69	61	27	355	22	202	12	497	326	394	948	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	72	64	28	370	23	91	12	518	259	410	988	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	156	224	100	385	438	696	26	608	846	366	1842	34
Arrive On Green	0.04	0.06	0.06	0.21	0.23	0.23	0.01	0.32	0.32	0.20	0.51	0.51
Sat Flow, veh/h	3510	3610	1610	1810	1900	1610	1810	1900	1576	1810	3627	66
Grp Volume(v), veh/h	72	64	28	370	23	91	12	518	259	410	492	514
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1900	1610	1810	1900	1576	1810	1805	1888
Q Serve(g_s), s	1.9	1.6	1.6	19.5	0.9	3.3	0.6	24.6	8.9	19.5	17.8	17.8
Cycle Q Clear(g_c), s	1.9	1.6	1.6	19.5	0.9	3.3	0.6	24.6	8.9	19.5	17.8	17.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	156	224	100	385	438	696	26	608	846	366	917	959
V/C Ratio(X)	0.46	0.29	0.28	0.96	0.05	0.13	0.47	0.85	0.31	1.12	0.54	0.54
Avail Cap(c_a), veh/h	182	674	300	385	644	871	94	851	1048	366	1085	1135
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	43.2	43.2	37.6	28.9	16.5	47.2	30.7	12.6	38.5	16.1	16.1
Incr Delay (d2), s/veh	2.1	0.7	1.5	36.0	0.0	0.0	12.5	6.5	0.2	83.9	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.7	0.6	11.9	0.4	1.1	0.4	11.4	2.8	16.5	6.2	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	43.9	44.7	73.5	28.9	16.5	59.7	37.2	12.9	122.4	16.2	16.2
LnGrp LOS	D	D	D	E	C	B	E	D	B	F	B	B
Approach Vol, veh/h		164			484			789			1416	
Approach Delay, s/veh		45.4			60.7			29.6			47.0	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	36.2	25.0	11.3	5.9	54.3	8.8	27.5
Change Period (Y+Rc), s	4.5	5.3	4.5	* 5.3	4.5	* 5.3	4.5	5.3
Max Green Setting (Gmax), s	19.5	43.2	20.5	* 18	5.0	* 58	5.0	32.7
Max Q Clear Time (g_c+I1), s	21.5	26.6	21.5	3.6	2.6	19.8	3.9	5.3
Green Ext Time (p_c), s	0.0	4.3	0.0	0.3	0.0	3.4	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D

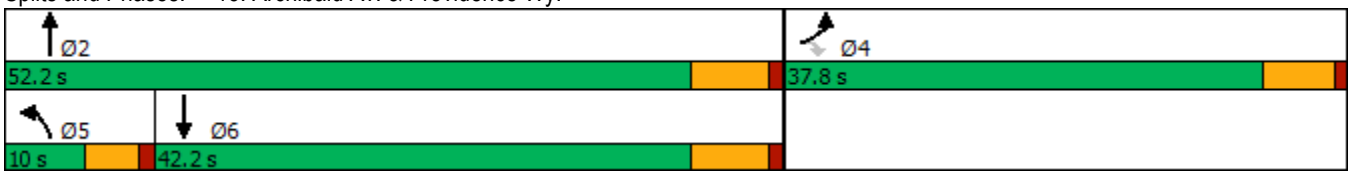
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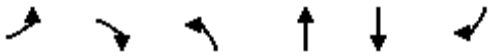
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	56	27	8	779	1321
Future Volume (vph)	56	27	8	779	1321
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	37.8	37.8	9.6	16.2	16.2
Total Split (s)	37.8	37.8	10.0	52.2	42.2
Total Split (%)	42.0%	42.0%	11.1%	58.0%	46.9%
Yellow Time (s)	4.8	4.8	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	6.2	6.2
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Min	Min
Act Effct Green (s)	13.7	13.7	5.3	45.4	43.9
Actuated g/C Ratio	0.21	0.21	0.08	0.70	0.67
v/c Ratio	0.16	0.08	0.06	0.33	0.59
Control Delay	22.6	8.4	34.1	7.5	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	8.4	34.1	7.5	13.0
LOS	C	A	C	A	B
Approach Delay	17.9			7.7	13.0
Approach LOS	B			A	B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 65.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 55.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & Providence Wy.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	56	27	8	779	1321	9
Future Volume (veh/h)	56	27	8	779	1321	9
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	60	20	9	838	1420	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	244	217	21	2252	1908	13
Arrive On Green	0.13	0.13	0.01	0.62	0.52	0.52
Sat Flow, veh/h	1810	1610	1810	3705	3769	26
Grp Volume(v), veh/h	60	20	9	838	697	733
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1805	1805	1895
Q Serve(g_s), s	1.5	0.5	0.2	5.6	15.0	15.0
Cycle Q Clear(g_c), s	1.5	0.5	0.2	5.6	15.0	15.0
Prop In Lane	1.00	1.00	1.00			0.01
Lane Grp Cap(c), veh/h	244	217	21	2252	937	984
V/C Ratio(X)	0.25	0.09	0.42	0.37	0.74	0.74
Avail Cap(c_a), veh/h	1166	1038	197	3345	1309	1374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	18.8	24.4	4.6	9.3	9.4
Incr Delay (d2), s/veh	0.5	0.2	4.9	0.1	1.5	1.4
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	0.0	0.1	0.8	3.6	3.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.7	19.0	29.3	4.7	10.8	10.8
LnGrp LOS	B	B	C	A	B	B
Approach Vol, veh/h	80			847	1430	
Approach Delay, s/veh	19.6			4.9	10.8	
Approach LOS	B			A	B	

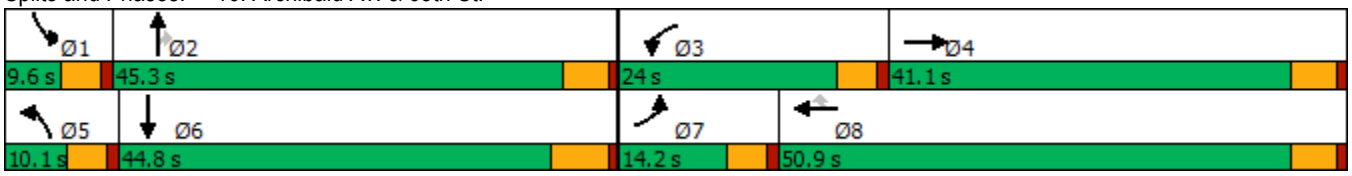
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.2		12.5	5.2	32.0
Change Period (Y+Rc), s		6.2		5.8	4.6	6.2
Max Green Setting (Gmax), s		46.0		32.0	5.4	36.0
Max Q Clear Time (g_c+I1), s		7.6		3.5	2.2	17.0
Green Ext Time (p_c), s		5.9		0.2	0.0	8.7

Intersection Summary		
HCM 6th Ctrl Delay		9.0
HCM 6th LOS		A

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	35	28	127	38	35	46	716	221	118	1139
Future Volume (vph)	35	28	127	38	35	46	716	221	118	1139
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	6.6	14.2	12.0	20.5	20.5	5.5	42.4	42.4	5.1	43.2
Actuated g/C Ratio	0.07	0.16	0.13	0.23	0.23	0.06	0.47	0.47	0.06	0.48
v/c Ratio	0.28	0.12	0.56	0.09	0.08	0.44	0.44	0.27	1.22	0.52
Control Delay	49.2	17.3	48.2	27.4	0.3	58.2	20.0	4.0	198.2	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	17.3	48.2	27.4	0.3	58.2	20.0	4.0	198.2	21.0
LOS	D	B	D	C	A	E	C	A	F	C
Approach Delay		28.5		35.9			18.2			36.5
Approach LOS		C		D			B			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay: 29.3	Intersection LOS: C
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Archibald Av. & 65th St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	28	37	127	38	35	46	716	221	118	1139	91
Future Volume (veh/h)	35	28	37	127	38	35	46	716	221	118	1139	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	29	16	134	40	18	48	754	179	124	1199	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	62	275	138	169	338	286	73	1740	766	108	2492	166
Arrive On Green	0.03	0.12	0.12	0.09	0.18	0.18	0.04	0.48	0.48	0.06	0.50	0.50
Sat Flow, veh/h	1810	2309	1163	1810	1900	1610	1810	3610	1590	1810	4967	331
Grp Volume(v), veh/h	37	22	23	134	40	18	48	754	179	124	835	444
Grp Sat Flow(s),veh/h/ln	1810	1805	1668	1810	1900	1610	1810	1805	1590	1810	1729	1840
Q Serve(g_s), s	1.7	0.9	1.0	6.0	1.5	0.8	2.2	11.4	5.5	5.0	13.2	13.2
Cycle Q Clear(g_c), s	1.7	0.9	1.0	6.0	1.5	0.8	2.2	11.4	5.5	5.0	13.2	13.2
Prop In Lane	1.00		0.70	1.00		1.00	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	62	215	198	169	338	286	73	1740	766	108	1735	923
V/C Ratio(X)	0.59	0.10	0.12	0.79	0.12	0.06	0.66	0.43	0.23	1.14	0.48	0.48
Avail Cap(c_a), veh/h	208	779	720	421	1043	884	119	1740	766	108	1735	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	32.8	32.8	37.0	28.8	28.5	39.5	14.2	12.6	39.2	13.7	13.7
Incr Delay (d2), s/veh	3.3	0.2	0.3	3.2	0.2	0.1	3.7	0.8	0.7	130.1	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.4	0.4	2.7	0.7	0.3	1.0	4.3	1.9	6.0	4.5	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	33.0	33.1	40.2	29.0	28.6	43.2	14.9	13.3	169.3	14.6	15.5
LnGrp LOS	D	C	C	D	C	C	D	B	B	F	B	B
Approach Vol, veh/h		82			192			981			1403	
Approach Delay, s/veh		37.5			36.7			16.0			28.6	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	46.4	12.4	15.0	8.0	48.0	7.5	19.9
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	7.0	13.4	8.0	3.0	4.2	15.2	3.7	3.5
Green Ext Time (p_c), s	0.0	6.0	0.1	0.2	0.0	8.3	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C

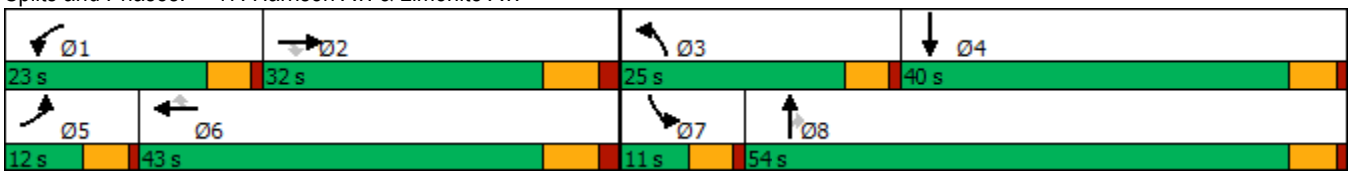
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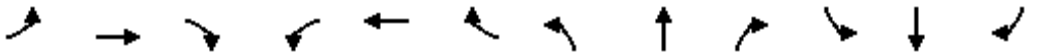
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	60	604	38	231	496	15	39	52	183	16	73
Future Volume (vph)	60	604	38	231	496	15	39	52	183	16	73
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.0	15.9	15.9	16.6	34.4	34.4	6.5	17.0	17.0	5.7	12.2
Actuated g/C Ratio	0.09	0.23	0.23	0.24	0.49	0.49	0.09	0.24	0.24	0.08	0.17
v/c Ratio	0.21	0.56	0.08	0.59	0.21	0.02	0.26	0.12	0.37	0.12	0.33
Control Delay	42.2	28.1	0.3	35.7	14.7	0.1	41.4	21.8	5.8	42.4	26.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	28.1	0.3	35.7	14.7	0.1	41.4	21.8	5.8	42.4	26.8
LOS	D	C	A	D	B	A	D	C	A	D	C
Approach Delay		27.1			21.0			13.9			29.0
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 69.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 22.7	Intersection LOS: C
Intersection Capacity Utilization 47.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	604	38	231	496	15	39	52	183	16	73	27
Future Volume (veh/h)	60	604	38	231	496	15	39	52	183	16	73	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	33	664	32	254	545	13	43	57	127	18	80	11
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	1188	361	311	1891	585	81	272	231	40	196	27
Arrive On Green	0.04	0.23	0.23	0.17	0.36	0.36	0.04	0.14	0.14	0.02	0.12	0.12
Sat Flow, veh/h	1810	5187	1575	1810	5187	1606	1810	1900	1610	1810	1628	224
Grp Volume(v), veh/h	33	664	32	254	545	13	43	57	127	18	0	91
Grp Sat Flow(s),veh/h/ln	1810	1729	1575	1810	1729	1606	1810	1900	1610	1810	0	1852
Q Serve(g_s), s	0.9	5.8	0.8	7.0	3.8	0.3	1.2	1.4	3.8	0.5	0.0	2.3
Cycle Q Clear(g_c), s	0.9	5.8	0.8	7.0	3.8	0.3	1.2	1.4	3.8	0.5	0.0	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	66	1188	361	311	1891	585	81	272	231	40	0	223
V/C Ratio(X)	0.50	0.56	0.09	0.82	0.29	0.02	0.53	0.21	0.55	0.45	0.00	0.41
Avail Cap(c_a), veh/h	246	2522	766	633	3632	1124	704	1800	1525	211	0	1250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.3	17.5	15.6	20.5	11.6	10.5	24.0	19.5	20.5	24.8	0.0	20.9
Incr Delay (d2), s/veh	2.1	0.4	0.1	2.0	0.1	0.0	2.0	0.4	2.0	2.9	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.9	0.3	2.5	1.1	0.1	0.5	0.5	1.3	0.2	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	17.9	15.7	22.5	11.7	10.5	26.0	19.8	22.5	27.8	0.0	22.1
LnGrp LOS	C	B	B	C	B	B	C	B	C	C	A	C
Approach Vol, veh/h		729			812			227			109	
Approach Delay, s/veh		18.2			15.0			22.5			23.0	
Approach LOS		B			B			C			C	

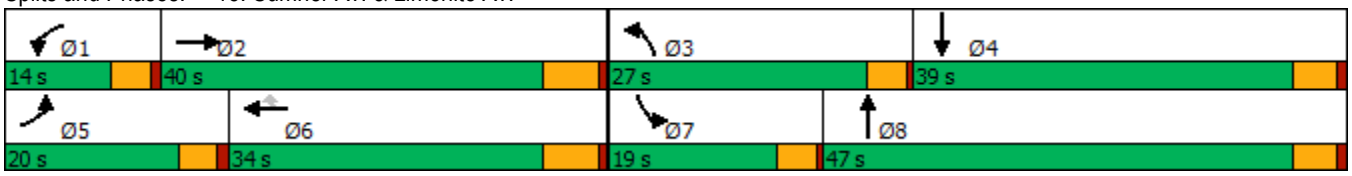
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	18.8	7.3	11.5	6.9	25.7	6.1	12.7
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	9.0	7.8	3.2	4.3	2.9	5.8	2.5	5.8
Green Ext Time (p_c), s	0.1	3.8	0.0	0.4	0.0	3.5	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	205	600	195	503	67	29	224	138	475
Future Volume (vph)	205	600	195	503	67	29	224	138	475
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.0	16.8	8.4	16.2	16.2	5.6	13.8	10.1	24.7
Actuated g/C Ratio	0.13	0.24	0.12	0.23	0.23	0.08	0.20	0.14	0.35
v/c Ratio	0.48	0.56	0.49	0.44	0.14	0.21	0.50	0.56	0.56
Control Delay	35.7	26.1	37.3	26.2	0.6	40.7	18.3	40.7	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.7	26.1	37.3	26.2	0.6	40.7	18.3	40.7	20.1
LOS	D	C	D	C	A	D	B	D	C
Approach Delay		28.4		26.8			19.9		23.6
Approach LOS		C		C			B		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 69.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	600	54	195	503	67	29	224	146	138	475	191
Future Volume (veh/h)	205	600	54	195	503	67	29	224	146	138	475	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	216	632	30	205	529	25	31	236	60	145	500	122
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	342	1163	55	325	1164	356	51	529	132	187	750	182
Arrive On Green	0.10	0.23	0.23	0.09	0.22	0.22	0.03	0.19	0.19	0.10	0.26	0.26
Sat Flow, veh/h	3510	5072	240	3510	5187	1587	1810	2861	712	1810	2880	699
Grp Volume(v), veh/h	216	430	232	205	529	25	31	147	149	145	312	310
Grp Sat Flow(s),veh/h/ln	1755	1729	1853	1755	1729	1587	1810	1805	1768	1810	1805	1774
Q Serve(g_s), s	3.0	5.5	5.5	2.8	4.4	0.6	0.8	3.6	3.8	3.9	7.7	7.8
Cycle Q Clear(g_c), s	3.0	5.5	5.5	2.8	4.4	0.6	0.8	3.6	3.8	3.9	7.7	7.8
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.40	1.00		0.39
Lane Grp Cap(c), veh/h	342	793	425	325	1164	356	51	334	327	187	470	462
V/C Ratio(X)	0.63	0.54	0.55	0.63	0.45	0.07	0.61	0.44	0.46	0.77	0.66	0.67
Avail Cap(c_a), veh/h	1087	2350	1259	667	2903	888	832	1515	1484	542	1227	1206
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	17.0	17.0	21.9	16.8	15.3	24.0	18.1	18.1	21.9	16.5	16.6
Incr Delay (d2), s/veh	0.7	0.6	1.1	0.8	0.3	0.1	4.4	0.7	0.7	2.6	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.8	2.0	1.0	1.4	0.2	0.4	1.3	1.3	1.5	2.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.4	17.6	18.1	22.6	17.0	15.4	28.4	18.8	18.9	24.4	17.7	17.8
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		878			759			327			767	
Approach Delay, s/veh		18.9			18.5			19.7			19.0	
Approach LOS		B			B			B			B	

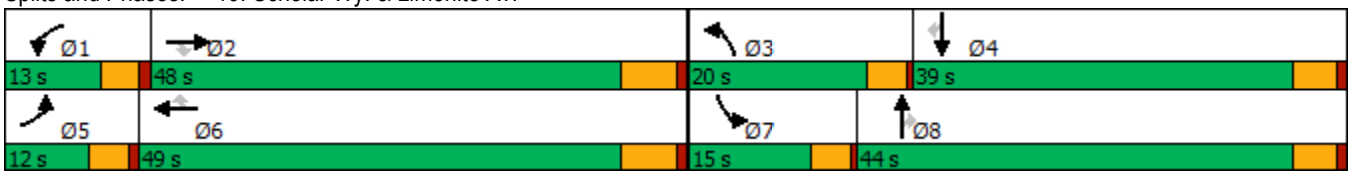
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	17.5	5.4	18.0	9.4	17.2	9.2	14.3
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	4.8	7.5	2.8	9.8	5.0	6.4	5.9	5.8
Green Ext Time (p_c), s	0.1	3.8	0.0	2.8	0.2	3.2	0.1	1.3

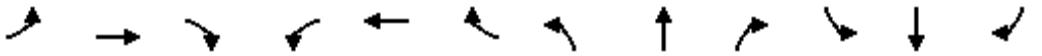
Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	818	50	133	704	68	44	70	102	52	144	35
Future Volume (vph)	36	818	50	133	704	68	44	70	102	52	144	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	5.9	24.2	24.2	9.4	32.9	32.9	6.3	11.2	11.2	6.7	11.5	11.5
Actuated g/C Ratio	0.09	0.35	0.35	0.14	0.48	0.48	0.09	0.16	0.16	0.10	0.17	0.17
v/c Ratio	0.25	0.67	0.08	0.56	0.43	0.09	0.28	0.24	0.30	0.31	0.25	0.14
Control Delay	41.8	23.0	0.2	45.2	16.8	0.3	40.8	29.3	8.8	40.7	27.5	28.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	23.0	0.2	45.2	16.8	0.3	40.8	29.3	8.8	40.7	27.5	28.1
LOS	D	C	A	D	B	A	D	C	A	D	C	C
Approach Delay		22.5			19.8			21.9			30.5	
Approach LOS		C			B			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 68.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 22.2	Intersection LOS: C
Intersection Capacity Utilization 58.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 19: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	818	50	133	704	68	44	70	102	52	144	35
Future Volume (veh/h)	36	818	50	133	704	68	44	70	102	52	144	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	861	36	140	741	61	46	74	49	55	152	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	1303	572	180	1544	687	68	234	198	76	462	199
Arrive On Green	0.03	0.36	0.36	0.10	0.43	0.43	0.04	0.12	0.12	0.04	0.13	0.13
Sat Flow, veh/h	1810	3610	1583	1810	3610	1606	1810	1900	1610	1810	3610	1559
Grp Volume(v), veh/h	38	861	36	140	741	61	46	74	49	55	152	37
Grp Sat Flow(s),veh/h/ln	1810	1805	1583	1810	1805	1606	1810	1900	1610	1810	1805	1559
Q Serve(g_s), s	1.1	10.4	0.8	3.9	7.7	1.2	1.3	1.9	1.4	1.6	2.0	1.1
Cycle Q Clear(g_c), s	1.1	10.4	0.8	3.9	7.7	1.2	1.3	1.9	1.4	1.6	2.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	59	1303	572	180	1544	687	68	234	198	76	462	199
V/C Ratio(X)	0.65	0.66	0.06	0.78	0.48	0.09	0.68	0.32	0.25	0.72	0.33	0.19
Avail Cap(c_a), veh/h	261	2912	1277	295	2981	1327	556	1423	1206	382	2357	1018
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	14.0	10.9	22.9	10.7	8.9	24.8	20.8	20.7	24.6	20.7	20.3
Incr Delay (d2), s/veh	4.4	0.6	0.0	2.8	0.2	0.1	4.4	0.6	0.5	4.7	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.2	0.2	1.5	2.1	0.3	0.6	0.8	0.5	0.7	0.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	14.5	10.9	25.6	11.0	8.9	29.2	21.4	21.1	29.3	21.0	20.6
LnGrp LOS	C	B	B	C	B	A	C	C	C	C	C	C
Approach Vol, veh/h		935			942			169			244	
Approach Delay, s/veh		15.0			13.0			23.4			22.8	
Approach LOS		B			B			C			C	

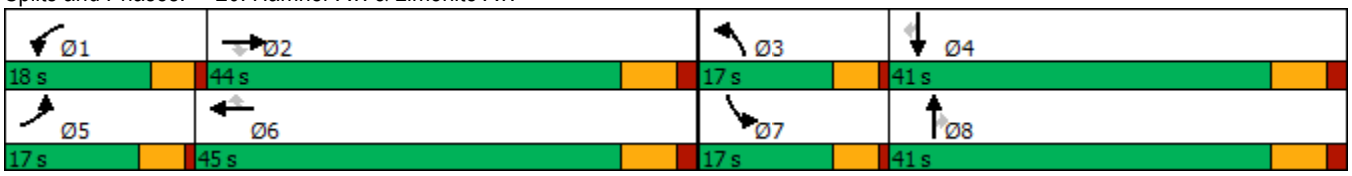
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	24.8	5.9	11.7	6.2	28.3	6.2	11.4
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	5.9	12.4	3.3	4.0	3.1	9.7	3.6	3.9
Green Ext Time (p_c), s	0.0	6.0	0.0	0.8	0.0	5.2	0.0	0.4

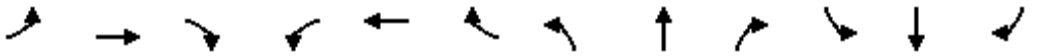
Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	289	610	73	372	469	182	186	528	203	232	663	191
Future Volume (vph)	289	610	73	372	469	182	186	528	203	232	663	191
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	11.1	21.6	21.6	13.3	23.8	23.8	9.0	23.3	23.3	9.9	24.2	24.2
Actuated g/C Ratio	0.12	0.23	0.23	0.14	0.26	0.26	0.10	0.25	0.25	0.11	0.26	0.26
v/c Ratio	0.71	0.52	0.16	0.76	0.52	0.34	0.57	0.42	0.38	0.64	0.51	0.35
Control Delay	51.4	33.1	1.7	51.8	32.9	6.5	49.0	30.3	6.4	50.1	30.8	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.4	33.1	1.7	51.8	32.9	6.5	49.0	30.3	6.4	50.1	30.8	6.1
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		36.2			35.1			28.8			30.6	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.6	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 32.7	Intersection LOS: C
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 20: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	610	73	372	469	182	186	528	203	232	663	191
Future Volume (veh/h)	289	610	73	372	469	182	186	528	203	232	663	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	298	629	45	384	484	120	192	544	123	239	684	82
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	379	1261	380	464	964	430	272	1280	385	321	1351	413
Arrive On Green	0.11	0.24	0.24	0.13	0.27	0.27	0.08	0.25	0.25	0.09	0.26	0.26
Sat Flow, veh/h	3510	5187	1563	3510	3610	1608	3510	5187	1559	3510	5187	1586
Grp Volume(v), veh/h	298	629	45	384	484	120	192	544	123	239	684	82
Grp Sat Flow(s),veh/h/ln	1755	1729	1563	1755	1805	1608	1755	1729	1559	1755	1729	1586
Q Serve(g_s), s	6.9	8.7	1.9	8.9	9.5	4.9	4.5	7.4	5.4	5.6	9.4	3.4
Cycle Q Clear(g_c), s	6.9	8.7	1.9	8.9	9.5	4.9	4.5	7.4	5.4	5.6	9.4	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	379	1261	380	464	964	430	272	1280	385	321	1351	413
V/C Ratio(X)	0.79	0.50	0.12	0.83	0.50	0.28	0.70	0.43	0.32	0.75	0.51	0.20
Avail Cap(c_a), veh/h	503	2294	691	545	1639	730	503	2108	633	503	2108	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	27.3	24.7	35.4	26.0	24.3	37.7	26.5	25.8	37.1	26.4	24.1
Incr Delay (d2), s/veh	4.2	0.7	0.3	7.8	0.9	0.7	1.3	0.5	1.0	1.3	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.4	0.7	4.1	3.9	1.8	1.9	2.9	2.0	2.3	3.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	27.9	25.0	43.1	26.8	25.0	38.9	27.0	26.8	38.4	27.0	24.6
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		972			988			859			1005	
Approach Delay, s/veh		31.7			32.9			29.6			29.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	27.3	11.5	28.8	14.0	29.4	12.6	27.6
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	10.9	10.7	6.5	11.4	8.9	11.5	7.6	9.4
Green Ext Time (p_c), s	0.1	8.0	0.1	8.4	0.1	6.7	0.1	7.4

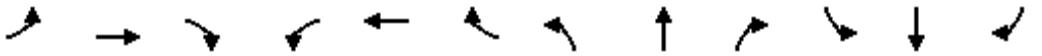
Intersection Summary	
HCM 6th Ctrl Delay	31.0
HCM 6th LOS	C

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	748	378	770	374	161	1	369
Future Volume (vph)	748	378	770	374	161	1	369
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	22.5	22.5	22.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	4.5	4.5	4.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.6	73.6	73.6	73.6	10.9	10.9	10.9
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.12	0.12	0.12
v/c Ratio	0.19	0.29	0.20	0.29	0.42	0.42	0.60
Control Delay	3.1	1.0	3.2	1.0	45.0	45.1	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.1	1.0	3.2	1.0	45.0	45.1	9.9
LOS	A	A	A	A	D	D	A
Approach Delay	2.4		2.4			20.6	
Approach LOS	A		A			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.5	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 5.9	Intersection LOS: A
Intersection Capacity Utilization 36.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰	↱↱
Traffic Volume (veh/h)	0	748	378	0	770	374	0	0	0	161	1	369
Future Volume (veh/h)	0	748	378	0	770	374	0	0	0	161	1	369
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	771	360	0	794	386				167	0	116
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4212	1290	0	4212	1308				280	0	250
Arrive On Green	0.00	0.81	0.81	0.00	0.81	0.81				0.08	0.00	0.08
Sat Flow, veh/h	0	5358	1589	0	5358	1610				3619	0	3220
Grp Volume(v), veh/h	0	771	360	0	794	386				167	0	116
Grp Sat Flow(s),veh/h/ln	0	1729	1589	0	1729	1610				1810	0	1610
Q Serve(g_s), s	0.0	3.0	5.0	0.0	3.1	5.4				4.0	0.0	3.1
Cycle Q Clear(g_c), s	0.0	3.0	5.0	0.0	3.1	5.4				4.0	0.0	3.1
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4212	1290	0	4212	1308				280	0	250
V/C Ratio(X)	0.00	0.18	0.28	0.00	0.19	0.30				0.60	0.00	0.46
Avail Cap(c_a), veh/h	0	4212	1290	0	4212	1308				1459	0	1299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	1.9	2.1	0.0	1.9	2.1				40.4	0.0	40.0
Incr Delay (d2), s/veh	0.0	0.1	0.5	0.0	0.1	0.6				2.0	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	1.0	0.0	0.5	1.0				1.8	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.0	2.6	0.0	2.0	2.7				42.4	0.0	41.3
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1131			1180						283	
Approach Delay, s/veh		2.2			2.2						41.9	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		11.5		79.0						
Change Period (Y+Rc), s		5.5		4.5		5.5						
Max Green Setting (Gmax), s		73.5		36.5		73.5						
Max Q Clear Time (g_c+I1), s		7.0		6.0		7.4						
Green Ext Time (p_c), s		4.6		1.0		4.7						

Intersection Summary												
HCM 6th Ctrl Delay			6.5									
HCM 6th LOS			A									

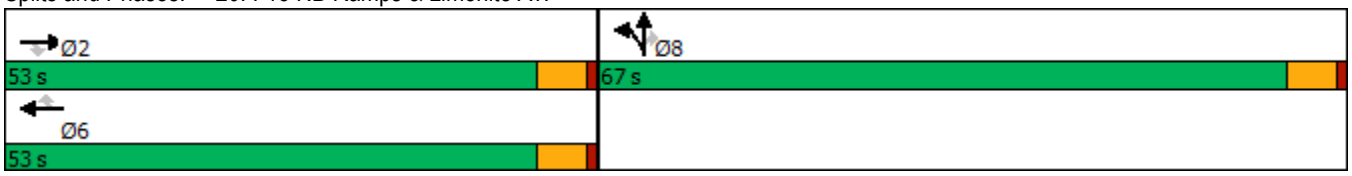
Notes

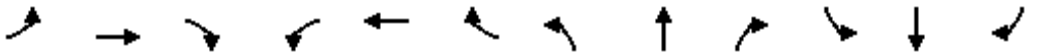
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	648	261	763	106	381	2	683
Future Volume (vph)	648	261	763	106	381	2	683
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.8	47.8	47.8	47.8	23.2	23.2	23.2
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.28	0.28	0.28
v/c Ratio	0.22	0.26	0.26	0.11	0.40	0.41	0.73
Control Delay	9.3	2.2	9.5	2.6	25.8	25.9	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	2.2	9.5	2.6	25.8	25.9	22.7
LOS	A	A	A	A	C	C	C
Approach Delay	7.3		8.7			23.8	
Approach LOS	A		A			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 82.1	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 45.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 20: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↲	↱↱			
Traffic Volume (veh/h)	0	648	261	0	763	106	381	2	683	0	0	0
Future Volume (veh/h)	0	648	261	0	763	106	381	2	683	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	661	266	0	779	103	390	0	394			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3435	1042	0	3435	1066	668	0	594			
Arrive On Green	0.00	0.66	0.66	0.00	0.66	0.66	0.18	0.00	0.18			
Sat Flow, veh/h	0	5358	1573	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	661	266	0	779	103	390	0	394			
Grp Sat Flow(s),veh/h/ln	0	1729	1573	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	3.5	4.9	0.0	4.3	1.7	7.1	0.0	8.2			
Cycle Q Clear(g_c), s	0.0	3.5	4.9	0.0	4.3	1.7	7.1	0.0	8.2			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3435	1042	0	3435	1066	668	0	594			
V/C Ratio(X)	0.00	0.19	0.26	0.00	0.23	0.10	0.58	0.00	0.66			
Avail Cap(c_a), veh/h	0	3435	1042	0	3435	1066	3103	0	2761			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	4.7	4.9	0.0	4.8	4.4	26.7	0.0	27.2			
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.0	0.2	0.2	0.8	0.0	1.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	1.0	1.3	0.0	1.2	0.5	2.8	0.0	2.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.8	5.5	0.0	5.0	4.6	27.5	0.0	28.5			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		927			882			784				
Approach Delay, s/veh		5.0			4.9			28.0				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		18.7				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		6.9				6.3		10.2				
Green Ext Time (p_c), s		3.7				4.0		3.1				

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 5.2:

E+P CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		E+P	
				CALC	CP	DATE	12/18/19
Jurisdiction:	**Eastvale**			CHK	CH	DATE	12/18/19
Major Street:	**Providence Way**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 5**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **1,139** vpd Minor Street Future ADT = **140** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……... [√]

or

In built up area of isolated community of < 10,000 population …….. [ ]

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL — **XX**

CONDITION A - Minimum Vehicular Volume

Satisfied / Not Satisfied — **XX**

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **1,139**	*1* **140**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied / Not Satisfied — **XX**

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **1,139**	*1* **140**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied / Not Satisfied — **XX**

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** **8%** **B** **14%**

2 CONDITIONS 80%

2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 5.3:

E+P CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	707	442	442	622	44	44	342
v/c Ratio	0.17	0.32	0.11	0.44	0.34	0.34	0.65
Control Delay	2.2	0.9	2.1	1.2	47.3	47.3	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.2	0.9	2.1	1.2	47.3	47.3	11.0
Queue Length 50th (ft)	24	0	14	0	26	26	0
Queue Length 95th (ft)	38	16	24	18	61	61	43
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	4172	1368	4172	1420	666	666	1298
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.32	0.11	0.44	0.07	0.07	0.26

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	288	499	864	243	94	95	292
v/c Ratio	0.08	0.40	0.24	0.20	0.40	0.40	0.45
Control Delay	3.6	1.5	4.1	1.1	31.6	31.7	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.6	1.5	4.1	1.1	31.6	31.7	6.1
Queue Length 50th (ft)	10	0	36	0	37	38	0
Queue Length 95th (ft)	21	26	62	19	80	81	32
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3628	1255	3628	1202	1553	1553	2601
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.40	0.24	0.20	0.06	0.06	0.11

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	771	390	794	386	83	84	380
v/c Ratio	0.19	0.29	0.20	0.29	0.42	0.42	0.60
Control Delay	3.1	1.0	3.2	1.0	45.0	45.1	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.1	1.0	3.2	1.0	45.0	45.1	9.9
Queue Length 50th (ft)	32	0	33	0	49	50	8
Queue Length 95th (ft)	64	23	66	22	96	97	52
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	4039	1326	4039	1342	663	665	1314
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.29	0.20	0.29	0.13	0.13	0.29

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	661	266	779	108	194	197	697
v/c Ratio	0.22	0.26	0.26	0.11	0.40	0.41	0.73
Control Delay	9.3	2.2	9.5	2.6	25.8	25.9	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	2.2	9.5	2.6	25.8	25.9	22.7
Queue Length 50th (ft)	54	0	65	0	84	85	127
Queue Length 95th (ft)	97	36	115	24	141	144	190
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200					400
Base Capacity (vph)	3020	1028	3020	985	1293	1297	2194
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.26	0.26	0.11	0.15	0.15	0.32

Intersection Summary

APPENDIX 5.4:

E+P CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	4487	7146	0.63	67.6	22.1	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.885	4487	447	7200	2100	0.62	0.21	64.7	60.5	23.1	25.6	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4016	7146	0.56	68.1	19.7	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.917	4686	670	7200	1900	0.65	0.35	61.9	60.0	25.2	23.2	C

Segment 5: Basic

Time	PHF	fHV	Flow Rate	Capacity	d/c	Speed	Density	LOS

Period			(pc/h)	(pc/h)	Ratio	(mi/h)	(pc/mi/ln)	
1	0.92	0.926	4679	7146	0.65	67.2	23.2	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.926	5153	474	7200	2100	0.72	0.23	62.2	60.7	27.6	24.5	C

Segment 7: Basic

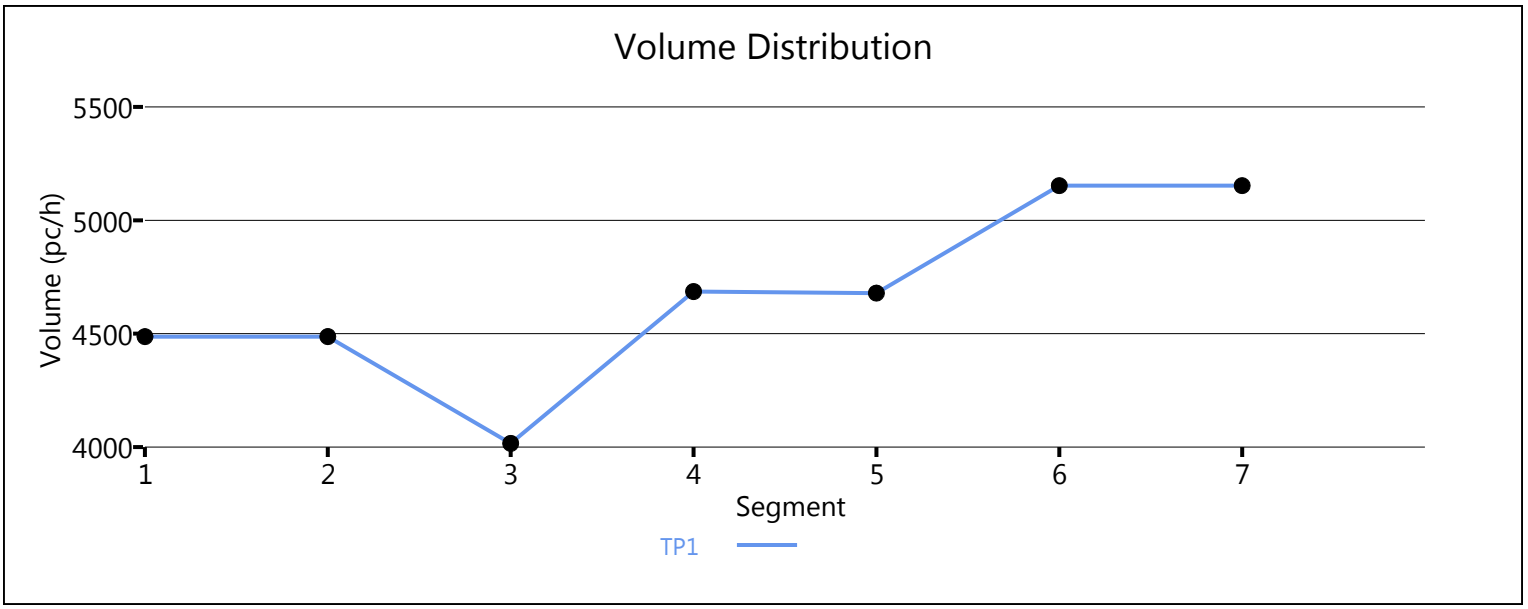
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	5153	7146	0.72	65.7	26.1	D

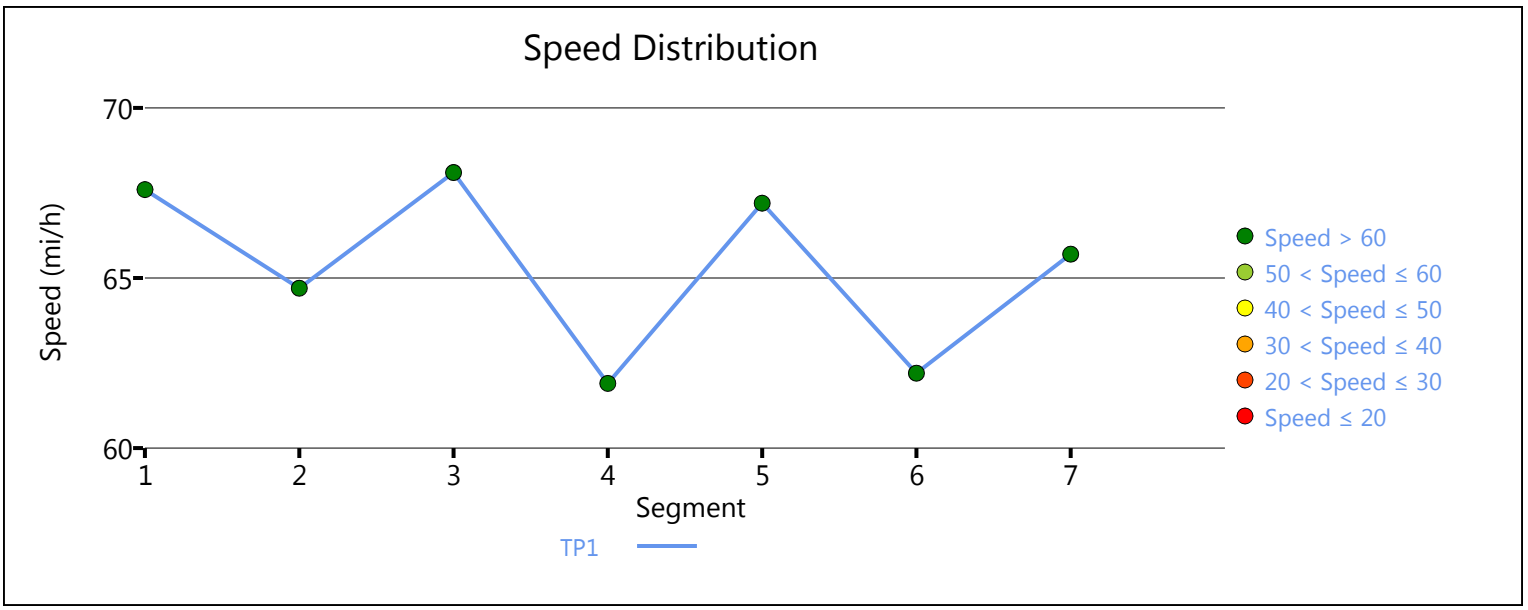
Facility Time Period Results

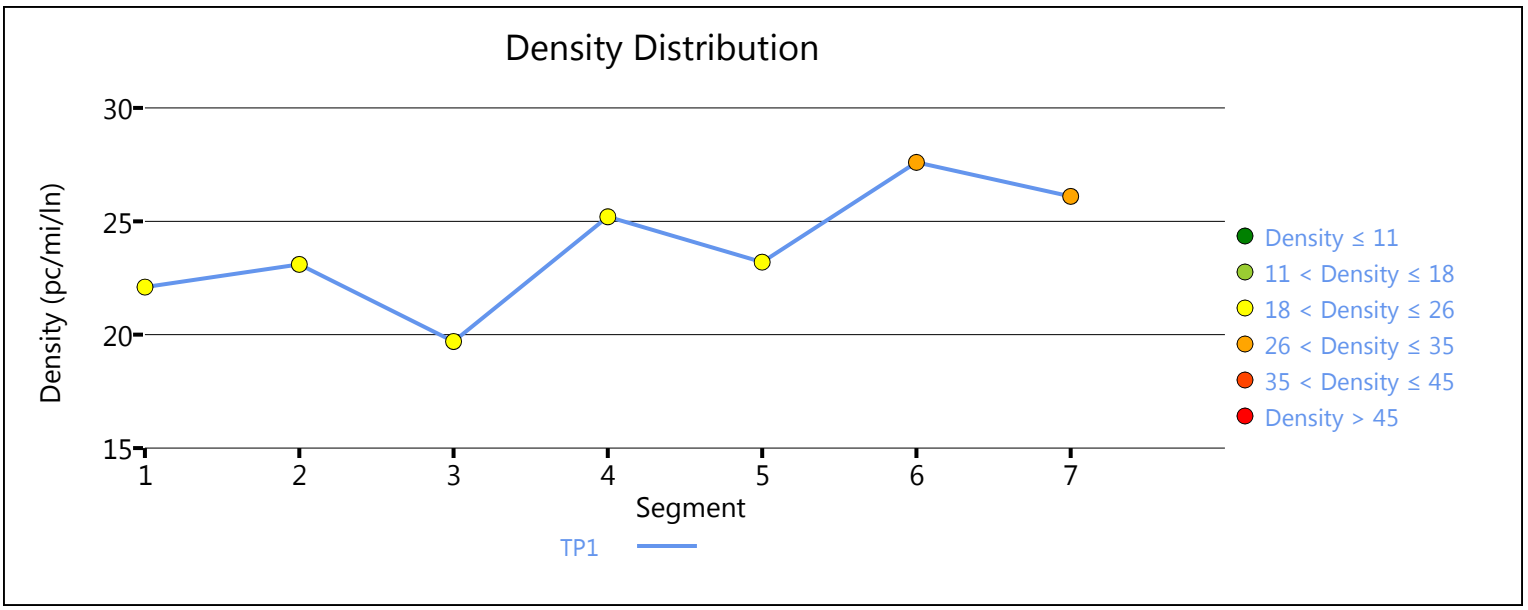
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.3	23.7	21.8	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	65.3	Density, veh/mi/ln	21.8
Average Travel Time, min	1.7	Density, pc/mi/ln	23.7







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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4178	7146	0.58	68.0	20.5	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.893	4178	525	7200	2100	0.58	0.25	64.5	60.3	21.6	24.7	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3661	7146	0.51	68.2	17.9	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4192	531	7200	1900	0.58	0.28	62.6	60.7	22.3	20.5	C

Segment 5: Basic

Time	PHF	fHV	Flow Rate	Capacity	d/c	Speed	Density	LOS

Period			(pc/h)	(pc/h)	Ratio	(mi/h)	(pc/mi/ln)	
1	0.92	0.980	4187	7146	0.59	68.0	20.5	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4423	236	7200	2100	0.61	0.11	63.7	62.5	23.1	19.1	B

Segment 7: Basic

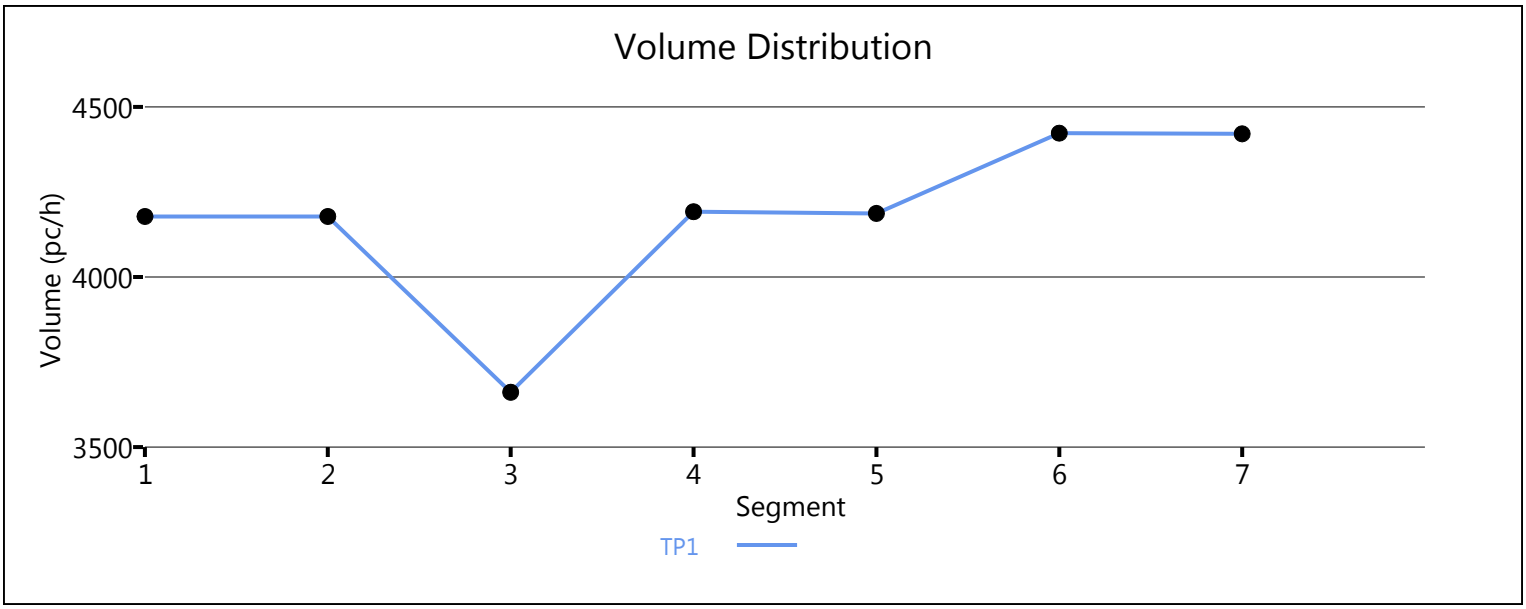
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4421	7146	0.62	67.7	21.8	C

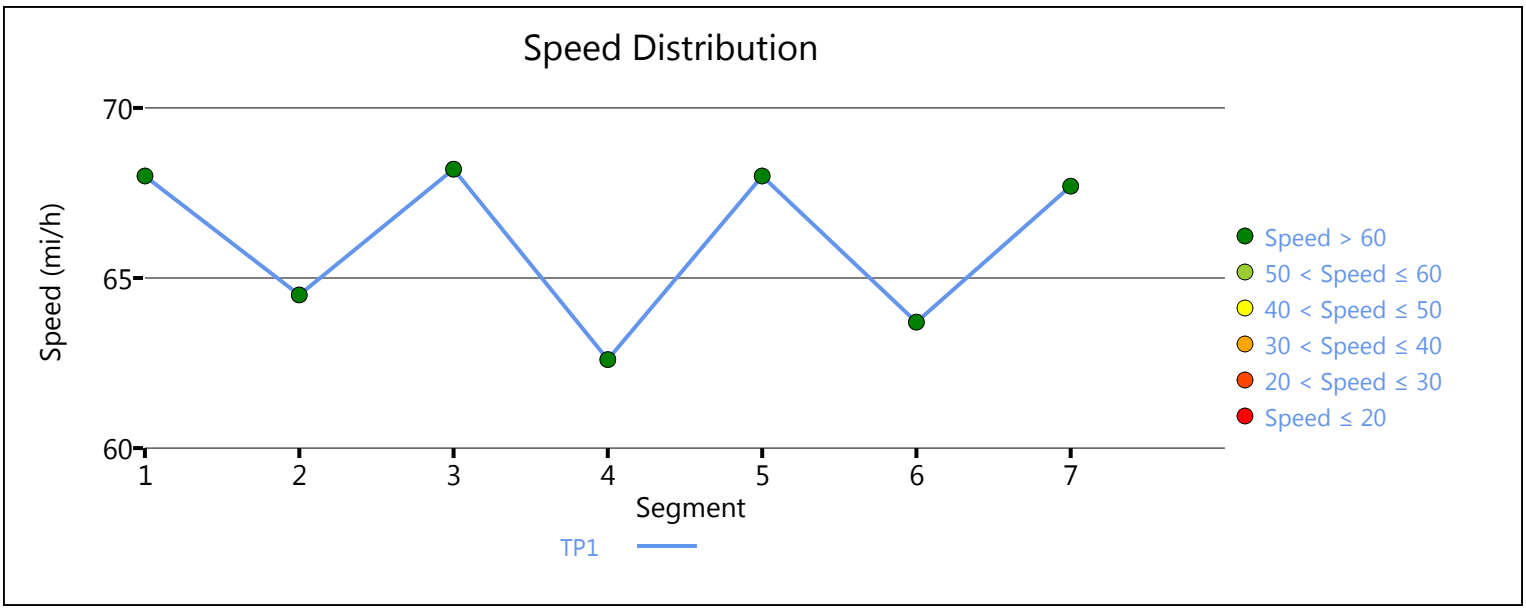
Facility Time Period Results

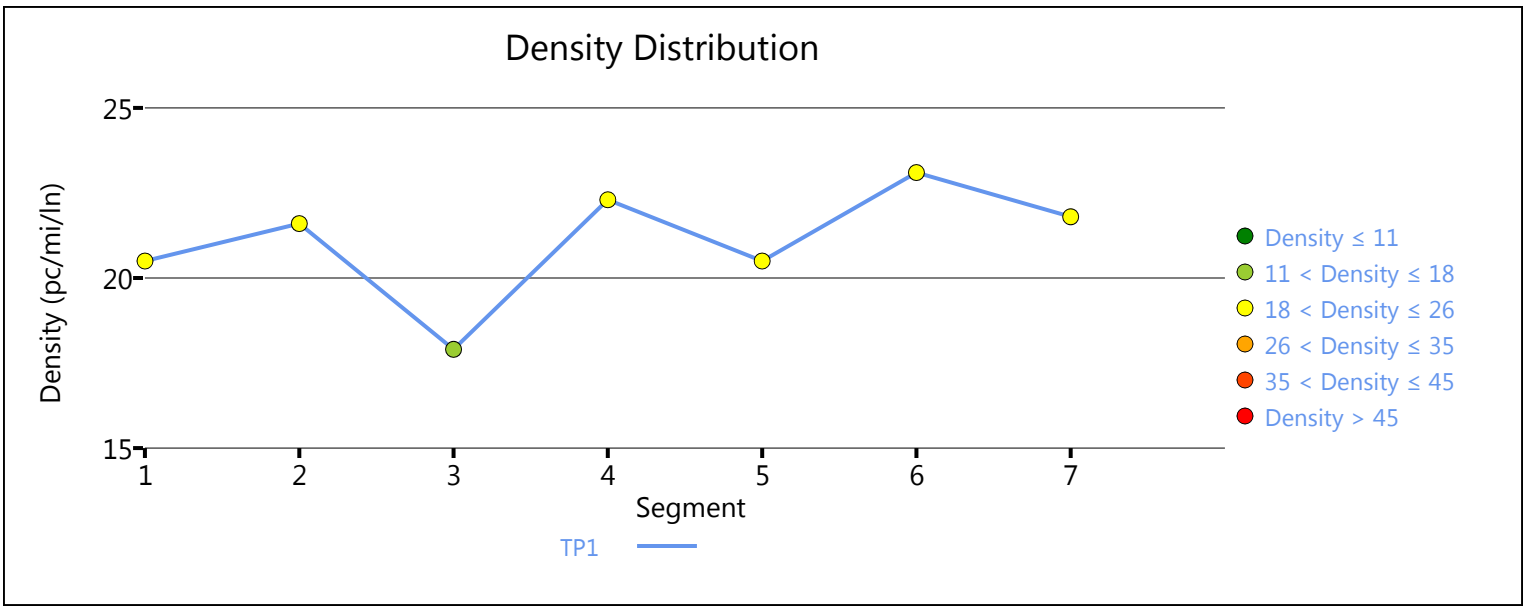
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.0	21.2	20.8	1.6	C

Facility Overall Results

Space Mean Speed, mi/h	66.0	Density, veh/mi/ln	20.8
Average Travel Time, min	1.6	Density, pc/mi/ln	21.2







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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3804	7146	0.53	68.2	18.6	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.971	3804	580	7200	2100	0.53	0.28	64.3	60.2	19.7	22.6	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3213	7146	0.45	68.2	15.7	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.943	3626	413	7200	1900	0.50	0.22	63.2	61.3	19.1	17.5	B

Segment 5: Basic

Time	PHF	fHV	Flow Rate	Capacity	d/c	Speed	Density	LOS

Period			(pc/h)	(pc/h)	Ratio	(mi/h)	(pc/mi/ln)	
1	0.92	0.952	3622	7146	0.51	68.2	17.7	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.962	4038	416	7200	2100	0.56	0.20	63.7	62.2	21.1	19.1	B

Segment 7: Basic

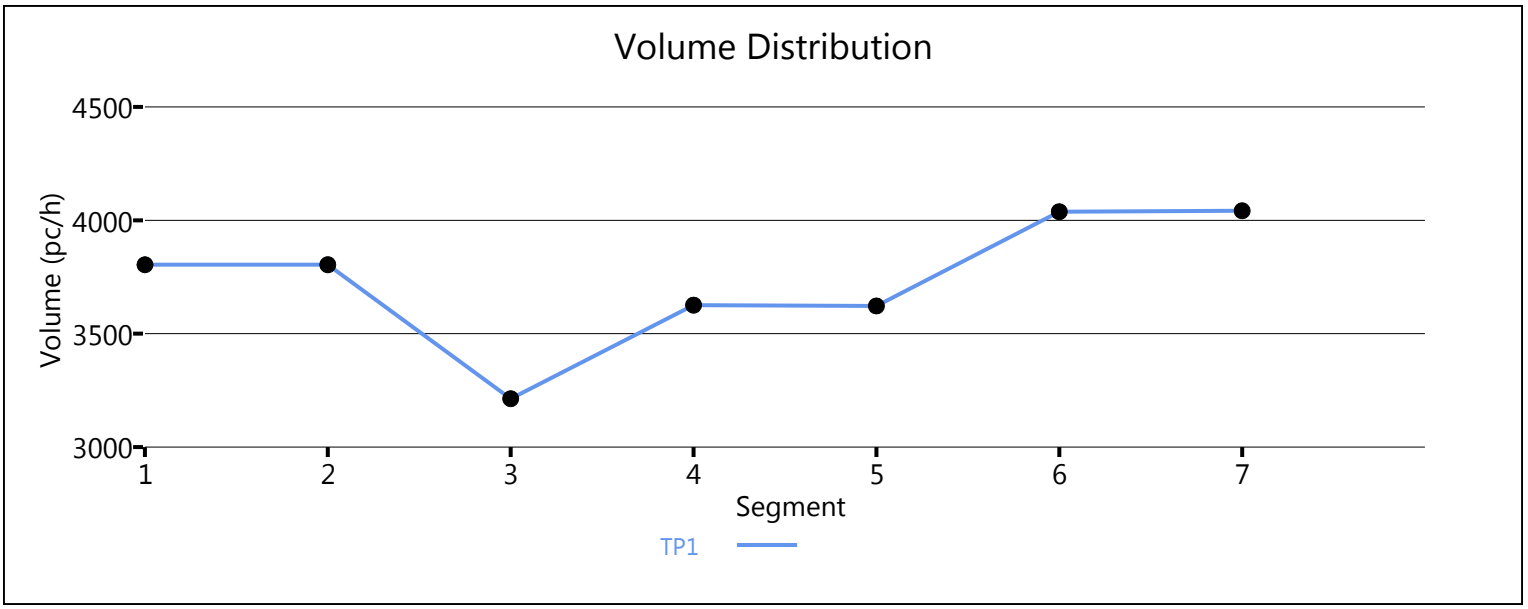
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	4042	7146	0.57	68.1	19.8	C

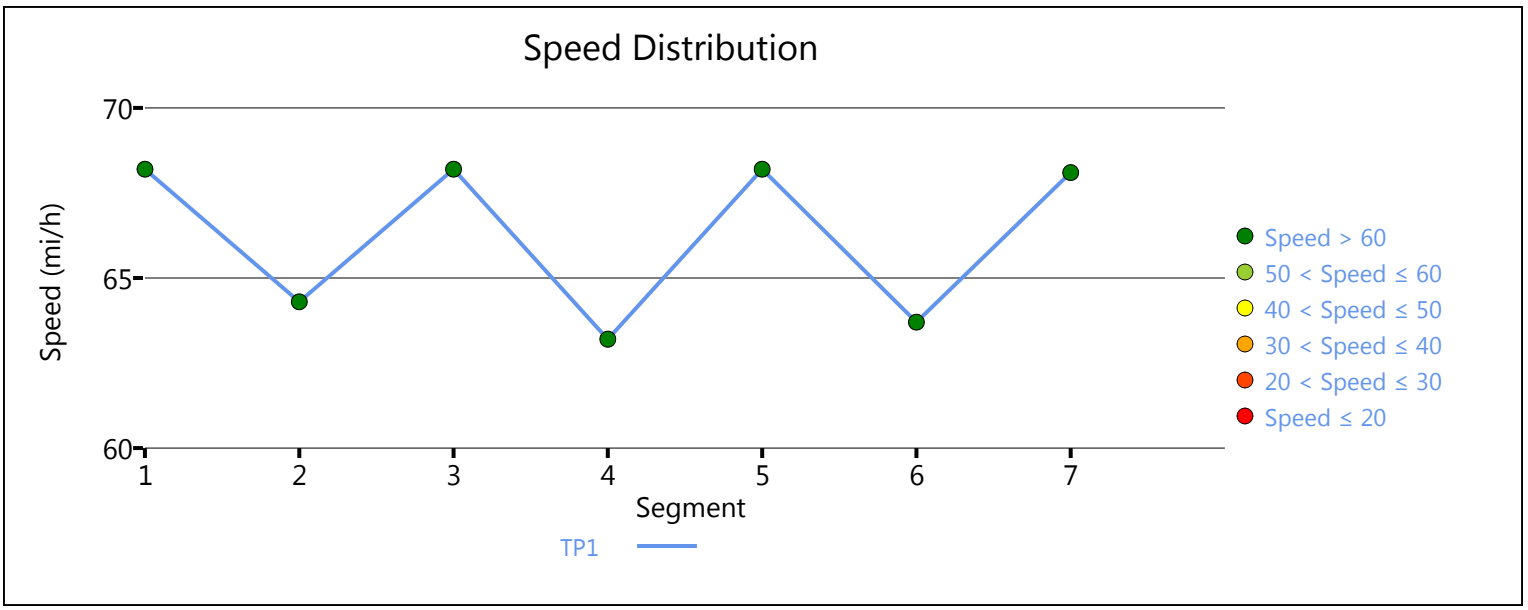
Facility Time Period Results

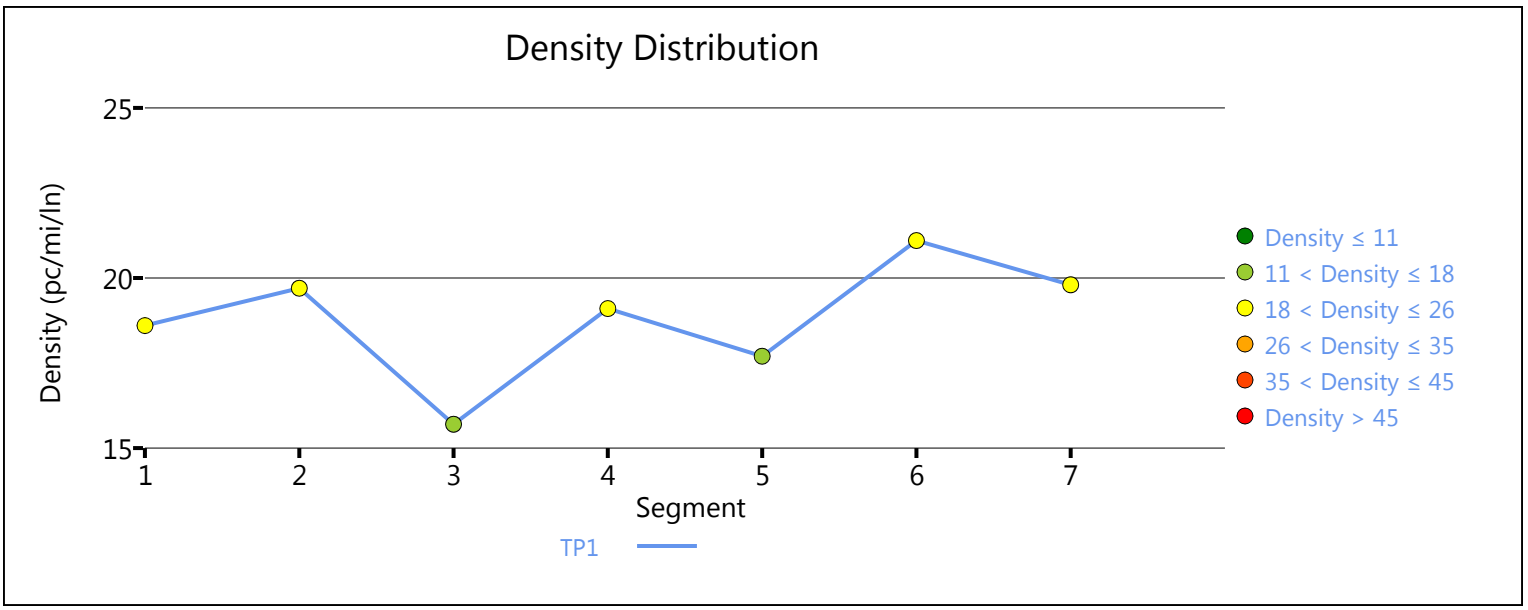
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.3	18.7	17.8	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	66.3	Density, veh/mi/ln	17.8
Average Travel Time, min	1.7	Density, pc/mi/ln	18.7







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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5135	7146	0.72	65.8	26.0	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	5135	1215	7200	2100	0.71	0.58	62.9	58.6	27.2	30.2	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3932	7146	0.55	68.2	19.2	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.943	4217	285	7200	1900	0.59	0.15	62.7	60.8	22.4	20.0	B

Segment 5: Basic

Time	PHF	fHV	Flow Rate	Capacity	d/c	Speed	Density	LOS

Period			(pc/h)	(pc/h)	Ratio	(mi/h)	(pc/mi/ln)	
1	0.92	0.980	4206	7146	0.59	68.0	20.6	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.935	4322	116	7200	2100	0.60	0.06	63.9	62.7	22.5	18.3	B

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4357	7146	0.61	67.8	21.4	C

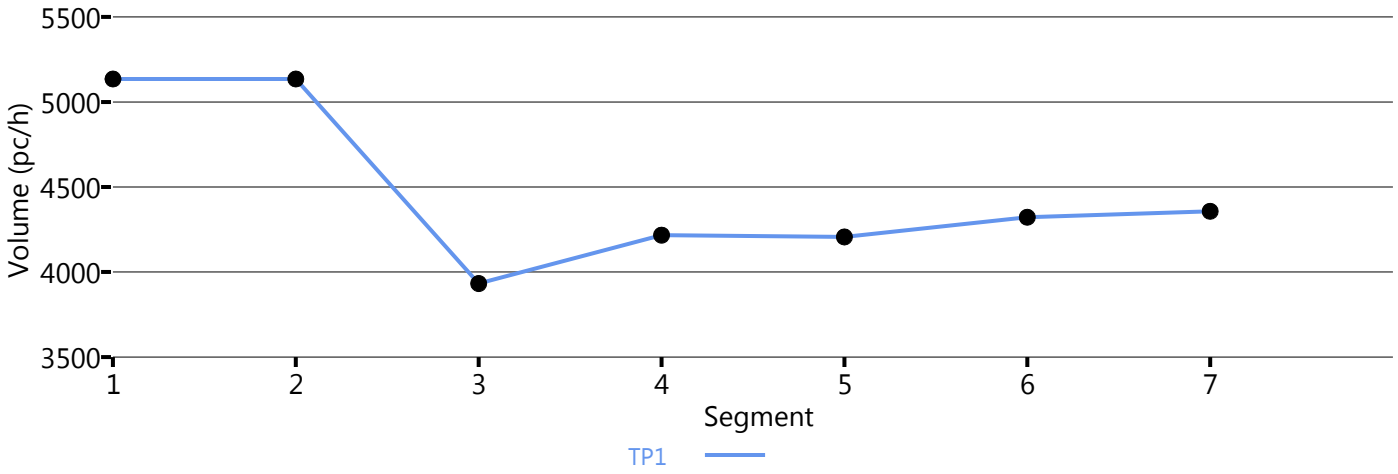
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.3	23.1	22.6	1.6	C

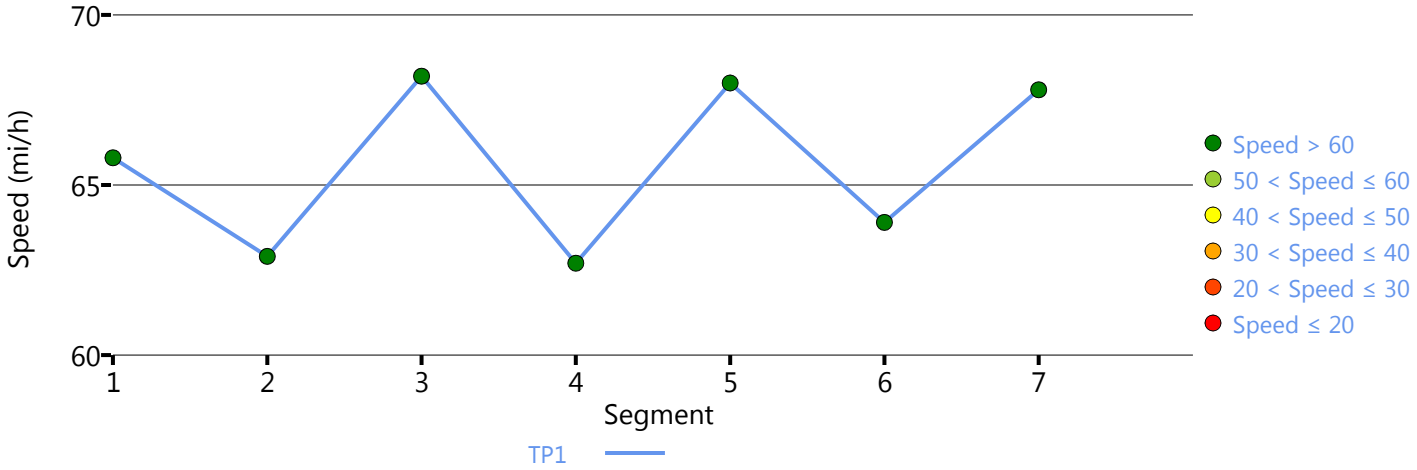
Facility Overall Results

Space Mean Speed, mi/h	65.3	Density, veh/mi/ln	22.6
Average Travel Time, min	1.6	Density, pc/mi/ln	23.1

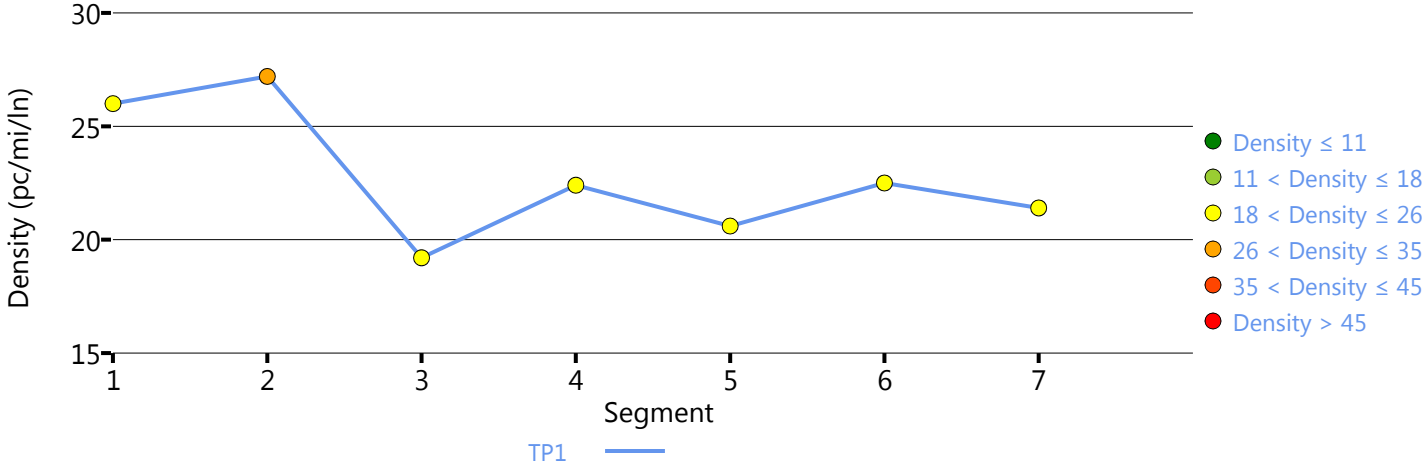
Volume Distribution



Speed Distribution



Density Distribution



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APPENDIX 6.1:

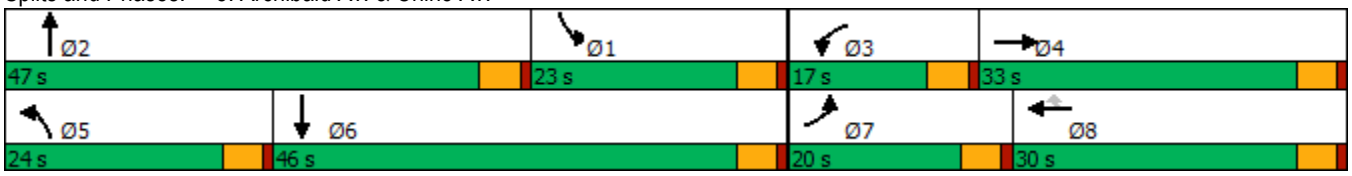
OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

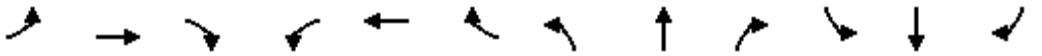
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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	94	27	74	74	246	133	1085	114	784
Future Volume (vph)	94	27	74	74	246	133	1085	114	784
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.9	11.2	9.6	10.2	10.2	13.1	32.3	13.1	28.2
Actuated g/C Ratio	0.14	0.14	0.12	0.13	0.13	0.17	0.41	0.17	0.36
v/c Ratio	0.43	0.27	0.39	0.33	0.61	0.51	0.58	0.44	0.71
Control Delay	43.9	20.7	44.9	40.9	12.3	42.7	23.4	39.9	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	20.7	44.9	40.9	12.3	42.7	23.4	39.9	27.0
LOS	D	C	D	D	B	D	C	D	C
Approach Delay		33.9		23.7			25.5		28.5
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 78.7	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 56.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	27	44	74	74	246	133	1085	36	114	784	51
Future Volume (veh/h)	94	27	44	74	74	246	133	1085	36	114	784	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	97	28	45	76	76	213	137	1119	34	118	808	47
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	122	102	164	100	270	229	175	1750	53	150	1125	65
Arrive On Green	0.08	0.16	0.16	0.06	0.15	0.15	0.11	0.36	0.36	0.09	0.34	0.34
Sat Flow, veh/h	1619	621	998	1619	1800	1525	1619	4897	149	1619	3285	191
Grp Volume(v), veh/h	97	0	73	76	76	213	137	748	405	118	421	434
Grp Sat Flow(s),veh/h/ln	1619	0	1618	1619	1800	1525	1619	1638	1769	1619	1710	1766
Q Serve(g_s), s	3.3	0.0	2.2	2.6	2.1	5.5	4.7	10.8	10.8	4.0	12.2	12.2
Cycle Q Clear(g_c), s	3.3	0.0	2.2	2.6	2.1	5.5	4.7	10.8	10.8	4.0	12.2	12.2
Prop In Lane	1.00		0.62	1.00		1.00	1.00		0.08	1.00		0.11
Lane Grp Cap(c), veh/h	122	0	265	100	270	229	175	1171	632	150	586	605
V/C Ratio(X)	0.79	0.00	0.27	0.76	0.28	0.93	0.78	0.64	0.64	0.78	0.72	0.72
Avail Cap(c_a), veh/h	439	0	809	354	805	682	553	2446	1321	525	1247	1287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	0.0	20.8	26.2	21.4	11.7	24.7	15.2	15.2	25.2	16.3	16.3
Incr Delay (d2), s/veh	10.9	0.0	0.6	11.4	0.6	15.4	7.5	0.6	1.1	8.7	1.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.8	1.2	0.8	3.3	1.9	3.1	3.4	1.7	3.9	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	0.0	21.3	37.6	22.0	27.0	32.2	15.8	16.3	33.9	17.9	17.9
LnGrp LOS	D	A	C	D	C	C	C	B	B	C	B	B
Approach Vol, veh/h		170			365			1290			973	
Approach Delay, s/veh		30.1			28.2			17.7			19.9	
Approach LOS		C			C			B			B	

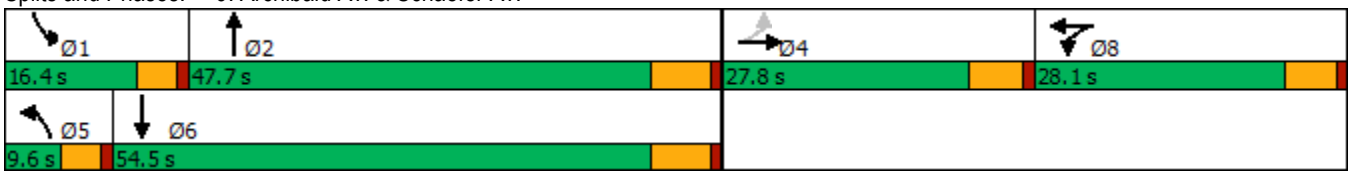
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	24.9	8.1	13.9	10.7	24.0	8.9	13.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	6.0	12.8	4.6	4.2	6.7	14.2	5.3	7.5
Green Ext Time (p_c), s	0.2	7.5	0.1	0.3	0.2	5.0	0.1	1.0

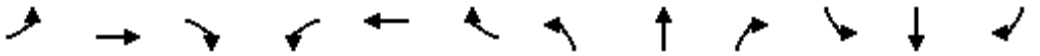
Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	91	0	1239	71	750		
Future Volume (vph)	91	0	1239	71	750		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	47.7	16.4	54.5	27.8	9.6
Total Split (%)	23.4%	23.4%	39.8%	13.7%	45.4%	23%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	13.1	13.1	27.2	8.4	37.4		
Actuated g/C Ratio	0.19	0.19	0.40	0.12	0.55		
v/c Ratio	0.30	0.16	0.67	0.37	0.41		
Control Delay	33.4	0.5	20.8	40.8	10.9		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	33.4	0.5	20.8	40.8	10.9		
LOS	C	A	C	D	B		
Approach Delay		16.1	20.8		13.5		
Approach LOS		B	C		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 67.9	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 52.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	91	0	101	0	1239	18	71	750	0
Future Volume (veh/h)	0	0	0	91	0	101	0	1239	18	71	750	0
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	95	0	88	0	1291	19	74	781	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	4	0	296	0	279	3	2084	31	104	1960	0
Arrive On Green	0.00	0.00	0.00	0.18	0.00	0.18	0.00	0.42	0.42	0.06	0.57	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4989	73	1619	3510	0
Grp Volume(v), veh/h	0	0	0	95	0	88	0	848	462	74	781	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1787	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	2.6	0.0	2.5	0.0	10.2	10.2	2.3	6.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.6	0.0	2.5	0.0	10.2	10.2	2.3	6.4	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	0	4	0	296	0	279	3	1369	746	104	1960	0
V/C Ratio(X)	0.00	0.00	0.00	0.32	0.00	0.32	0.00	0.62	0.62	0.71	0.40	0.00
Avail Cap(c_a), veh/h	0	785	0	716	0	675	161	2677	1460	379	3256	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	17.9	0.0	17.9	0.0	11.5	11.5	23.1	6.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.5	0.8	3.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.8	0.0	0.8	0.0	2.5	2.8	0.8	1.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	18.5	0.0	18.5	0.0	12.0	12.4	26.5	6.1	0.0
LnGrp LOS	A	A	A	B	A	B	A	B	B	C	A	A
Approach Vol, veh/h		0			183			1310			855	
Approach Delay, s/veh		0.0			18.5			12.1			7.9	
Approach LOS					B			B			A	

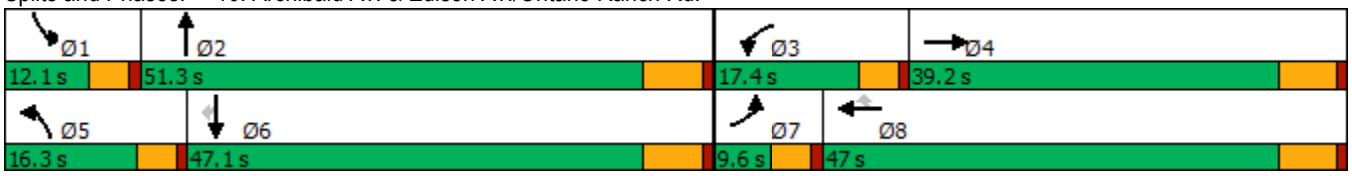
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	27.6		0.0	0.0	35.4		15.0				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	4.3	12.2		0.0	0.0	8.4		4.6				
Green Ext Time (p_c), s	0.0	8.8		0.0	0.0	5.2		0.6				

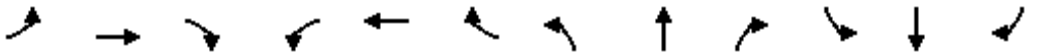
Intersection Summary			
HCM 6th Ctrl Delay		11.1	
HCM 6th LOS		B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	194	42	344	469	167	154	1016	362	64	394	108
Future Volume (vph)	25	194	42	344	469	167	154	1016	362	64	394	108
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.3	21.4	99.7	13.5	34.9	34.9	12.4	37.4	99.7	7.2	29.2	29.2
Actuated g/C Ratio	0.05	0.21	1.00	0.14	0.35	0.35	0.12	0.38	1.00	0.07	0.29	0.29
v/c Ratio	0.17	0.27	0.03	0.88	0.76	0.26	0.79	0.81	0.24	0.57	0.40	0.20
Control Delay	56.2	33.9	0.0	69.8	40.8	5.4	74.9	35.5	0.4	71.0	29.3	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	33.9	0.0	69.8	40.8	5.4	74.9	35.5	0.4	71.0	29.3	2.3
LOS	E	C	A	E	D	A	E	D	A	E	C	A
Approach Delay		30.6			45.0			31.2			28.9	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 34.8	Intersection LOS: C
Intersection Capacity Utilization 82.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	194	42	344	469	167	154	1016	362	64	394	108
Future Volume (veh/h)	25	194	42	344	469	167	154	1016	362	64	394	108
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	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	26	198	0	351	479	128	157	1037	0	65	402	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	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	79	661		412	551	467	187	1260		81	1035	462
Arrive On Green	0.03	0.19	0.00	0.14	0.31	0.31	0.12	0.37	0.00	0.05	0.30	0.30
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	26	198	0	351	479	128	157	1037	0	65	402	77
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1525
Q Serve(g_s), s	0.8	4.4	0.0	10.2	22.1	5.6	8.3	24.2	0.0	3.5	8.2	3.3
Cycle Q Clear(g_c), s	0.8	4.4	0.0	10.2	22.1	5.6	8.3	24.2	0.0	3.5	8.2	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	79	661		412	551	467	187	1260		81	1035	462
V/C Ratio(X)	0.33	0.30		0.85	0.87	0.27	0.84	0.82		0.81	0.39	0.17
Avail Cap(c_a), veh/h	168	1284		431	836	708	216	1744		138	1580	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	30.3	0.0	36.9	28.8	23.1	38.1	25.2	0.0	41.3	24.2	22.5
Incr Delay (d2), s/veh	0.9	0.3	0.0	13.8	6.5	0.3	19.8	2.4	0.0	6.9	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.7	0.0	4.2	9.6	1.9	4.1	8.9	0.0	1.5	3.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	30.6	0.0	50.7	35.3	23.4	57.9	27.5	0.0	48.2	24.4	22.7
LnGrp LOS	D	C		D	D	C	E	C		D	C	C
Approach Vol, veh/h		224	A		958			1194	A		544	
Approach Delay, s/veh		32.0			39.4			31.5			27.0	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	38.9	16.8	23.2	14.7	33.1	6.9	33.1
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	5.5	26.2	12.2	6.4	10.3	10.2	2.8	24.1
Green Ext Time (p_c), s	0.0	6.2	0.1	1.0	0.0	2.5	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C

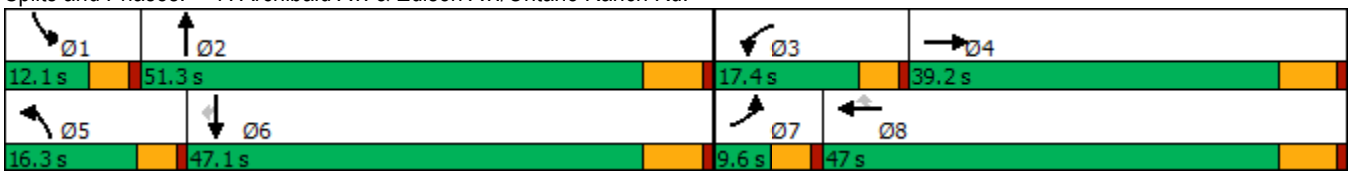
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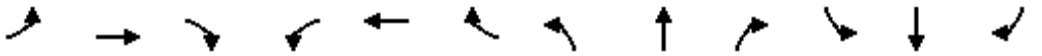
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	194	42	344	469	167	154	1016	362	64	394	108
Future Volume (vph)	25	194	42	344	469	167	154	1016	362	64	394	108
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.3	21.4	99.7	13.5	34.9	34.9	12.4	37.4	99.7	7.2	29.2	29.2
Actuated g/C Ratio	0.05	0.21	1.00	0.14	0.35	0.35	0.12	0.38	1.00	0.07	0.29	0.29
v/c Ratio	0.17	0.27	0.03	0.88	0.76	0.26	0.79	0.81	0.24	0.57	0.40	0.20
Control Delay	56.2	33.9	0.0	69.8	40.8	5.4	74.9	35.5	0.4	71.0	29.3	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	33.9	0.0	69.8	40.8	5.4	74.9	35.5	0.4	71.0	29.3	2.3
LOS	E	C	A	E	D	A	E	D	A	E	C	A
Approach Delay		30.6			45.0			31.2			28.9	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 34.8	Intersection LOS: C
Intersection Capacity Utilization 82.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	194	42	344	469	167	154	1016	362	64	394	108
Future Volume (veh/h)	25	194	42	344	469	167	154	1016	362	64	394	108
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	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	26	198	0	351	479	128	157	1037	0	65	402	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	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	79	661		412	551	467	187	1260		81	1035	462
Arrive On Green	0.03	0.19	0.00	0.14	0.31	0.31	0.12	0.37	0.00	0.05	0.30	0.30
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	26	198	0	351	479	128	157	1037	0	65	402	77
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1525
Q Serve(g_s), s	0.8	4.4	0.0	10.2	22.1	5.6	8.3	24.2	0.0	3.5	8.2	3.3
Cycle Q Clear(g_c), s	0.8	4.4	0.0	10.2	22.1	5.6	8.3	24.2	0.0	3.5	8.2	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	79	661		412	551	467	187	1260		81	1035	462
V/C Ratio(X)	0.33	0.30		0.85	0.87	0.27	0.84	0.82		0.81	0.39	0.17
Avail Cap(c_a), veh/h	168	1284		431	836	708	216	1744		138	1580	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	30.3	0.0	36.9	28.8	23.1	38.1	25.2	0.0	41.3	24.2	22.5
Incr Delay (d2), s/veh	0.9	0.3	0.0	13.8	6.5	0.3	19.8	2.4	0.0	6.9	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.7	0.0	4.2	9.6	1.9	4.1	8.9	0.0	1.5	3.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	30.6	0.0	50.7	35.3	23.4	57.9	27.5	0.0	48.2	24.4	22.7
LnGrp LOS	D	C		D	D	C	E	C		D	C	C
Approach Vol, veh/h		224	A		958			1194	A		544	
Approach Delay, s/veh		32.0			39.4			31.5			27.0	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	38.9	16.8	23.2	14.7	33.1	6.9	33.1
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	5.5	26.2	12.2	6.4	10.3	10.2	2.8	24.1
Green Ext Time (p_c), s	0.0	6.2	0.1	1.0	0.0	2.5	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C

Notes

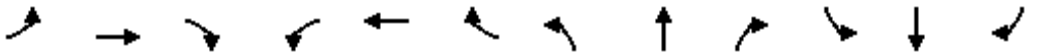
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	60	1471	10	20	761
Future Volume (vph)	6	60	1471	10	20	761
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	13.6%	13.6%	59.1%	59.1%	13.7%	72.9%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.0	5.0	51.3	51.3	5.0	53.1
Actuated g/C Ratio	0.08	0.08	0.79	0.79	0.08	0.82
v/c Ratio	0.02	0.16	0.58	0.01	0.17	0.29
Control Delay	28.5	0.9	8.2	5.9	31.6	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	0.9	8.2	5.9	31.6	3.3
LOS	C	A	A	A	C	A
Approach Delay			8.1			4.0
Approach LOS			A			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 64.6	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 6.6	Intersection LOS: A
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	6	0	60	0	1471	10	20	761	0
Future Volume (veh/h)	0	0	0	6	0	60	0	1471	10	20	761	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				6	0	7	0	1565	11	21	810	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, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				51	0	44	0	2334	1019	40	2697	0
Arrive On Green				0.02	0.00	0.02	0.00	0.68	0.68	0.02	0.79	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1494	1619	3510	0
Grp Volume(v), veh/h				6	0	7	0	1565	11	21	810	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1494	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.1	0.0	15.1	0.1	0.7	3.7	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.1	0.0	15.1	0.1	0.7	3.7	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				51	0	44	0	2334	1019	40	2697	0
V/C Ratio(X)				0.12	0.00	0.16	0.00	0.67	0.01	0.52	0.30	0.00
Avail Cap(c_a), veh/h				278	0	238	0	2334	1019	143	2697	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.3	0.0	27.4	0.0	5.2	2.9	27.2	1.7	0.0
Incr Delay (d2), s/veh				1.0	0.0	1.7	0.0	1.6	0.0	3.8	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				0.0	0.0	0.1	0.0	1.9	0.0	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.4	0.0	29.0	0.0	6.8	2.9	31.0	1.9	0.0
LnGrp LOS				C	A	C	A	A	A	C	A	A
Approach Vol, veh/h					13			1576			831	
Approach Delay, s/veh					28.7			6.8			2.7	
Approach LOS					C			A			A	

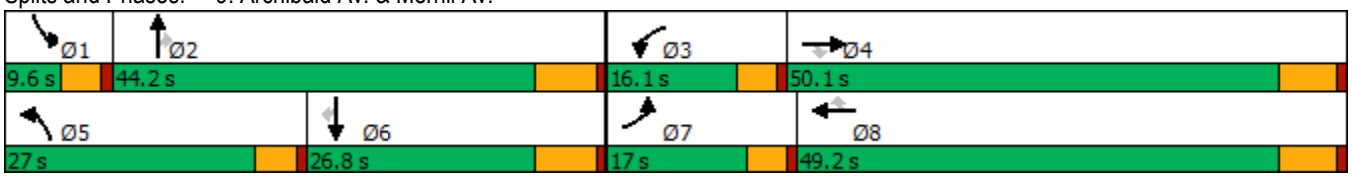
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	6.0	45.0				51.0		5.4				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	2.7	17.1				5.7		2.1				
Green Ext Time (p_c), s	0.0	9.9				5.4		0.0				

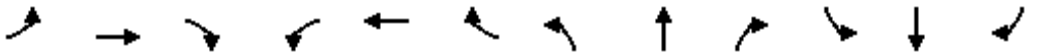
Intersection Summary		
HCM 6th Ctrl Delay		5.5
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	20	114	75	45	124	455	1164	37	38	515	270
Future Volume (vph)	203	20	114	75	45	124	455	1164	37	38	515	270
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.6	21.8	21.8	8.3	15.3	15.3	22.8	41.3	41.3	5.1	19.4	19.4
Actuated g/C Ratio	0.14	0.24	0.24	0.09	0.17	0.17	0.25	0.45	0.45	0.06	0.21	0.21
v/c Ratio	0.95	0.05	0.25	0.53	0.15	0.33	1.18	0.78	0.05	0.24	0.74	0.60
Control Delay	91.3	28.8	2.8	56.4	32.5	4.9	136.8	29.0	0.1	49.9	42.7	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.3	28.8	2.8	56.4	32.5	4.9	136.8	29.0	0.1	49.9	42.7	19.5
LOS	F	C	A	E	C	A	F	C	A	D	D	B
Approach Delay		57.5			25.7			58.0			35.4	
Approach LOS		E			C			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 49.3	Intersection LOS: D
Intersection Capacity Utilization 76.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	20	114	75	45	124	455	1164	37	38	515	270
Future Volume (veh/h)	203	20	114	75	45	124	455	1164	37	38	515	270
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	209	21	63	77	46	33	469	1200	19	39	531	212
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	241	378	320	96	216	183	438	1472	657	106	669	299
Arrive On Green	0.15	0.21	0.21	0.06	0.12	0.12	0.27	0.43	0.43	0.04	0.20	0.20
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	209	21	63	77	46	33	469	1200	19	39	531	212
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1525	1478	1710	1525
Q Serve(g_s), s	10.4	0.8	2.8	3.9	1.9	1.6	22.4	25.5	0.6	1.1	12.2	10.8
Cycle Q Clear(g_c), s	10.4	0.8	2.8	3.9	1.9	1.6	22.4	25.5	0.6	1.1	12.2	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	241	378	320	96	216	183	438	1472	657	106	669	299
V/C Ratio(X)	0.87	0.06	0.20	0.80	0.21	0.18	1.07	0.82	0.03	0.37	0.79	0.71
Avail Cap(c_a), veh/h	242	954	809	225	935	792	438	1557	694	178	838	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	26.1	27.0	38.5	32.9	32.8	30.2	20.7	13.6	39.0	31.7	31.1
Incr Delay (d2), s/veh	25.3	0.1	0.3	5.7	0.5	0.5	63.2	3.3	0.0	0.8	4.2	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.3	1.0	1.6	0.8	0.6	15.4	9.1	0.2	0.4	4.9	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	26.2	27.3	44.2	33.4	33.2	93.4	24.0	13.6	39.8	35.9	35.7
LnGrp LOS	E	C	C	D	C	C	F	C	B	D	D	D
Approach Vol, veh/h		293			156			1688			782	
Approach Delay, s/veh		50.4			38.7			43.2			36.0	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	42.1	9.5	23.6	27.0	22.7	16.9	16.2
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.1	27.5	5.9	4.8	24.4	14.2	12.4	3.9
Green Ext Time (p_c), s	0.0	5.3	0.0	0.3	0.0	2.0	0.0	0.3

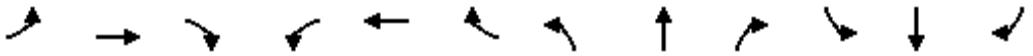
Intersection Summary	
HCM 6th Ctrl Delay	41.8
HCM 6th LOS	D

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	353	542	854	338	145	543
Future Volume (vph)	353	542	854	338	145	543
Turn Type	Prot	pm+ov	NA	pm+ov	Prot	NA
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Detector Phase	8	1	2	8	1	6
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	36.3	11.0	46.3	36.3	11.0	11.0
Total Split (s)	36.3	27.0	56.7	36.3	27.0	83.7
Total Split (%)	30.3%	22.5%	47.3%	30.3%	22.5%	69.8%
Yellow Time (s)	4.3	4.0	4.3	4.3	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.0	5.3	5.3	5.0	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	Min	None	None	Min
Act Effct Green (s)	25.0	45.0	51.9	76.9	14.7	71.9
Actuated g/C Ratio	0.23	0.42	0.48	0.72	0.14	0.67
v/c Ratio	0.88	0.79	0.97	0.28	0.61	0.44
Control Delay	62.3	31.8	52.8	1.1	55.3	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.3	31.8	52.8	1.1	55.3	10.3
LOS	E	C	D	A	E	B
Approach Delay			38.1			19.8
Approach LOS			D			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107.3	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 35.4	Intersection LOS: D
Intersection Capacity Utilization 87.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	353	0	542	0	854	338	145	543	0
Future Volume (veh/h)	0	0	0	353	0	542	0	854	338	145	543	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h				368	0	446	0	890	253	151	566	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				480	0	592	0	920	1189	185	1204	0
Arrive On Green				0.27	0.00	0.27	0.00	0.48	0.48	0.10	0.63	0.00
Sat Flow, veh/h				1810	0	1610	0	1900	1573	1810	1900	0
Grp Volume(v), veh/h				368	0	446	0	890	253	151	566	0
Grp Sat Flow(s),veh/h/ln				1810	0	1610	0	1900	1573	1810	1900	0
Q Serve(g_s), s				19.7	0.0	25.5	0.0	47.8	5.0	8.6	16.3	0.0
Cycle Q Clear(g_c), s				19.7	0.0	25.5	0.0	47.8	5.0	8.6	16.3	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				480	0	592	0	920	1189	185	1204	0
V/C Ratio(X)				0.77	0.00	0.75	0.00	0.97	0.21	0.82	0.47	0.00
Avail Cap(c_a), veh/h				534	0	639	0	929	1196	379	1422	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				35.6	0.0	29.1	0.0	26.3	3.9	46.3	10.0	0.0
Incr Delay (d2), s/veh				5.0	0.0	4.0	0.0	21.8	0.1	8.6	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.8	0.0	9.7	0.0	24.5	3.4	4.1	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.6	0.0	33.1	0.0	48.2	4.0	54.9	10.1	0.0
LnGrp LOS				D	A	C	A	D	A	D	B	A
Approach Vol, veh/h					814			1143			717	
Approach Delay, s/veh					36.5			38.4			19.6	
Approach LOS					D			D			B	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	15.7	56.2				71.9		33.2				
Change Period (Y+Rc), s	5.0	5.3				* 5.3		5.3				
Max Green Setting (Gmax), s	22.0	51.4				* 79		31.0				
Max Q Clear Time (g_c+I1), s	10.6	49.8				18.3		27.5				
Green Ext Time (p_c), s	0.3	1.1				1.9		0.4				

Intersection Summary		
HCM 6th Ctrl Delay		32.8
HCM 6th LOS		C

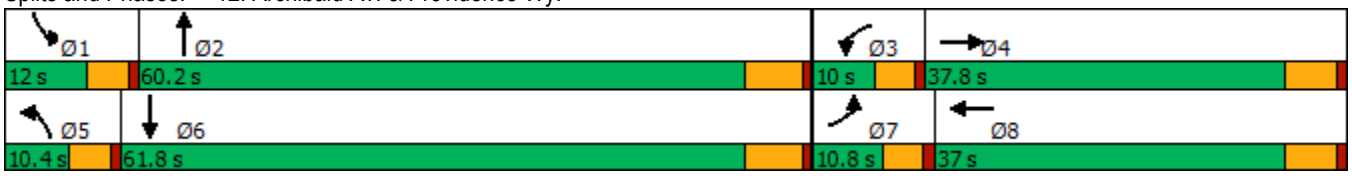
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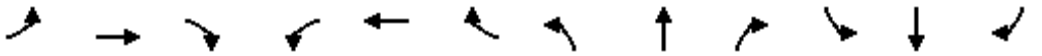
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	27	0	37	0	19	1177	45	859
Future Volume (vph)	27	0	37	0	19	1177	45	859
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	27.8	9.6	38.2	9.6	28.2
Total Split (s)	10.8	37.8	10.0	37.0	10.4	60.2	12.0	61.8
Total Split (%)	9.0%	31.5%	8.3%	30.8%	8.7%	50.2%	10.0%	51.5%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	7.2	14.9	12.4	14.8	6.4	51.2	8.0	53.9
Actuated g/C Ratio	0.10	0.20	0.16	0.20	0.09	0.68	0.11	0.72
v/c Ratio	0.17	0.01	0.13	0.09	0.14	0.54	0.26	0.39
Control Delay	47.7	0.0	39.3	0.4	48.5	17.1	46.9	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	0.0	39.3	0.4	48.5	17.1	46.9	12.3
LOS	D	A	D	A	D	B	D	B
Approach Delay		38.4		19.6		17.6		14.0
Approach LOS		D		B		B		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 75.2	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	6	37	0	38	19	1177	49	45	859	52
Future Volume (veh/h)	27	0	6	37	0	38	19	1177	49	45	859	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	0	6	40	0	41	21	1279	53	49	934	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	101	0	217	70	0	190	44	1666	69	80	1700	104
Arrive On Green	0.06	0.00	0.13	0.04	0.00	0.12	0.02	0.47	0.47	0.04	0.49	0.49
Sat Flow, veh/h	1810	0	1610	1810	0	1610	1810	3532	146	1810	3456	211
Grp Volume(v), veh/h	29	0	6	40	0	41	21	653	679	49	488	503
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1610	1810	1805	1874	1810	1805	1862
Q Serve(g_s), s	1.1	0.0	0.2	1.5	0.0	1.6	0.8	20.5	20.5	1.8	12.9	12.9
Cycle Q Clear(g_c), s	1.1	0.0	0.2	1.5	0.0	1.6	0.8	20.5	20.5	1.8	12.9	12.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		0.11
Lane Grp Cap(c), veh/h	101	0	217	70	0	190	44	851	884	80	888	916
V/C Ratio(X)	0.29	0.00	0.03	0.57	0.00	0.22	0.48	0.77	0.77	0.61	0.55	0.55
Avail Cap(c_a), veh/h	164	0	754	143	0	735	154	1426	1481	196	1469	1515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	0.0	25.7	32.3	0.0	27.3	32.9	14.9	15.0	32.1	12.1	12.1
Incr Delay (d2), s/veh	1.6	0.0	0.1	7.0	0.0	0.6	3.1	1.5	1.4	7.3	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.1	0.7	0.0	0.6	0.3	6.8	7.0	0.9	4.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	0.0	25.7	39.3	0.0	27.8	36.0	16.4	16.4	39.4	12.6	12.6
LnGrp LOS	C	A	C	D	A	C	D	B	B	D	B	B
Approach Vol, veh/h		35			81			1353			1040	
Approach Delay, s/veh		31.4			33.5			16.7			13.9	
Approach LOS		C			C			B			B	

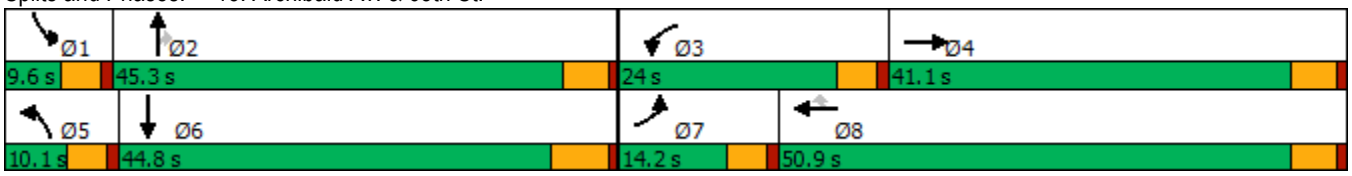
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	38.4	7.3	15.0	6.2	39.8	8.4	13.9
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	7.4	54.0	5.4	32.0	5.8	55.6	6.2	31.2
Max Q Clear Time (g_c+I1), s	3.8	22.5	3.5	2.2	2.8	14.9	3.1	3.6
Green Ext Time (p_c), s	0.0	9.7	0.0	0.0	0.0	6.5	0.0	0.2

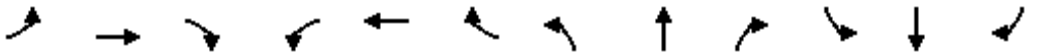
Intersection Summary	
HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	57	47	233	27	61	18	1081	138	36	804
Future Volume (vph)	57	47	233	27	61	18	1081	138	36	804
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	7.4	14.3	17.6	26.7	26.7	5.4	41.1	41.1	5.1	41.7
Actuated g/C Ratio	0.08	0.15	0.19	0.29	0.29	0.06	0.44	0.44	0.05	0.45
v/c Ratio	0.44	0.21	0.76	0.06	0.12	0.19	0.75	0.19	0.40	0.39
Control Delay	55.0	18.5	53.2	26.5	1.3	52.6	28.2	5.3	60.6	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	18.5	53.2	26.5	1.3	52.6	28.2	5.3	60.6	20.4
LOS	D	B	D	C	A	D	C	A	E	C
Approach Delay		31.5		41.0			26.0			22.1
Approach LOS		C		D			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93.4	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 26.9	Intersection LOS: C
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	47	56	233	27	61	18	1081	138	36	804	22
Future Volume (veh/h)	57	47	56	233	27	61	18	1081	138	36	804	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	63	52	27	256	30	26	20	1188	116	40	884	15
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	281	135	294	449	375	40	1634	719	64	2448	42
Arrive On Green	0.05	0.12	0.12	0.16	0.24	0.24	0.02	0.45	0.45	0.04	0.47	0.47
Sat Flow, veh/h	1810	2358	1136	1810	1900	1589	1810	3610	1589	1810	5253	89
Grp Volume(v), veh/h	63	39	40	256	30	26	20	1188	116	40	582	317
Grp Sat Flow(s),veh/h/ln	1810	1805	1689	1810	1900	1589	1810	1805	1589	1810	1729	1884
Q Serve(g_s), s	3.1	1.7	1.9	12.3	1.1	1.1	1.0	23.8	3.8	1.9	9.6	9.6
Cycle Q Clear(g_c), s	3.1	1.7	1.9	12.3	1.1	1.1	1.0	23.8	3.8	1.9	9.6	9.6
Prop In Lane	1.00		0.67	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	82	215	201	294	449	375	40	1634	719	64	1611	878
V/C Ratio(X)	0.77	0.18	0.20	0.87	0.07	0.07	0.50	0.73	0.16	0.63	0.36	0.36
Avail Cap(c_a), veh/h	196	732	684	395	980	820	112	1634	719	102	1611	878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	35.2	35.3	36.3	26.3	26.3	43.0	19.8	14.4	42.3	15.2	15.2
Incr Delay (d2), s/veh	5.7	0.4	0.5	12.1	0.1	0.1	3.6	2.9	0.5	3.7	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.8	0.8	6.2	0.5	0.4	0.5	9.7	1.4	0.9	3.4	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	35.6	35.8	48.5	26.4	26.4	46.6	22.7	14.8	46.0	15.9	16.4
LnGrp LOS	D	D	D	D	C	C	D	C	B	D	B	B
Approach Vol, veh/h		142			312			1324			939	
Approach Delay, s/veh		41.0			44.5			22.4			17.3	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	46.4	19.0	15.7	6.5	47.6	8.6	26.1
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	3.9	25.8	14.3	3.9	3.0	11.6	5.1	3.1
Green Ext Time (p_c), s	0.0	7.2	0.2	0.4	0.0	5.5	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

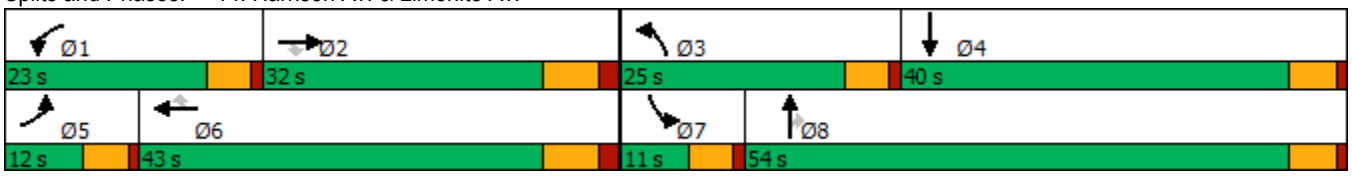
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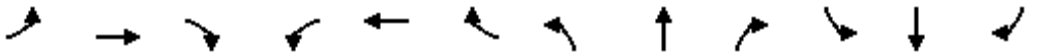
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	40	400	11	163	679	5	111	106	220	21	120
Future Volume (vph)	40	400	11	163	679	5	111	106	220	21	120
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.3	12.9	12.9	11.4	23.9	23.9	9.4	22.5	22.5	5.8	14.5
Actuated g/C Ratio	0.09	0.19	0.19	0.16	0.34	0.34	0.14	0.32	0.32	0.08	0.21
v/c Ratio	0.26	0.44	0.03	0.59	0.41	0.01	0.49	0.18	0.35	0.15	0.46
Control Delay	42.6	29.7	0.1	40.8	22.3	0.0	40.8	19.5	4.8	42.3	28.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	29.7	0.1	40.8	22.3	0.0	40.8	19.5	4.8	42.3	28.1
LOS	D	C	A	D	C	A	D	B	A	D	C
Approach Delay		30.1			25.7			17.5			29.7
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 69.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 25.3	Intersection LOS: C
Intersection Capacity Utilization 51.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	400	11	163	679	5	111	106	220	21	120	48
Future Volume (veh/h)	40	400	11	163	679	5	111	106	220	21	120	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	426	9	173	722	3	118	113	141	22	128	34
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	945	293	222	1346	418	153	387	323	48	210	56
Arrive On Green	0.05	0.18	0.18	0.12	0.26	0.26	0.08	0.20	0.20	0.03	0.15	0.15
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	1900	1587	1810	1447	384
Grp Volume(v), veh/h	43	426	9	173	722	3	118	113	141	22	0	162
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	1900	1587	1810	0	1831
Q Serve(g_s), s	1.1	3.5	0.2	4.4	5.7	0.1	3.1	2.4	3.7	0.6	0.0	4.0
Cycle Q Clear(g_c), s	1.1	3.5	0.2	4.4	5.7	0.1	3.1	2.4	3.7	0.6	0.0	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	82	945	293	222	1346	418	153	387	323	48	0	266
V/C Ratio(X)	0.52	0.45	0.03	0.78	0.54	0.01	0.77	0.29	0.44	0.46	0.00	0.61
Avail Cap(c_a), veh/h	264	2704	839	679	3894	1209	755	1930	1612	226	0	1325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.4	17.5	16.1	20.4	15.3	13.2	21.5	16.2	16.7	23.0	0.0	19.2
Incr Delay (d2), s/veh	1.9	0.3	0.0	2.2	0.3	0.0	3.1	0.4	0.9	2.5	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.1	0.1	1.6	1.7	0.0	1.2	0.9	1.2	0.2	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.3	17.8	16.2	22.6	15.6	13.2	24.5	16.6	17.6	25.5	0.0	21.5
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	A	C
Approach Vol, veh/h		478			898			372			184	
Approach Delay, s/veh		18.4			17.0			19.5			22.0	
Approach LOS		B			B			B			C	

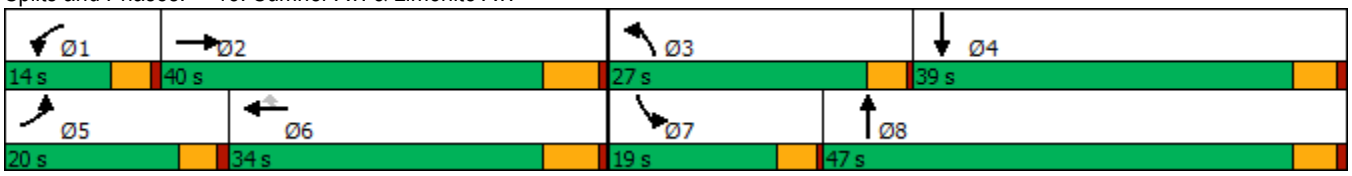
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	15.7	9.1	12.3	7.2	19.4	6.3	15.1
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	6.4	5.5	5.1	6.0	3.1	7.7	2.6	5.7
Green Ext Time (p_c), s	0.1	2.4	0.1	0.8	0.0	4.7	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	238	449	91	572	38	124	433	86	270
Future Volume (vph)	238	449	91	572	38	124	433	86	270
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	10.0	21.6	6.4	15.5	15.5	10.1	21.6	8.2	17.2
Actuated g/C Ratio	0.14	0.29	0.09	0.21	0.21	0.14	0.29	0.11	0.23
v/c Ratio	0.53	0.33	0.32	0.56	0.08	0.53	0.59	0.45	0.51
Control Delay	37.2	23.5	39.8	29.9	0.3	41.9	24.7	42.9	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	23.5	39.8	29.9	0.3	41.9	24.7	42.9	22.7
LOS	D	C	D	C	A	D	C	D	C
Approach Delay		28.1		29.6			27.7		26.2
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 73.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 28.0	Intersection LOS: C
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	449	22	91	572	38	124	433	145	86	270	138
Future Volume (veh/h)	238	449	22	91	572	38	124	433	145	86	270	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	253	478	14	97	609	22	132	461	93	91	287	68
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	383	1380	40	205	1119	347	171	693	139	117	586	137
Arrive On Green	0.11	0.27	0.27	0.06	0.22	0.22	0.09	0.23	0.23	0.06	0.20	0.20
Sat Flow, veh/h	3510	5177	151	3510	5187	1610	1810	2996	600	1810	2906	677
Grp Volume(v), veh/h	253	319	173	97	609	22	132	277	277	91	177	178
Grp Sat Flow(s),veh/h/ln	1755	1729	1870	1755	1729	1610	1810	1805	1791	1810	1805	1778
Q Serve(g_s), s	3.6	3.8	3.9	1.4	5.4	0.6	3.7	7.2	7.2	2.5	4.5	4.6
Cycle Q Clear(g_c), s	3.6	3.8	3.9	1.4	5.4	0.6	3.7	7.2	7.2	2.5	4.5	4.6
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.34	1.00		0.38
Lane Grp Cap(c), veh/h	383	921	498	205	1119	347	171	418	415	117	364	358
V/C Ratio(X)	0.66	0.35	0.35	0.47	0.54	0.06	0.77	0.66	0.67	0.78	0.49	0.50
Avail Cap(c_a), veh/h	1057	2285	1236	648	2822	876	809	1473	1462	527	1192	1175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	15.3	15.3	23.5	17.9	16.0	22.7	17.9	18.0	23.7	18.2	18.2
Incr Delay (d2), s/veh	0.7	0.2	0.4	0.6	0.4	0.1	2.7	1.3	1.4	4.1	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.2	1.3	0.5	1.7	0.2	1.5	2.6	2.6	1.1	1.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	15.5	15.7	24.1	18.3	16.1	25.5	19.3	19.4	27.8	18.9	19.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		745			728			686			446	
Approach Delay, s/veh		18.0			19.0			20.5			20.8	
Approach LOS		B			B			C			C	

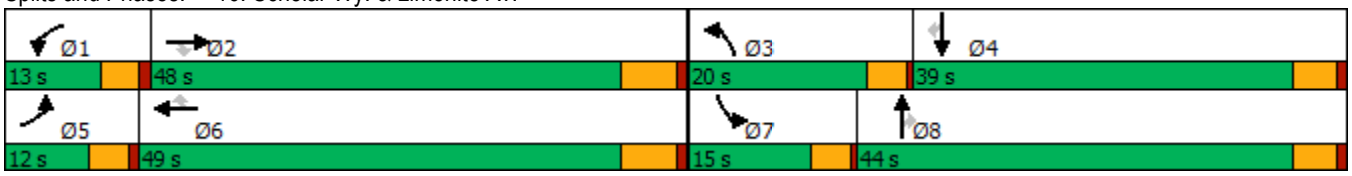
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	19.7	8.9	15.4	10.1	17.1	7.3	16.9
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	3.4	5.9	5.7	6.6	5.6	7.4	4.5	9.2
Green Ext Time (p_c), s	0.0	2.8	0.1	1.5	0.2	3.6	0.0	2.5

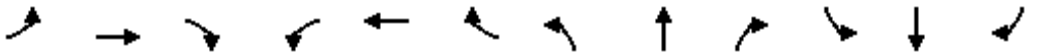
Intersection Summary	
HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	670	64	62	550	36	89	174	115	54	201	31
Future Volume (vph)	39	670	64	62	550	36	89	174	115	54	201	31
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	6.3	21.4	21.4	7.1	24.4	24.4	8.6	16.9	16.9	7.1	13.4	13.4
Actuated g/C Ratio	0.10	0.32	0.32	0.11	0.37	0.37	0.13	0.26	0.26	0.11	0.20	0.20
v/c Ratio	0.24	0.61	0.11	0.34	0.44	0.06	0.40	0.38	0.25	0.30	0.29	0.10
Control Delay	41.0	24.2	0.4	41.3	20.2	0.2	39.2	26.6	6.6	39.9	26.5	26.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	24.2	0.4	41.3	20.2	0.2	39.2	26.6	6.6	39.9	26.5	26.5
LOS	D	C	A	D	C	A	D	C	A	D	C	C
Approach Delay		23.0			21.1			23.5			29.0	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 66.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 23.3	Intersection LOS: C
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 16: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	670	64	62	550	36	89	174	115	54	201	31
Future Volume (veh/h)	39	670	64	62	550	36	89	174	115	54	201	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	713	48	66	585	27	95	185	77	57	214	33
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	64	1147	510	88	1197	533	122	342	286	80	566	243
Arrive On Green	0.04	0.32	0.32	0.05	0.33	0.33	0.07	0.18	0.18	0.04	0.16	0.16
Sat Flow, veh/h	1810	3610	1606	1810	3610	1608	1810	1900	1589	1810	3610	1549
Grp Volume(v), veh/h	41	713	48	66	585	27	95	185	77	57	214	33
Grp Sat Flow(s),veh/h/ln	1810	1805	1606	1810	1805	1608	1810	1900	1589	1810	1805	1549
Q Serve(g_s), s	1.1	8.0	1.0	1.7	6.2	0.5	2.5	4.2	2.0	1.5	2.5	0.9
Cycle Q Clear(g_c), s	1.1	8.0	1.0	1.7	6.2	0.5	2.5	4.2	2.0	1.5	2.5	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	1147	510	88	1197	533	122	342	286	80	566	243
V/C Ratio(X)	0.64	0.62	0.09	0.75	0.49	0.05	0.78	0.54	0.27	0.71	0.38	0.14
Avail Cap(c_a), veh/h	285	3179	1414	322	3254	1449	607	1554	1299	417	2573	1104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	13.8	11.4	22.4	12.7	10.8	21.9	17.8	16.9	22.5	18.0	17.3
Incr Delay (d2), s/veh	4.0	0.6	0.1	4.6	0.3	0.0	3.9	1.0	0.4	4.2	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.4	0.3	0.7	1.8	0.2	1.1	1.7	0.7	0.7	0.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	14.4	11.5	27.0	13.0	10.9	25.8	18.8	17.2	26.7	18.3	17.5
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		802			678			357			304	
Approach Delay, s/veh		14.8			14.3			20.3			19.8	
Approach LOS		B			B			C			B	

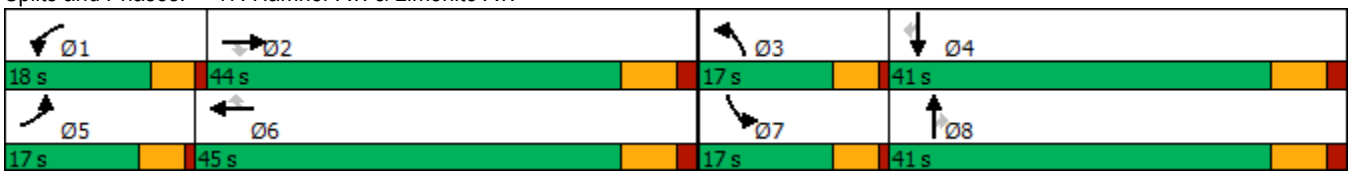
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	21.2	7.2	12.5	6.2	21.8	6.1	13.6
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	3.7	10.0	4.5	4.5	3.1	8.2	3.5	6.2
Green Ext Time (p_c), s	0.0	4.9	0.0	1.2	0.0	3.8	0.0	1.0

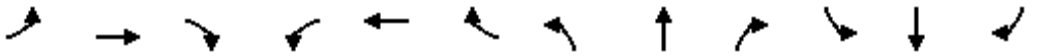
Intersection Summary	
HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	565	34	212	424	100	135	581	301	197	324	95
Future Volume (vph)	160	565	34	212	424	100	135	581	301	197	324	95
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	8.6	21.2	21.2	9.9	22.5	22.5	7.9	24.3	24.3	9.4	25.8	25.8
Actuated g/C Ratio	0.10	0.24	0.24	0.11	0.25	0.25	0.09	0.27	0.27	0.11	0.29	0.29
v/c Ratio	0.52	0.50	0.08	0.60	0.51	0.22	0.48	0.45	0.52	0.59	0.24	0.19
Control Delay	47.1	32.0	0.3	47.3	32.1	5.3	47.3	28.8	9.5	47.8	25.6	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	32.0	0.3	47.3	32.1	5.3	47.3	28.8	9.5	47.8	25.6	4.0
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		33.8			32.8			25.5			29.4	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 89.5	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 30.0	Intersection LOS: C
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	565	34	212	424	100	135	581	301	197	324	95
Future Volume (veh/h)	160	565	34	212	424	100	135	581	301	197	324	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	174	614	27	230	461	72	147	632	163	214	352	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	262	1227	375	324	917	404	231	1322	404	306	1433	439
Arrive On Green	0.07	0.24	0.24	0.09	0.25	0.25	0.07	0.25	0.25	0.09	0.28	0.28
Sat Flow, veh/h	3510	5187	1586	3510	3610	1589	3510	5187	1584	3510	5187	1590
Grp Volume(v), veh/h	174	614	27	230	461	72	147	632	163	214	352	39
Grp Sat Flow(s),veh/h/ln	1755	1729	1586	1755	1805	1589	1755	1729	1584	1755	1729	1590
Q Serve(g_s), s	3.5	7.5	1.0	4.6	8.0	2.6	3.0	7.5	6.2	4.3	3.8	1.3
Cycle Q Clear(g_c), s	3.5	7.5	1.0	4.6	8.0	2.6	3.0	7.5	6.2	4.3	3.8	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	1227	375	324	917	404	231	1322	404	306	1433	439
V/C Ratio(X)	0.66	0.50	0.07	0.71	0.50	0.18	0.64	0.48	0.40	0.70	0.25	0.09
Avail Cap(c_a), veh/h	578	2632	805	626	1882	828	578	2419	739	578	2419	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	24.1	21.6	32.1	23.3	21.2	33.2	23.0	22.6	32.3	20.5	19.6
Incr Delay (d2), s/veh	1.1	0.7	0.2	1.1	0.9	0.4	1.1	0.6	1.4	1.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.8	0.3	1.9	3.2	0.9	1.2	2.8	2.2	1.7	1.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	24.8	21.8	33.2	24.2	21.7	34.3	23.6	24.0	33.4	20.7	19.8
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	B
Approach Vol, veh/h		815			763			942			605	
Approach Delay, s/veh		26.6			26.7			25.3			25.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	24.2	9.8	27.1	10.5	25.5	11.4	25.6
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	6.6	9.5	5.0	5.8	5.5	10.0	6.3	9.5
Green Ext Time (p_c), s	0.1	7.8	0.1	4.4	0.1	6.1	0.1	8.8

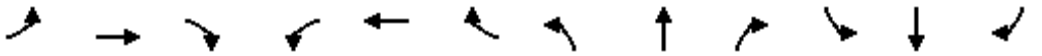
Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	735	457	484	622	88	0	335
Future Volume (vph)	735	457	484	622	88	0	335
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	36.5	36.5	23.5	23.5	23.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.5	73.5	73.5	73.5	7.0	7.0	7.0
Actuated g/C Ratio	0.80	0.80	0.80	0.80	0.08	0.08	0.08
v/c Ratio	0.18	0.34	0.12	0.45	0.35	0.35	0.65
Control Delay	2.3	0.9	2.1	1.3	47.3	47.6	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.3	0.9	2.1	1.3	47.3	47.6	10.9
LOS	A	A	A	A	D	D	B
Approach Delay	1.8		1.6			18.5	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 4.3	Intersection LOS: A
Intersection Capacity Utilization 43.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 18: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰	↱↱
Traffic Volume (veh/h)	0	735	457	0	484	622	0	0	0	88	0	335
Future Volume (veh/h)	0	735	457	0	484	622	0	0	0	88	0	335
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	758	434	0	499	641				91	0	137
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4205	1289	0	4205	1305				246	0	218
Arrive On Green	0.00	0.81	0.81	0.00	0.81	0.81				0.07	0.00	0.07
Sat Flow, veh/h	0	5358	1590	0	5358	1610				3619	0	3206
Grp Volume(v), veh/h	0	758	434	0	499	641				91	0	137
Grp Sat Flow(s),veh/h/ln	0	1729	1590	0	1729	1610				1810	0	1603
Q Serve(g_s), s	0.0	2.9	6.4	0.0	1.8	11.4				2.2	0.0	3.8
Cycle Q Clear(g_c), s	0.0	2.9	6.4	0.0	1.8	11.4				2.2	0.0	3.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4205	1289	0	4205	1305				246	0	218
V/C Ratio(X)	0.00	0.18	0.34	0.00	0.12	0.49				0.37	0.00	0.63
Avail Cap(c_a), veh/h	0	4205	1289	0	4205	1305				1417	0	1255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	1.9	2.2	0.0	1.8	2.7				40.4	0.0	41.1
Incr Delay (d2), s/veh	0.0	0.1	0.7	0.0	0.1	1.3				0.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	1.2	0.0	0.3	2.2				0.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.0	2.9	0.0	1.9	4.0				40.7	0.0	42.2
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1192			1140						228	
Approach Delay, s/veh		2.3			3.1						41.6	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		11.7		79.0						
Change Period (Y+Rc), s		5.5		5.5		5.5						
Max Green Setting (Gmax), s		73.5		35.5		73.5						
Max Q Clear Time (g_c+I1), s		8.4		5.8		13.4						
Green Ext Time (p_c), s		4.7		0.4		3.7						

Intersection Summary												
HCM 6th Ctrl Delay			6.2									
HCM 6th LOS			A									

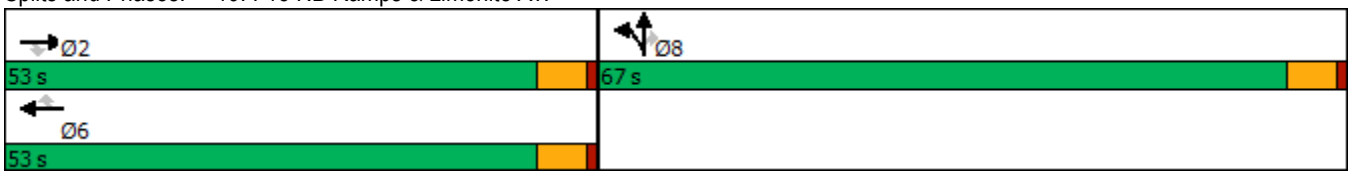
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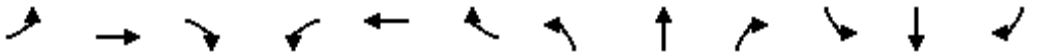
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	302	521	889	245	217	0	295
Future Volume (vph)	302	521	889	245	217	0	295
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.5	47.5	47.5	47.5	10.2	10.2	10.2
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.15	0.15	0.15
v/c Ratio	0.09	0.42	0.25	0.21	0.43	0.44	0.44
Control Delay	3.9	1.6	4.5	1.2	31.9	32.0	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.9	1.6	4.5	1.2	31.9	32.0	5.8
LOS	A	A	A	A	C	C	A
Approach Delay	2.5		3.8			16.8	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 68.8	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 6.0	Intersection LOS: A
Intersection Capacity Utilization 37.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↰	↱↱			
Traffic Volume (veh/h)	0	302	521	0	889	245	217	0	295	0	0	0
Future Volume (veh/h)	0	302	521	0	889	245	217	0	295	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	308	532	0	907	217	221	0	103			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3765	1168	0	3765	1169	384	0	341			
Arrive On Green	0.00	0.73	0.73	0.00	0.73	0.73	0.11	0.00	0.11			
Sat Flow, veh/h	0	5358	1609	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	308	532	0	907	217	221	0	103			
Grp Sat Flow(s),veh/h/ln	0	1729	1609	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	1.1	8.9	0.0	3.8	2.8	3.8	0.0	1.9			
Cycle Q Clear(g_c), s	0.0	1.1	8.9	0.0	3.8	2.8	3.8	0.0	1.9			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3765	1168	0	3765	1169	384	0	341			
V/C Ratio(X)	0.00	0.08	0.46	0.00	0.24	0.19	0.58	0.00	0.30			
Avail Cap(c_a), veh/h	0	3765	1168	0	3765	1169	3401	0	3027			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	2.6	3.7	0.0	3.0	2.8	27.8	0.0	27.0			
Incr Delay (d2), s/veh	0.0	0.0	1.3	0.0	0.2	0.4	1.4	0.0	0.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.2	1.9	0.0	0.7	0.6	1.6	0.0	0.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.7	5.0	0.0	3.1	3.2	29.2	0.0	27.5			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		840			1124			324				
Approach Delay, s/veh		4.1			3.1			28.7				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		12.4				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		10.9				5.8		5.8				
Green Ext Time (p_c), s		2.4				5.1		1.2				

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

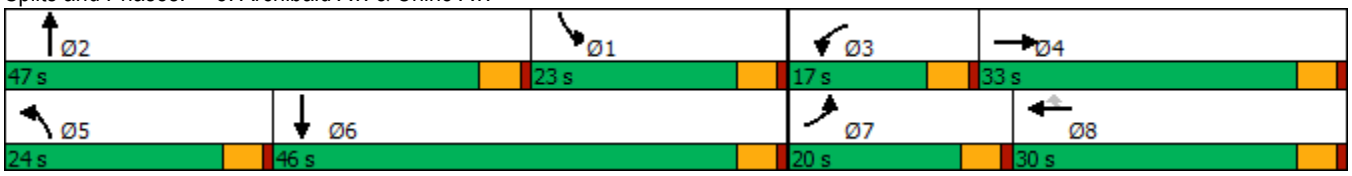
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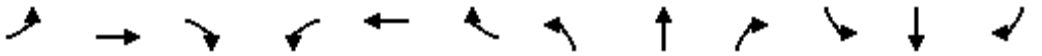
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	125	161	22	44	110	56	847	141	1111
Future Volume (vph)	125	161	22	44	110	56	847	141	1111
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.1	23.1	7.0	10.8	10.8	8.8	23.8	24.8	42.5
Actuated g/C Ratio	0.13	0.26	0.08	0.12	0.12	0.10	0.26	0.27	0.47
v/c Ratio	0.60	0.60	0.18	0.21	0.38	0.37	0.72	0.33	0.76
Control Delay	52.2	35.2	47.6	39.6	7.7	48.9	33.9	33.6	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	35.2	47.6	39.6	7.7	48.9	33.9	33.6	26.9
LOS	D	D	D	D	A	D	C	C	C
Approach Delay		40.7		20.6			34.8		27.6
Approach LOS		D		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.4	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 31.4	Intersection LOS: C
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	161	99	22	44	110	56	847	42	141	1111	58
Future Volume (veh/h)	125	161	99	22	44	110	56	847	42	141	1111	58
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	130	168	103	23	46	76	58	882	41	147	1157	55
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	164	212	130	42	231	196	81	1342	62	341	1462	69
Arrive On Green	0.10	0.20	0.20	0.03	0.13	0.13	0.05	0.28	0.28	0.21	0.44	0.44
Sat Flow, veh/h	1619	1044	640	1619	1800	1525	1619	4813	223	1619	3324	158
Grp Volume(v), veh/h	130	0	271	23	46	76	58	600	323	147	595	617
Grp Sat Flow(s),veh/h/ln	1619	0	1685	1619	1800	1525	1619	1638	1760	1619	1710	1772
Q Serve(g_s), s	5.1	0.0	10.0	0.9	1.5	1.8	2.3	10.6	10.6	5.2	19.6	19.6
Cycle Q Clear(g_c), s	5.1	0.0	10.0	0.9	1.5	1.8	2.3	10.6	10.6	5.2	19.6	19.6
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.13	1.00		0.09
Lane Grp Cap(c), veh/h	164	0	342	42	231	196	81	914	491	341	752	779
V/C Ratio(X)	0.79	0.00	0.79	0.54	0.20	0.39	0.72	0.66	0.66	0.43	0.79	0.79
Avail Cap(c_a), veh/h	381	0	731	307	698	592	480	2121	1139	455	1081	1120
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	24.8	31.5	25.5	9.3	30.7	20.8	20.9	22.4	15.8	15.8
Incr Delay (d2), s/veh	8.4	0.0	4.1	10.5	0.4	1.3	11.4	0.8	1.5	0.9	2.6	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	4.0	0.5	0.6	1.0	1.1	3.4	3.8	1.8	6.4	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	0.0	28.9	42.0	26.0	10.6	42.0	21.7	22.4	23.3	18.4	18.3
LnGrp LOS	D	A	C	D	C	B	D	C	C	C	B	B
Approach Vol, veh/h		401			145			981			1359	
Approach Delay, s/veh		31.6			20.4			23.1			18.9	
Approach LOS		C			C			C			B	

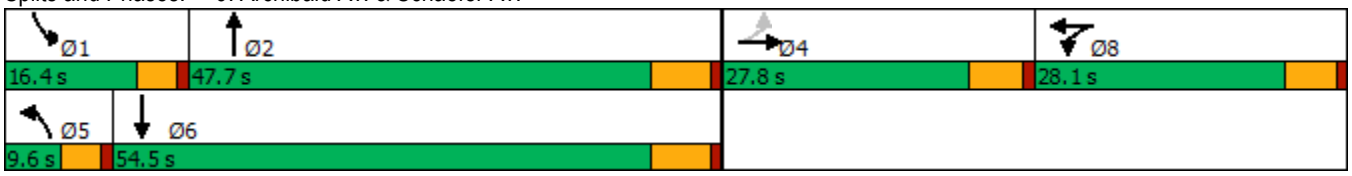
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	22.9	6.3	17.9	7.9	33.4	11.2	13.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	7.2	12.6	2.9	12.0	4.3	21.6	7.1	3.8
Green Ext Time (p_c), s	0.2	5.6	0.0	1.3	0.1	7.2	0.2	0.4

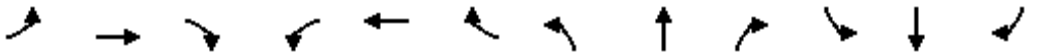
Intersection Summary	
HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	10	0	840	36	1152		
Future Volume (vph)	10	0	840	36	1152		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	47.7	16.4	54.5	27.8	9.6
Total Split (%)	23.4%	23.4%	39.8%	13.7%	45.4%	23%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	16.0	16.0	31.6	8.5	35.1		
Actuated g/C Ratio	0.32	0.32	0.64	0.17	0.71		
v/c Ratio	0.02	0.05	0.29	0.14	0.50		
Control Delay	26.0	0.1	13.8	32.3	12.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	26.0	0.1	13.8	32.3	12.0		
LOS	C	A	B	C	B		
Approach Delay		5.4	13.8		12.6		
Approach LOS		A	B		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 49.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 52.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	0	41	0	840	23	36	1152	0
Future Volume (veh/h)	0	0	0	10	0	41	0	840	23	36	1152	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	11	0	27	0	884	23	38	1213	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	5	0	143	0	134	5	1921	50	71	1930	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.39	0.39	0.04	0.56	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4922	128	1619	3510	0
Grp Volume(v), veh/h	0	0	0	11	0	27	0	588	319	38	1213	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1774	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.6	0.0	4.7	4.7	0.8	8.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.2	0.0	0.6	0.0	4.7	4.7	0.8	8.5	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	0	5	0	143	0	134	5	1278	692	71	1930	0
V/C Ratio(X)	0.00	0.00	0.00	0.08	0.00	0.20	0.00	0.46	0.46	0.53	0.63	0.00
Avail Cap(c_a), veh/h	0	1119	0	1020	0	961	229	3815	2065	540	4640	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.8	0.0	15.0	0.0	8.0	8.0	16.6	5.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.7	0.0	0.3	0.5	2.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.7	0.9	0.3	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	15.0	0.0	15.7	0.0	8.3	8.5	18.8	5.5	0.0
LnGrp LOS	A	A	A	B	A	B	A	A	A	B	A	A
Approach Vol, veh/h		0			38			907			1251	
Approach Delay, s/veh		0.0			15.5			8.4			5.9	
Approach LOS					B			A			A	

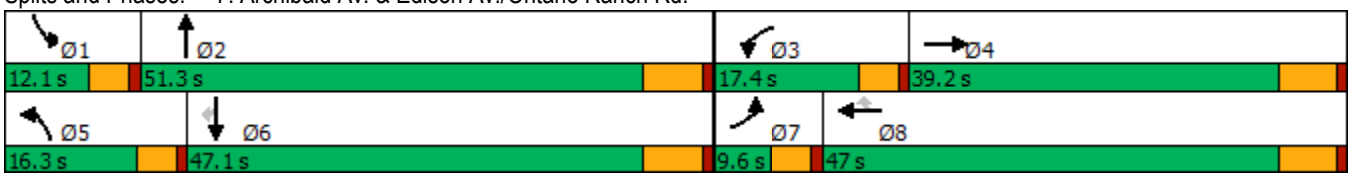
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	20.3		0.0	0.0	26.5		8.9				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	2.8	6.7		0.0	0.0	10.5		2.6				
Green Ext Time (p_c), s	0.0	5.6		0.0	0.0	9.5		0.1				

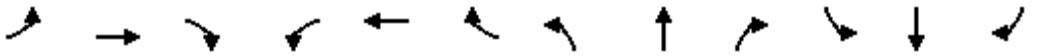
Intersection Summary		
HCM 6th Ctrl Delay		7.1
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	595	109	285	209	87	53	472	287	131	954	84
Future Volume (vph)	85	595	109	285	209	87	53	472	287	131	954	84
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.2	24.1	100.1	12.8	31.7	31.7	8.1	32.5	100.1	7.8	35.1	35.1
Actuated g/C Ratio	0.05	0.24	1.00	0.13	0.32	0.32	0.08	0.32	1.00	0.08	0.35	0.35
v/c Ratio	0.58	0.75	0.07	0.78	0.38	0.16	0.42	0.44	0.20	1.07	0.82	0.14
Control Delay	67.8	42.5	0.1	60.9	30.5	3.5	59.0	27.4	0.3	150.4	37.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	42.5	0.1	60.9	30.5	3.5	59.0	27.4	0.3	150.4	37.8	0.5
LOS	E	D	A	E	C	A	E	C	A	F	D	A
Approach Delay		39.4			41.3			19.9			47.7	
Approach LOS		D			D			B			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 37.9	Intersection LOS: D
Intersection Capacity Utilization 77.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	595	109	285	209	87	53	472	287	131	954	84
Future Volume (veh/h)	85	595	109	285	209	87	53	472	287	131	954	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	88	613	0	294	215	56	55	487	0	135	984	71
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	150	785		360	541	458	69	1055		141	1207	526
Arrive On Green	0.05	0.23	0.00	0.12	0.30	0.30	0.04	0.31	0.00	0.09	0.35	0.35
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1490
Grp Volume(v), veh/h	88	613	0	294	215	56	55	487	0	135	984	71
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1490
Q Serve(g_s), s	2.5	14.5	0.0	8.4	8.2	2.3	2.9	9.9	0.0	7.2	22.6	2.8
Cycle Q Clear(g_c), s	2.5	14.5	0.0	8.4	8.2	2.3	2.9	9.9	0.0	7.2	22.6	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	150	785		360	541	458	69	1055		141	1207	526
V/C Ratio(X)	0.59	0.78		0.82	0.40	0.12	0.80	0.46		0.96	0.82	0.14
Avail Cap(c_a), veh/h	171	1306		438	850	720	219	1774		141	1607	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	31.2	0.0	37.0	24.0	22.0	41.0	24.1	0.0	39.3	25.4	19.0
Incr Delay (d2), s/veh	1.8	1.7	0.0	8.1	0.5	0.1	7.8	0.3	0.0	63.3	2.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.7	0.0	3.2	3.2	0.8	1.2	3.6	0.0	5.1	8.4	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	33.0	0.0	45.1	24.5	22.1	48.8	24.4	0.0	102.6	27.9	19.1
LnGrp LOS	D	C		D	C	C	D	C		F	C	B
Approach Vol, veh/h		701	A		565			542	A		1190	
Approach Delay, s/veh		34.1			35.0			26.9			35.8	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	33.2	15.1	26.0	8.3	37.0	9.0	32.1
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	9.2	11.9	10.4	16.5	4.9	24.6	4.5	10.2
Green Ext Time (p_c), s	0.0	2.9	0.1	3.3	0.0	5.7	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

Notes

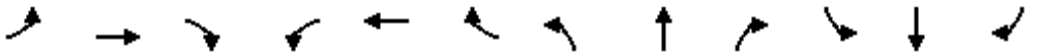
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	19	793	7	52	1296
Future Volume (vph)	3	19	793	7	52	1296
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	13.6%	13.6%	59.1%	59.1%	13.7%	72.9%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.1	5.1	47.0	47.0	5.1	56.4
Actuated g/C Ratio	0.08	0.08	0.77	0.77	0.08	0.93
v/c Ratio	0.01	0.05	0.31	0.01	0.40	0.42
Control Delay	26.3	0.2	5.2	6.0	36.2	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	0.2	5.2	6.0	36.2	2.7
LOS	C	A	A	A	D	A
Approach Delay			5.2			4.0
Approach LOS			A			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 60.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 4.4	Intersection LOS: A
Intersection Capacity Utilization 49.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	3	0	19	0	793	7	52	1296	0
Future Volume (veh/h)	0	0	0	3	0	19	0	793	7	52	1296	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				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				3	0	1	0	818	6	54	1336	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				17	0	14	0	2272	1013	82	2727	0
Arrive On Green				0.01	0.00	0.01	0.00	0.66	0.66	0.05	0.80	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1525	1619	3510	0
Grp Volume(v), veh/h				3	0	1	0	818	6	54	1336	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1525	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.0	0.0	5.9	0.1	1.8	7.2	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.0	0.0	5.9	0.1	1.8	7.2	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				17	0	14	0	2272	1013	82	2727	0
V/C Ratio(X)				0.18	0.00	0.07	0.00	0.36	0.01	0.66	0.49	0.00
Avail Cap(c_a), veh/h				281	0	241	0	2272	1013	145	2727	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.6	0.0	27.6	0.0	4.1	3.2	26.0	1.9	0.0
Incr Delay (d2), s/veh				4.9	0.0	2.0	0.0	0.4	0.0	3.3	0.6	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.0	0.0	0.0	0.0	0.8	0.0	0.7	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.5	0.0	29.6	0.0	4.6	3.2	29.3	2.5	0.0
LnGrp LOS				C	A	C	A	A	A	C	A	A
Approach Vol, veh/h					4			824			1390	
Approach Delay, s/veh					31.8			4.6			3.6	
Approach LOS					C			A			A	

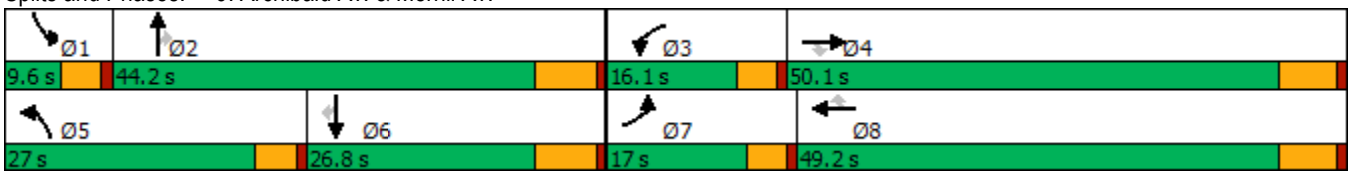
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	7.4	43.6				51.0		4.8				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	3.8	7.9				9.2		2.1				
Green Ext Time (p_c), s	0.0	5.2				10.8		0.0				

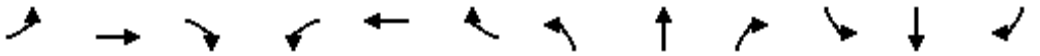
Intersection Summary		
HCM 6th Ctrl Delay		4.0
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	305	71	470	45	24	52	141	603	39	70	933	186
Future Volume (vph)	305	71	470	45	24	52	141	603	39	70	933	186
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.2	21.4	21.4	7.2	15.1	15.1	11.8	30.8	30.8	5.3	21.6	21.6
Actuated g/C Ratio	0.16	0.27	0.27	0.09	0.19	0.19	0.15	0.38	0.38	0.07	0.27	0.27
v/c Ratio	1.18	0.15	0.64	0.32	0.07	0.13	0.61	0.47	0.06	0.37	1.05	0.37
Control Delay	149.4	25.1	6.7	46.2	27.9	0.7	46.9	23.8	0.2	48.1	74.7	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	149.4	25.1	6.7	46.2	27.9	0.7	46.9	23.8	0.2	48.1	74.7	11.6
LOS	F	C	A	D	C	A	D	C	A	D	E	B
Approach Delay		59.6			22.9			26.8			63.3	
Approach LOS		E			C			C			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 80.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 50.8	Intersection LOS: D
Intersection Capacity Utilization 76.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	305	71	470	45	24	52	141	603	39	70	933	186
Future Volume (veh/h)	305	71	470	45	24	52	141	603	39	70	933	186
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	314	73	300	46	25	15	145	622	26	72	962	134
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	276	480	407	67	248	210	179	1154	515	156	956	426
Arrive On Green	0.17	0.27	0.27	0.04	0.14	0.14	0.11	0.34	0.34	0.05	0.28	0.28
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	314	73	300	46	25	15	145	622	26	72	962	134
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1525	1478	1710	1525
Q Serve(g_s), s	12.4	2.3	13.0	2.0	0.9	0.6	6.4	10.7	0.8	1.7	20.3	5.0
Cycle Q Clear(g_c), s	12.4	2.3	13.0	2.0	0.9	0.6	6.4	10.7	0.8	1.7	20.3	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	276	480	407	67	248	210	179	1154	515	156	956	426
V/C Ratio(X)	1.14	0.15	0.74	0.68	0.10	0.07	0.81	0.54	0.05	0.46	1.01	0.31
Avail Cap(c_a), veh/h	276	1088	922	256	1066	903	499	1775	792	204	956	426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	20.3	24.3	34.3	27.4	27.3	31.6	19.5	16.2	33.4	26.2	20.7
Incr Delay (d2), s/veh	95.9	0.1	2.6	4.5	0.2	0.1	3.3	0.4	0.0	0.8	30.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	0.9	4.6	0.9	0.4	0.2	2.4	3.6	0.3	0.6	11.1	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.0	20.5	26.9	38.8	27.6	27.4	34.9	19.9	16.3	34.2	56.8	21.1
LnGrp LOS	F	C	C	D	C	C	C	B	B	C	F	C
Approach Vol, veh/h		687			86			793			1168	
Approach Delay, s/veh		71.5			33.5			22.5			51.3	
Approach LOS		E			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	31.0	7.6	25.6	12.6	26.8	17.0	16.2
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.7	12.7	4.0	15.0	8.4	22.3	14.4	2.9
Green Ext Time (p_c), s	0.0	3.8	0.0	1.3	0.1	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	47.5
HCM 6th LOS	D

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	403	228	521	370	457	994
Future Volume (vph)	403	228	521	370	457	994
Turn Type	Prot	pm+ov	NA	pm+ov	Prot	NA
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Detector Phase	8	1	2	8	1	6
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	36.3	11.0	46.3	36.3	11.0	11.0
Total Split (s)	36.3	27.0	56.7	36.3	27.0	83.7
Total Split (%)	30.3%	22.5%	47.3%	30.3%	22.5%	69.8%
Yellow Time (s)	4.3	4.0	4.3	4.3	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.0	5.3	5.3	5.0	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	Min	None	None	Min
Act Effct Green (s)	26.9	54.8	35.5	62.4	22.5	63.5
Actuated g/C Ratio	0.27	0.54	0.35	0.62	0.22	0.63
v/c Ratio	0.88	0.24	0.81	0.39	1.18	0.87
Control Delay	57.0	3.9	40.0	7.3	142.2	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	3.9	40.0	7.3	142.2	25.0
LOS	E	A	D	A	F	C
Approach Delay			26.5			62.0
Approach LOS			C			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 46.2	Intersection LOS: D
Intersection Capacity Utilization 87.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	403	0	228	0	521	370	457	994	0
Future Volume (veh/h)	0	0	0	403	0	228	0	521	370	457	994	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	0	1900	0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h				420	0	119	0	543	304	476	1035	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				455	0	787	0	651	945	430	1205	0
Arrive On Green				0.25	0.00	0.25	0.00	0.34	0.34	0.24	0.63	0.00
Sat Flow, veh/h				1810	0	1610	0	1900	1576	1810	1900	0
Grp Volume(v), veh/h				420	0	119	0	543	304	476	1035	0
Grp Sat Flow(s),veh/h/ln				1810	0	1610	0	1900	1576	1810	1900	0
Q Serve(g_s), s				21.0	0.0	3.8	0.0	24.4	9.0	22.0	40.6	0.0
Cycle Q Clear(g_c), s				21.0	0.0	3.8	0.0	24.4	9.0	22.0	40.6	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				455	0	787	0	651	945	430	1205	0
V/C Ratio(X)				0.92	0.00	0.15	0.00	0.83	0.32	1.11	0.86	0.00
Avail Cap(c_a), veh/h				605	0	921	0	1054	1279	430	1614	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				33.8	0.0	13.1	0.0	28.0	9.5	35.3	13.6	0.0
Incr Delay (d2), s/veh				14.5	0.0	0.0	0.0	3.7	0.2	76.1	3.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				10.3	0.0	1.2	0.0	10.7	5.0	17.9	13.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.3	0.0	13.1	0.0	31.8	9.7	111.4	16.6	0.0
LnGrp LOS				D	A	B	A	C	A	F	B	A
Approach Vol, veh/h					539			847			1511	
Approach Delay, s/veh					40.5			23.9			46.5	
Approach LOS					D			C			D	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	27.0	37.1				64.1		28.6				
Change Period (Y+Rc), s	5.0	5.3				* 5.3		5.3				
Max Green Setting (Gmax), s	22.0	51.4				* 79		31.0				
Max Q Clear Time (g_c+I1), s	24.0	26.4				42.6		23.0				
Green Ext Time (p_c), s	0.0	5.4				4.8		0.4				

Intersection Summary		
HCM 6th Ctrl Delay		38.7
HCM 6th LOS		D

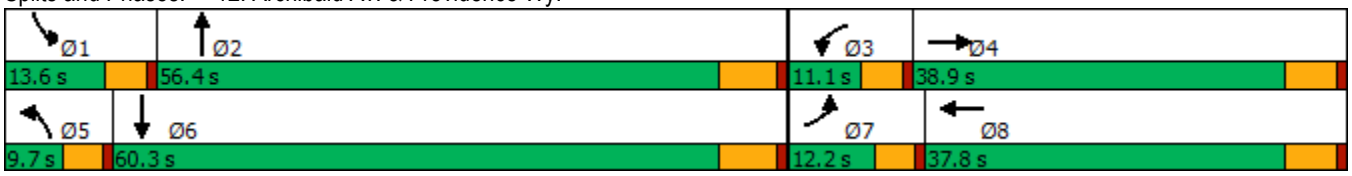
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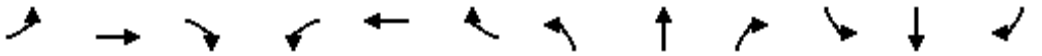
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	80	0	49	0	13	827	47	1393
Future Volume (vph)	80	0	49	0	13	827	47	1393
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	12.2	38.9	11.1	37.8	9.7	56.4	13.6	60.3
Total Split (%)	10.2%	32.4%	9.3%	31.5%	8.1%	47.0%	11.3%	50.3%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	8.9	16.8	10.3	13.6	5.3	41.6	7.8	47.4
Actuated g/C Ratio	0.11	0.20	0.12	0.16	0.06	0.49	0.09	0.56
v/c Ratio	0.45	0.06	0.24	0.14	0.12	0.54	0.31	0.75
Control Delay	51.1	0.3	44.2	0.7	49.2	19.1	47.2	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	0.3	44.2	0.7	49.2	19.1	47.2	19.7
LOS	D	A	D	A	D	B	D	B
Approach Delay		40.0		22.1		19.5		20.6
Approach LOS		D		C		B		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.5	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	0	22	49	0	51	13	827	52	47	1393	23
Future Volume (veh/h)	80	0	22	49	0	51	13	827	52	47	1393	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	86	0	15	53	0	55	14	889	57	51	1498	25
Peak Hour Factor	0.93	0.92	0.93	0.92	0.92	0.92	0.93	0.93	0.92	0.92	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	111	0	222	81	0	198	31	1686	108	79	1875	31
Arrive On Green	0.06	0.00	0.14	0.04	0.00	0.12	0.02	0.49	0.49	0.04	0.52	0.52
Sat Flow, veh/h	1810	0	1588	1810	0	1610	1810	3444	221	1810	3632	61
Grp Volume(v), veh/h	86	0	15	53	0	55	14	466	480	51	744	779
Grp Sat Flow(s),veh/h/ln	1810	0	1588	1810	0	1610	1810	1805	1860	1810	1805	1888
Q Serve(g_s), s	3.5	0.0	0.6	2.2	0.0	2.3	0.6	13.3	13.3	2.1	25.4	25.5
Cycle Q Clear(g_c), s	3.5	0.0	0.6	2.2	0.0	2.3	0.6	13.3	13.3	2.1	25.4	25.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.03
Lane Grp Cap(c), veh/h	111	0	222	81	0	198	31	884	911	79	932	975
V/C Ratio(X)	0.77	0.00	0.07	0.66	0.00	0.28	0.46	0.53	0.53	0.65	0.80	0.80
Avail Cap(c_a), veh/h	183	0	700	157	0	686	123	1207	1244	217	1300	1360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	0.0	28.0	35.3	0.0	29.9	36.6	13.2	13.2	35.3	14.9	15.0
Incr Delay (d2), s/veh	10.7	0.0	0.1	8.8	0.0	0.8	3.9	0.5	0.5	8.5	2.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.2	1.1	0.0	0.9	0.3	4.4	4.6	1.0	8.6	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	0.0	28.2	44.1	0.0	30.7	40.5	13.7	13.7	43.9	17.4	17.3
LnGrp LOS	D	A	C	D	A	C	D	B	B	D	B	B
Approach Vol, veh/h		101			108			960			1574	
Approach Delay, s/veh		42.9			37.2			14.1			18.2	
Approach LOS		D			D			B			B	

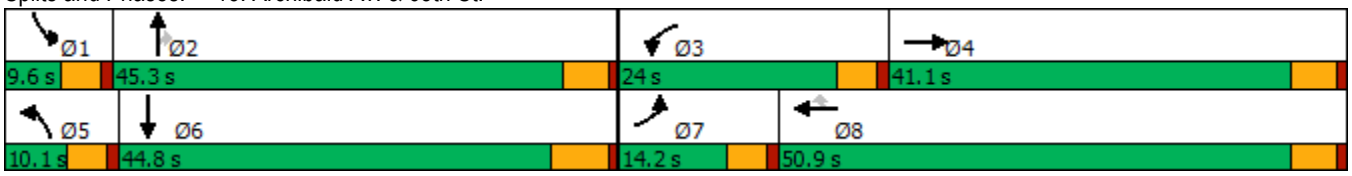
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	43.0	7.9	16.3	5.9	45.0	9.2	15.0
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	9.0	50.2	6.5	33.1	5.1	54.1	7.6	32.0
Max Q Clear Time (g_c+I1), s	4.1	15.3	4.2	2.6	2.6	27.5	5.5	4.3
Green Ext Time (p_c), s	0.0	6.0	0.0	0.0	0.0	11.2	0.0	0.2

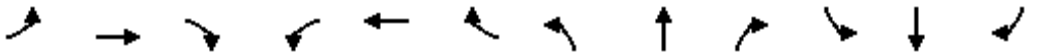
Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	36	29	131	39	34	47	773	228	115	1202
Future Volume (vph)	36	29	131	39	34	47	773	228	115	1202
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	6.6	14.2	12.2	20.6	20.6	5.5	42.2	42.2	5.1	43.1
Actuated g/C Ratio	0.07	0.16	0.14	0.23	0.23	0.06	0.47	0.47	0.06	0.48
v/c Ratio	0.29	0.13	0.56	0.09	0.08	0.45	0.48	0.27	1.19	0.55
Control Delay	49.4	17.6	48.3	27.4	0.3	58.7	20.7	4.0	187.8	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	17.6	48.3	27.4	0.3	58.7	20.7	4.0	187.8	21.6
LOS	D	B	D	C	A	E	C	A	F	C
Approach Delay		28.7		36.3			18.7			35.1
Approach LOS		C		D			B			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 28.8	Intersection LOS: C
Intersection Capacity Utilization 56.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	29	38	131	39	34	47	773	228	115	1202	93
Future Volume (veh/h)	36	29	38	131	39	34	47	773	228	115	1202	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	31	17	138	41	17	49	814	186	121	1265	82
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	63	275	138	174	342	290	74	1734	764	108	2486	161
Arrive On Green	0.04	0.12	0.12	0.10	0.18	0.18	0.04	0.48	0.48	0.06	0.50	0.50
Sat Flow, veh/h	1810	2314	1160	1810	1900	1610	1810	3610	1590	1810	4977	323
Grp Volume(v), veh/h	38	24	24	138	41	17	49	814	186	121	879	468
Grp Sat Flow(s),veh/h/ln	1810	1805	1669	1810	1900	1610	1810	1805	1590	1810	1729	1842
Q Serve(g_s), s	1.7	1.0	1.1	6.2	1.5	0.7	2.2	12.7	5.8	5.0	14.3	14.3
Cycle Q Clear(g_c), s	1.7	1.0	1.1	6.2	1.5	0.7	2.2	12.7	5.8	5.0	14.3	14.3
Prop In Lane	1.00		0.70	1.00		1.00	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	63	215	199	174	342	290	74	1734	764	108	1727	920
V/C Ratio(X)	0.60	0.11	0.12	0.80	0.12	0.06	0.67	0.47	0.24	1.12	0.51	0.51
Avail Cap(c_a), veh/h	208	776	718	419	1040	881	119	1734	764	108	1727	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	32.9	33.0	37.0	28.8	28.4	39.6	14.6	12.8	39.3	14.1	14.1
Incr Delay (d2), s/veh	3.3	0.2	0.3	3.1	0.2	0.1	3.8	0.9	0.8	122.2	1.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.4	0.4	2.8	0.7	0.3	1.0	4.8	2.0	5.7	4.9	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	33.1	33.2	40.1	28.9	28.5	43.4	15.5	13.6	161.6	15.1	16.1
LnGrp LOS	D	C	C	D	C	C	D	B	B	F	B	B
Approach Vol, veh/h		86			196			1049			1468	
Approach Delay, s/veh		37.6			36.8			16.5			27.5	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	46.4	12.6	15.1	8.0	48.0	7.5	20.2
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	7.0	14.7	8.2	3.1	4.2	16.3	3.7	3.5
Green Ext Time (p_c), s	0.0	6.4	0.1	0.2	0.0	8.7	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

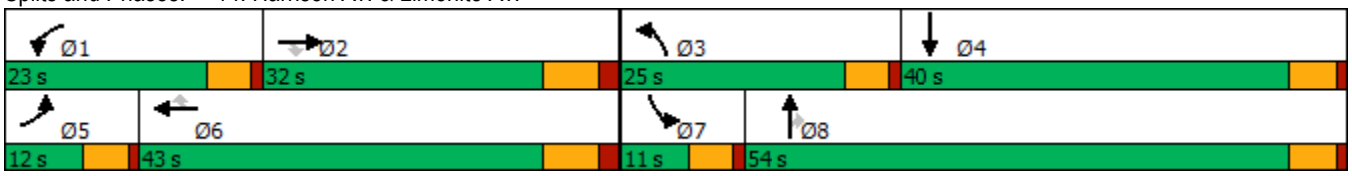
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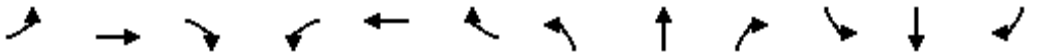
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	60	646	39	238	546	15	41	53	188	16	75
Future Volume (vph)	60	646	39	238	546	15	41	53	188	16	75
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.0	16.9	16.9	17.9	36.5	36.5	6.5	17.4	17.4	5.6	12.5
Actuated g/C Ratio	0.08	0.23	0.23	0.25	0.50	0.50	0.09	0.24	0.24	0.08	0.17
v/c Ratio	0.22	0.59	0.08	0.59	0.23	0.02	0.28	0.13	0.38	0.13	0.34
Control Delay	43.0	28.8	0.3	35.8	14.7	0.1	42.3	22.3	5.8	43.2	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	28.8	0.3	35.8	14.7	0.1	42.3	22.3	5.8	43.2	27.8
LOS	D	C	A	D	B	A	D	C	A	D	C
Approach Delay		27.8			20.7			14.2			30.0
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 72.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 23.0	Intersection LOS: C
Intersection Capacity Utilization 49.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	646	39	238	546	15	41	53	188	16	75	27
Future Volume (veh/h)	60	646	39	238	546	15	41	53	188	16	75	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	33	710	33	262	600	13	45	58	133	18	82	11
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	1234	375	319	1959	607	83	269	228	40	192	26
Arrive On Green	0.04	0.24	0.24	0.18	0.38	0.38	0.05	0.14	0.14	0.02	0.12	0.12
Sat Flow, veh/h	1810	5187	1575	1810	5187	1606	1810	1900	1610	1810	1634	219
Grp Volume(v), veh/h	33	710	33	262	600	13	45	58	133	18	0	93
Grp Sat Flow(s),veh/h/ln	1810	1729	1575	1810	1729	1606	1810	1900	1610	1810	0	1853
Q Serve(g_s), s	0.9	6.4	0.9	7.4	4.3	0.3	1.3	1.4	4.1	0.5	0.0	2.5
Cycle Q Clear(g_c), s	0.9	6.4	0.9	7.4	4.3	0.3	1.3	1.4	4.1	0.5	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	66	1234	375	319	1959	607	83	269	228	40	0	218
V/C Ratio(X)	0.50	0.58	0.09	0.82	0.31	0.02	0.54	0.22	0.58	0.45	0.00	0.43
Avail Cap(c_a), veh/h	240	2457	746	617	3538	1095	686	1753	1486	206	0	1218
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	17.8	15.7	20.9	11.6	10.3	24.6	20.1	21.2	25.5	0.0	21.6
Incr Delay (d2), s/veh	2.2	0.4	0.1	2.0	0.1	0.0	2.0	0.4	2.4	3.0	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.1	0.3	2.7	1.2	0.1	0.5	0.6	1.5	0.2	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	18.2	15.8	23.0	11.6	10.3	26.7	20.5	23.6	28.5	0.0	23.0
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	A	C
Approach Vol, veh/h		776			875			236			111	
Approach Delay, s/veh		18.5			15.0			23.4			23.8	
Approach LOS		B			B			C			C	

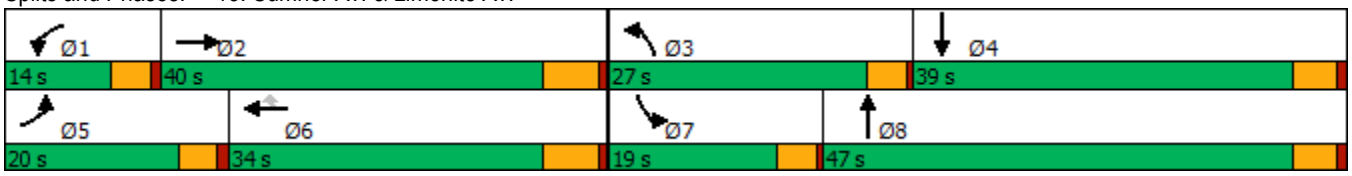
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	19.6	7.4	11.5	6.9	26.9	6.2	12.8
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	9.4	8.4	3.3	4.5	2.9	6.3	2.5	6.1
Green Ext Time (p_c), s	0.1	4.0	0.0	0.4	0.0	3.9	0.0	0.7

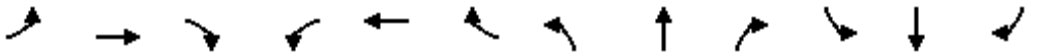
Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	211	642	201	552	69	31	231	142	490
Future Volume (vph)	211	642	201	552	69	31	231	142	490
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.2	17.7	8.6	17.1	17.1	5.7	15.1	10.4	24.3
Actuated g/C Ratio	0.13	0.24	0.12	0.24	0.24	0.08	0.21	0.14	0.33
v/c Ratio	0.50	0.59	0.51	0.48	0.14	0.23	0.50	0.58	0.61
Control Delay	37.2	27.1	39.1	27.3	0.6	42.3	18.7	42.4	22.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	27.1	39.1	27.3	0.6	42.3	18.7	42.4	22.4
LOS	D	C	D	C	A	D	B	D	C
Approach Delay		29.5		27.9			20.5		25.9
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 72.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 58.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Sumner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	642	56	201	552	69	31	231	151	142	490	197
Future Volume (veh/h)	211	642	56	201	552	69	31	231	151	142	490	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	222	676	32	212	581	27	33	243	65	149	516	128
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	346	1206	57	330	1210	370	53	530	139	192	759	187
Arrive On Green	0.10	0.24	0.24	0.09	0.23	0.23	0.03	0.19	0.19	0.11	0.26	0.26
Sat Flow, veh/h	3510	5072	239	3510	5187	1587	1810	2828	740	1810	2869	708
Grp Volume(v), veh/h	222	460	248	212	581	27	33	153	155	149	324	320
Grp Sat Flow(s),veh/h/ln	1755	1729	1853	1755	1729	1587	1810	1805	1763	1810	1805	1773
Q Serve(g_s), s	3.2	6.1	6.1	3.0	5.0	0.7	0.9	3.9	4.1	4.2	8.4	8.4
Cycle Q Clear(g_c), s	3.2	6.1	6.1	3.0	5.0	0.7	0.9	3.9	4.1	4.2	8.4	8.4
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.42	1.00		0.40
Lane Grp Cap(c), veh/h	346	822	441	330	1210	370	53	339	331	192	477	469
V/C Ratio(X)	0.64	0.56	0.56	0.64	0.48	0.07	0.63	0.45	0.47	0.78	0.68	0.68
Avail Cap(c_a), veh/h	1046	2259	1211	641	2791	854	800	1457	1423	522	1179	1158
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	17.4	17.5	22.7	17.2	15.6	25.0	18.8	18.8	22.7	17.2	17.2
Incr Delay (d2), s/veh	0.7	0.6	1.1	0.8	0.3	0.1	4.4	0.7	0.8	2.5	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.0	2.2	1.1	1.6	0.2	0.4	1.4	1.5	1.7	2.9	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	18.0	18.6	23.5	17.5	15.6	29.4	19.5	19.6	25.2	18.4	18.5
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		930			820			341			793	
Approach Delay, s/veh		19.4			19.0			20.5			19.7	
Approach LOS		B			B			C			B	

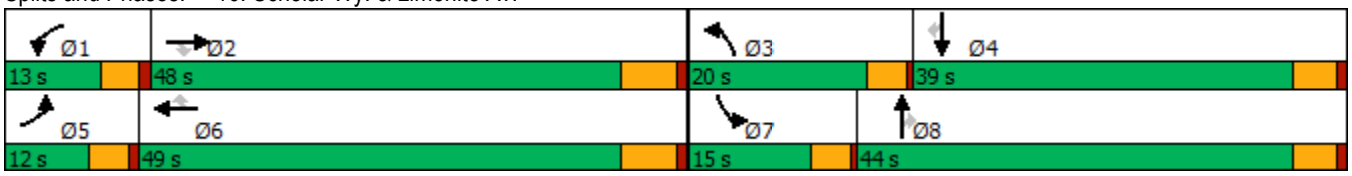
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	18.4	5.5	18.8	9.6	18.1	9.5	14.8
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	5.0	8.1	2.9	10.4	5.2	7.0	6.2	6.1
Green Ext Time (p_c), s	0.1	4.1	0.0	2.9	0.2	3.5	0.1	1.3

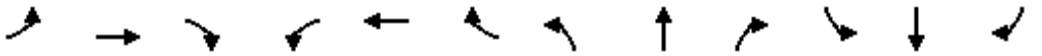
Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	872	50	152	761	70	45	72	114	53	148	35
Future Volume (vph)	35	872	50	152	761	70	45	72	114	53	148	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	5.8	25.6	25.6	9.4	34.3	34.3	6.4	11.4	11.4	6.8	11.6	11.6
Actuated g/C Ratio	0.08	0.37	0.37	0.13	0.49	0.49	0.09	0.16	0.16	0.10	0.17	0.17
v/c Ratio	0.25	0.69	0.08	0.66	0.45	0.09	0.28	0.25	0.33	0.32	0.26	0.14
Control Delay	42.8	23.4	0.2	50.2	17.0	0.5	41.7	30.1	8.8	41.7	28.3	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	23.4	0.2	50.2	17.0	0.5	41.7	30.1	8.8	41.7	28.3	29.0
LOS	D	C	A	D	B	A	D	C	A	D	C	C
Approach Delay		22.9			20.9			21.9			31.4	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 69.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 22.8	Intersection LOS: C
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	872	50	152	761	70	45	72	114	53	148	35
Future Volume (veh/h)	35	872	50	152	761	70	45	72	114	53	148	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	918	36	160	801	63	47	76	62	56	156	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	1347	591	203	1638	729	67	224	190	76	443	191
Arrive On Green	0.03	0.37	0.37	0.11	0.45	0.45	0.04	0.12	0.12	0.04	0.12	0.12
Sat Flow, veh/h	1810	3610	1584	1810	3610	1607	1810	1900	1610	1810	3610	1558
Grp Volume(v), veh/h	37	918	36	160	801	63	47	76	62	56	156	37
Grp Sat Flow(s),veh/h/ln	1810	1805	1584	1810	1805	1607	1810	1900	1610	1810	1805	1558
Q Serve(g_s), s	1.1	11.7	0.8	4.7	8.6	1.2	1.4	2.0	1.9	1.7	2.2	1.2
Cycle Q Clear(g_c), s	1.1	11.7	0.8	4.7	8.6	1.2	1.4	2.0	1.9	1.7	2.2	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	1347	591	203	1638	729	67	224	190	76	443	191
V/C Ratio(X)	0.65	0.68	0.06	0.79	0.49	0.09	0.70	0.34	0.33	0.74	0.35	0.19
Avail Cap(c_a), veh/h	247	2760	1211	280	2825	1257	527	1349	1143	362	2234	964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	14.5	11.1	23.8	10.5	8.5	26.1	22.3	22.2	26.0	22.1	21.7
Incr Delay (d2), s/veh	4.6	0.6	0.0	6.5	0.2	0.1	4.7	0.7	0.7	5.2	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.7	0.2	2.1	2.4	0.3	0.6	0.9	0.7	0.8	0.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	15.1	11.1	30.3	10.8	8.6	30.9	22.9	23.0	31.2	22.5	22.0
LnGrp LOS	C	B	B	C	B	A	C	C	C	C	C	C
Approach Vol, veh/h		991			1024			185			249	
Approach Delay, s/veh		15.5			13.7			25.0			24.4	
Approach LOS		B			B			C			C	

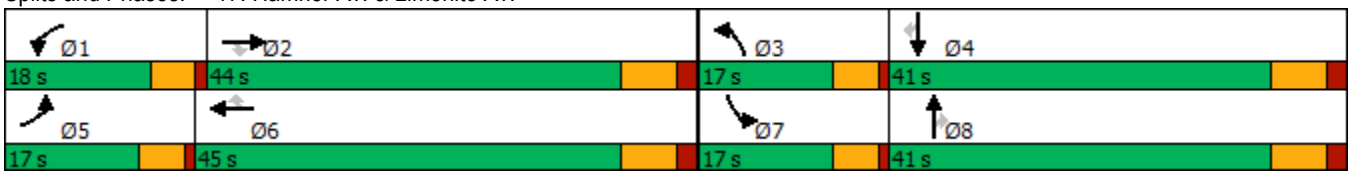
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	26.5	6.0	11.7	6.2	30.9	6.3	11.5
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	6.7	13.7	3.4	4.2	3.1	10.6	3.7	4.0
Green Ext Time (p_c), s	0.0	6.4	0.0	0.9	0.0	5.7	0.0	0.5

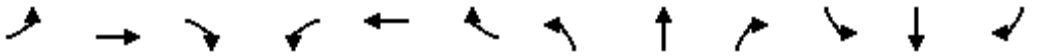
Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	298	663	79	393	529	187	195	566	219	239	706	198
Future Volume (vph)	298	663	79	393	529	187	195	566	219	239	706	198
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	11.5	24.5	24.5	13.3	26.3	26.3	9.4	25.0	25.0	10.2	25.8	25.8
Actuated g/C Ratio	0.12	0.25	0.25	0.14	0.27	0.27	0.10	0.26	0.26	0.10	0.26	0.26
v/c Ratio	0.75	0.53	0.17	0.85	0.56	0.34	0.60	0.44	0.40	0.67	0.53	0.36
Control Delay	55.9	33.4	2.1	61.1	33.8	6.1	52.3	31.9	6.4	54.0	32.7	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	33.4	2.1	61.1	33.8	6.1	52.3	31.9	6.4	54.0	32.7	6.3
LOS	E	C	A	E	C	A	D	C	A	D	C	A
Approach Delay		37.4			38.8			30.3			32.5	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.5	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 34.8	Intersection LOS: C
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	663	79	393	529	187	195	566	219	239	706	198
Future Volume (veh/h)	298	663	79	393	529	187	195	566	219	239	706	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	307	684	51	405	545	125	201	584	140	246	728	89
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	383	1297	391	478	1000	445	278	1293	389	324	1361	416
Arrive On Green	0.11	0.25	0.25	0.14	0.28	0.28	0.08	0.25	0.25	0.09	0.26	0.26
Sat Flow, veh/h	3510	5187	1564	3510	3610	1608	3510	5187	1559	3510	5187	1586
Grp Volume(v), veh/h	307	684	51	405	545	125	201	584	140	246	728	89
Grp Sat Flow(s),veh/h/ln	1755	1729	1564	1755	1805	1608	1755	1729	1559	1755	1729	1586
Q Serve(g_s), s	7.5	10.0	2.2	9.9	11.3	5.4	4.9	8.4	6.5	6.0	10.6	3.9
Cycle Q Clear(g_c), s	7.5	10.0	2.2	9.9	11.3	5.4	4.9	8.4	6.5	6.0	10.6	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	383	1297	391	478	1000	445	278	1293	389	324	1361	416
V/C Ratio(X)	0.80	0.53	0.13	0.85	0.55	0.28	0.72	0.45	0.36	0.76	0.54	0.21
Avail Cap(c_a), veh/h	478	2177	656	518	1556	693	478	2001	601	478	2001	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	28.6	25.6	37.2	27.1	25.0	39.6	28.0	27.3	39.1	27.9	25.4
Incr Delay (d2), s/veh	6.0	0.7	0.3	10.8	1.0	0.7	1.3	0.5	1.2	1.9	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	4.0	0.8	4.7	4.7	2.0	2.1	3.3	2.4	2.6	4.2	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	29.3	25.9	48.0	28.1	25.7	41.0	28.5	28.5	40.9	28.6	26.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1042			1075			925			1063	
Approach Delay, s/veh		33.6			35.3			31.2			31.2	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	29.0	12.0	30.1	14.6	31.4	13.1	29.0
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	11.9	12.0	6.9	12.6	9.5	13.3	8.0	10.4
Green Ext Time (p_c), s	0.1	8.6	0.1	8.8	0.1	7.4	0.1	7.9

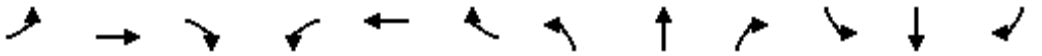
Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	785	420	830	386	166	1	401
Future Volume (vph)	785	420	830	386	166	1	401
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	22.5	22.5	22.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	4.5	4.5	4.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.7	73.7	73.7	73.7	11.2	11.2	11.2
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.12	0.12	0.12
v/c Ratio	0.20	0.32	0.21	0.30	0.42	0.43	0.68
Control Delay	3.2	1.1	3.3	1.0	44.7	45.0	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	1.1	3.3	1.0	44.7	45.0	16.9
LOS	A	A	A	A	D	D	B
Approach Delay	2.5		2.6			25.1	
Approach LOS	A		A			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.9	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 39.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 18: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰	↱↱
Traffic Volume (veh/h)	0	785	420	0	830	386	0	0	0	166	1	401
Future Volume (veh/h)	0	785	420	0	830	386	0	0	0	166	1	401
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	809	403	0	856	398				172	0	149
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4199	1286	0	4199	1303				291	0	259
Arrive On Green	0.00	0.81	0.81	0.00	0.81	0.81				0.08	0.00	0.08
Sat Flow, veh/h	0	5358	1588	0	5358	1610				3619	0	3220
Grp Volume(v), veh/h	0	809	403	0	856	398				172	0	149
Grp Sat Flow(s),veh/h/ln	0	1729	1588	0	1729	1610				1810	0	1610
Q Serve(g_s), s	0.0	3.2	5.9	0.0	3.4	5.7				4.2	0.0	4.1
Cycle Q Clear(g_c), s	0.0	3.2	5.9	0.0	3.4	5.7				4.2	0.0	4.1
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4199	1286	0	4199	1303				291	0	259
V/C Ratio(X)	0.00	0.19	0.31	0.00	0.20	0.31				0.59	0.00	0.58
Avail Cap(c_a), veh/h	0	4199	1286	0	4199	1303				1455	0	1295
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.0	2.2	0.0	2.0	2.2				40.3	0.0	40.3
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.0	0.1	0.6				1.9	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	1.1	0.0	0.6	1.1				1.8	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.1	2.8	0.0	2.1	2.8				42.2	0.0	42.3
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1212			1254						321	
Approach Delay, s/veh		2.3			2.3						42.3	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		11.8		79.0						
Change Period (Y+Rc), s		5.5		4.5		5.5						
Max Green Setting (Gmax), s		73.5		36.5		73.5						
Max Q Clear Time (g_c+I1), s		7.9		6.2		7.7						
Green Ext Time (p_c), s		4.9		1.1		5.2						

Intersection Summary												
HCM 6th Ctrl Delay			6.9									
HCM 6th LOS			A									

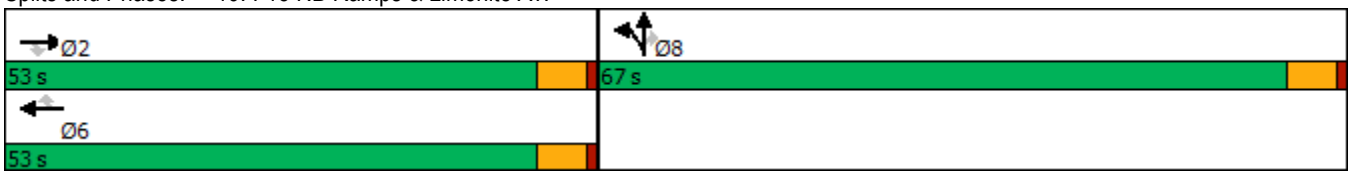
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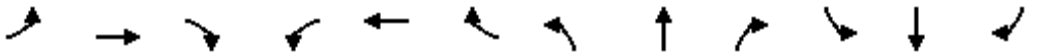
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	685	266	802	109	414	2	705
Future Volume (vph)	685	266	802	109	414	2	705
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.8	47.8	47.8	47.8	25.1	25.1	25.1
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.30	0.30	0.30
v/c Ratio	0.24	0.27	0.28	0.11	0.41	0.42	0.74
Control Delay	10.2	2.3	10.5	2.8	25.5	25.5	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.2	2.3	10.5	2.8	25.5	25.5	23.8
LOS	B	A	B	A	C	C	C
Approach Delay	8.0		9.6			24.5	
Approach LOS	A		A			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 14.7	Intersection LOS: B
Intersection Capacity Utilization 47.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↲	↱↱			
Traffic Volume (veh/h)	0	685	266	0	802	109	414	2	705	0	0	0
Future Volume (veh/h)	0	685	266	0	802	109	414	2	705	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	699	271	0	818	106	423	0	416			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3398	1031	0	3398	1055	699	0	622			
Arrive On Green	0.00	0.66	0.66	0.00	0.66	0.66	0.19	0.00	0.19			
Sat Flow, veh/h	0	5358	1573	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	699	271	0	818	106	423	0	416			
Grp Sat Flow(s),veh/h/ln	0	1729	1573	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	3.9	5.2	0.0	4.7	1.8	7.7	0.0	8.7			
Cycle Q Clear(g_c), s	0.0	3.9	5.2	0.0	4.7	1.8	7.7	0.0	8.7			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3398	1031	0	3398	1055	699	0	622			
V/C Ratio(X)	0.00	0.21	0.26	0.00	0.24	0.10	0.60	0.00	0.67			
Avail Cap(c_a), veh/h	0	3398	1031	0	3398	1055	3070	0	2731			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.0	5.2	0.0	5.1	4.6	26.7	0.0	27.1			
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.0	0.2	0.2	0.8	0.0	1.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	1.1	1.4	0.0	1.3	0.5	3.1	0.0	3.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.1	5.8	0.0	5.3	4.8	27.6	0.0	28.3			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		970			924			839				
Approach Delay, s/veh		5.3			5.2			28.0				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		19.5				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		7.2				6.7		10.7				
Green Ext Time (p_c), s		3.9				4.3		3.3				
Intersection Summary												
HCM 6th Ctrl Delay			12.2									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 6.2:

OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	6	0	8	0	0	2	3	0	0
Future Vol, veh/h	0	0	0	6	0	8	0	0	2	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	7	0	9	0	0	2	3	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	9	0	0	1	0	0	15	24	1	20	20	5
Stage 1	-	-	-	-	-	-	1	1	-	19	19	-
Stage 2	-	-	-	-	-	-	14	23	-	1	1	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1624	-	-	1635	-	-	1004	873	1089	996	878	1083
Stage 1	-	-	-	-	-	-	1027	899	-	1003	884	-
Stage 2	-	-	-	-	-	-	1010	880	-	1027	899	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1624	-	-	1635	-	-	1001	870	1089	991	874	1083
Mov Cap-2 Maneuver	-	-	-	-	-	-	1001	870	-	991	874	-
Stage 1	-	-	-	-	-	-	1027	899	-	1003	880	-
Stage 2	-	-	-	-	-	-	1006	876	-	1025	899	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.1	8.3	8.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1089	1624	-	-	1635	-	-	991
HCM Lane V/C Ratio	0.002	-	-	-	0.004	-	-	0.003
HCM Control Delay (s)	8.3	0	-	-	7.2	0	-	8.6
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	2.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	4	119	12	10
Demand Flow Rate, veh/h	4	119	12	10
Vehicles Circulating, veh/h	85	0	14	90
Vehicles Exiting, veh/h	15	26	75	29
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	2.8	3.0	2.6	2.8
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	L	TR	LTR	LTR
RT Channelized						
Lane Util	0.500	0.500	0.630	0.370	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
Entry Flow, veh/h	2	2	75	44	12	10
Cap Entry Lane, veh/h	1248	1321	1350	1420	1403	1316
Entry HV Adj Factor	0.940	1.060	1.000	1.000	1.000	1.000
Flow Entry, veh/h	2	2	75	44	12	10
Cap Entry, veh/h	1173	1400	1350	1420	1403	1316
V/C Ratio	0.002	0.002	0.056	0.031	0.009	0.008
Control Delay, s/veh	3.1	2.6	3.1	2.8	2.6	2.8
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↳			↑↑↳				↱			↱
Traffic Vol, veh/h	0	33	38	0	101	27	0	0	11	0	0	9
Future Vol, veh/h	0	33	38	0	101	27	0	0	11	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	36	41	0	110	29	0	0	12	0	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	39	-	-	70
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	1031	0	0	985
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	1031	-	-	985
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.5	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	1031	-	-	-	-	985
HCM Lane V/C Ratio	0.012	-	-	-	-	0.01
HCM Control Delay (s)	8.5	-	-	-	-	8.7
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	33	71	20	4	0
Future Vol, veh/h	0	33	71	20	4	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, %	0	0	0	0	0	0
Mvmt Flow	0	36	77	22	4	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	99	0	-	0	124	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	36	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1507	-	-	-	876	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	992	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1507	-	-	-	876	976
Mov Cap-2 Maneuver	-	-	-	-	876	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	992	-

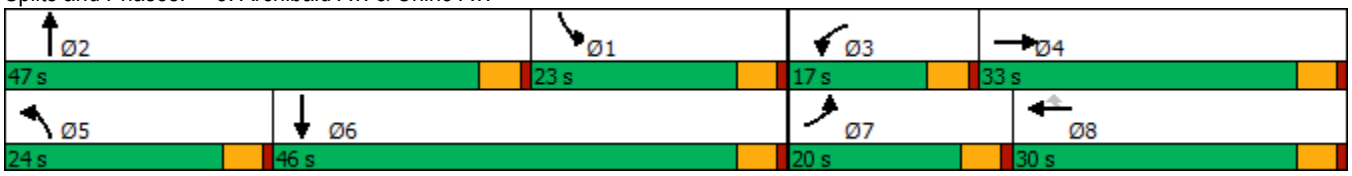
Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

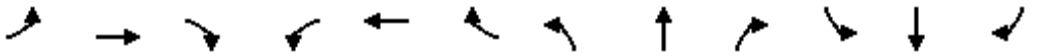
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1507	-	-	-	876
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	94	27	76	74	246	133	1095	114	817
Future Volume (vph)	94	27	76	74	246	133	1095	114	817
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.0	11.3	9.8	10.2	10.2	13.1	33.1	13.3	29.1
Actuated g/C Ratio	0.14	0.14	0.12	0.13	0.13	0.16	0.42	0.17	0.37
v/c Ratio	0.44	0.27	0.40	0.33	0.61	0.52	0.58	0.44	0.72
Control Delay	44.4	20.9	45.5	41.4	12.4	43.3	23.3	40.5	27.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.4	20.9	45.5	41.4	12.4	43.3	23.3	40.5	27.4
LOS	D	C	D	D	B	D	C	D	C
Approach Delay		34.3		24.1			25.4		28.9
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 79.7	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 57.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	27	44	76	74	246	133	1095	37	114	817	51
Future Volume (veh/h)	94	27	44	76	74	246	133	1095	37	114	817	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	97	28	45	78	76	213	137	1129	35	118	842	47
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	122	101	162	100	268	227	174	1753	54	160	1149	64
Arrive On Green	0.08	0.16	0.16	0.06	0.15	0.15	0.11	0.36	0.36	0.10	0.35	0.35
Sat Flow, veh/h	1619	621	998	1619	1800	1525	1619	4893	152	1619	3293	184
Grp Volume(v), veh/h	97	0	73	78	76	213	137	756	408	118	437	452
Grp Sat Flow(s),veh/h/ln	1619	0	1618	1619	1800	1525	1619	1638	1769	1619	1710	1767
Q Serve(g_s), s	3.4	0.0	2.3	2.7	2.2	5.6	4.8	11.1	11.1	4.1	12.9	12.9
Cycle Q Clear(g_c), s	3.4	0.0	2.3	2.7	2.2	5.6	4.8	11.1	11.1	4.1	12.9	12.9
Prop In Lane	1.00		0.62	1.00		1.00	1.00		0.09	1.00		0.10
Lane Grp Cap(c), veh/h	122	0	263	100	268	227	174	1174	634	160	597	617
V/C Ratio(X)	0.79	0.00	0.28	0.78	0.28	0.94	0.79	0.64	0.64	0.74	0.73	0.73
Avail Cap(c_a), veh/h	432	0	796	348	792	671	544	2406	1299	516	1226	1267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	21.2	26.7	21.8	11.8	25.1	15.5	15.5	25.3	16.4	16.4
Incr Delay (d2), s/veh	10.9	0.0	0.6	12.2	0.6	16.4	7.6	0.6	1.1	6.5	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.8	1.3	0.9	3.4	1.9	3.2	3.5	1.6	4.2	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	0.0	21.8	38.9	22.4	28.2	32.7	16.0	16.6	31.8	18.2	18.1
LnGrp LOS	D	A	C	D	C	C	C	B	B	C	B	B
Approach Vol, veh/h		170			367			1301			1007	
Approach Delay, s/veh		30.5			29.3			18.0			19.8	
Approach LOS		C			C			B			B	

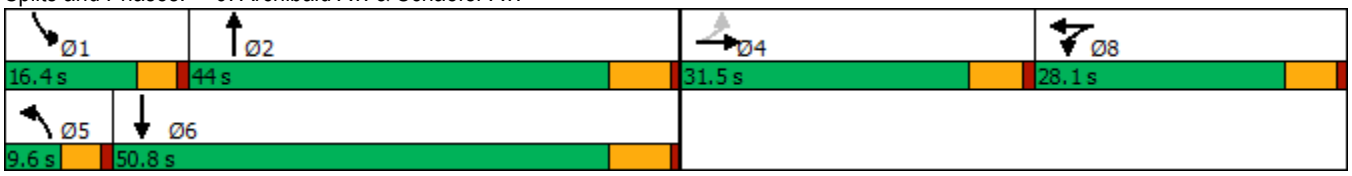
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	25.3	8.2	14.0	10.8	24.7	9.0	13.2
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	6.1	13.1	4.7	4.3	6.8	14.9	5.4	7.6
Green Ext Time (p_c), s	0.2	7.6	0.1	0.3	0.2	5.2	0.1	1.0

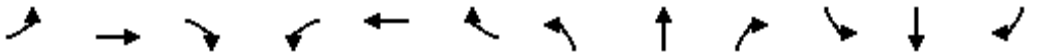
Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	91	0	1250	71	785		
Future Volume (vph)	91	0	1250	71	785		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	44.0	16.4	50.8	31.5	9.6
Total Split (%)	23.4%	23.4%	36.7%	13.7%	42.3%	26%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	13.0	13.0	27.2	8.3	37.3		
Actuated g/C Ratio	0.19	0.19	0.40	0.12	0.55		
v/c Ratio	0.31	0.15	0.67	0.37	0.43		
Control Delay	32.9	0.4	21.1	40.4	11.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	32.9	0.4	21.1	40.4	11.2		
LOS	C	A	C	D	B		
Approach Delay		15.8	21.1		13.6		
Approach LOS		B	C		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 67.5	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 17.9	Intersection LOS: B
Intersection Capacity Utilization 52.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	91	0	101	0	1250	18	71	785	0
Future Volume (veh/h)	0	0	0	91	0	101	0	1250	18	71	785	0
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	95	0	88	0	1302	19	74	818	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	4	0	297	0	280	3	2075	30	104	1954	0
Arrive On Green	0.00	0.00	0.00	0.18	0.00	0.18	0.00	0.42	0.42	0.06	0.57	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4990	73	1619	3510	0
Grp Volume(v), veh/h	0	0	0	95	0	88	0	855	466	74	818	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1787	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	2.6	0.0	2.5	0.0	10.4	10.4	2.3	6.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.6	0.0	2.5	0.0	10.4	10.4	2.3	6.8	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	0	4	0	297	0	280	3	1362	743	104	1954	0
V/C Ratio(X)	0.00	0.00	0.00	0.32	0.00	0.31	0.00	0.63	0.63	0.71	0.42	0.00
Avail Cap(c_a), veh/h	0	921	0	719	0	677	161	2446	1334	380	3017	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	17.8	0.0	17.8	0.0	11.6	11.6	23.0	6.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.5	0.9	3.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.8	0.0	0.8	0.0	2.5	2.8	0.8	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	18.4	0.0	18.4	0.0	12.1	12.5	26.4	6.2	0.0
LnGrp LOS	A	A	A	B	A	B	A	B	B	C	A	A
Approach Vol, veh/h		0			183			1321			892	
Approach Delay, s/veh		0.0			18.4			12.2			7.9	
Approach LOS					B			B			A	

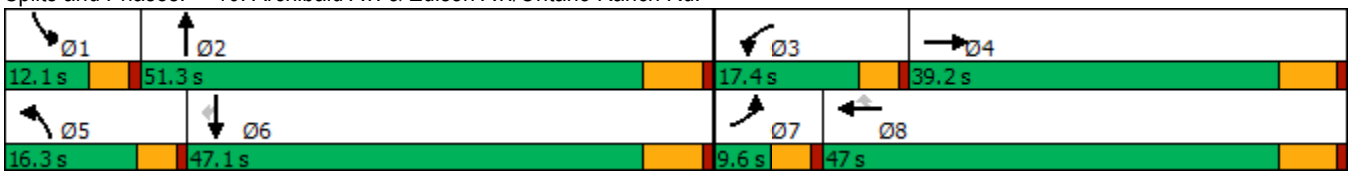
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	27.4		0.0	0.0	35.2		15.0				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	37.5		25.7	5.0	44.3		22.3				
Max Q Clear Time (g_c+I1), s	4.3	12.4		0.0	0.0	8.8		4.6				
Green Ext Time (p_c), s	0.0	8.5		0.0	0.0	5.4		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		11.1	
HCM 6th LOS		B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	194	44	350	469	167	155	1027	364	64	429	108
Future Volume (vph)	25	194	44	350	469	167	155	1027	364	64	429	108
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.3	21.5	100.0	13.5	34.9	34.9	12.3	37.7	100.0	7.2	29.6	29.6
Actuated g/C Ratio	0.05	0.22	1.00	0.14	0.35	0.35	0.12	0.38	1.00	0.07	0.30	0.30
v/c Ratio	0.17	0.27	0.03	0.90	0.76	0.26	0.79	0.81	0.25	0.57	0.43	0.20
Control Delay	56.3	34.0	0.0	72.5	41.0	5.4	76.1	35.7	0.4	71.1	29.8	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.3	34.0	0.0	72.5	41.0	5.4	76.1	35.7	0.4	71.1	29.8	2.3
LOS	E	C	A	E	D	A	E	D	A	E	C	A
Approach Delay		30.5			46.2			31.4			29.2	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 35.2	Intersection LOS: D
Intersection Capacity Utilization 82.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	194	44	350	469	167	155	1027	364	64	429	108
Future Volume (veh/h)	25	194	44	350	469	167	155	1027	364	64	429	108
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	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	26	198	0	357	479	128	158	1048	0	65	438	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	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	79	654		417	550	466	188	1268		81	1042	465
Arrive On Green	0.03	0.19	0.00	0.14	0.31	0.31	0.12	0.37	0.00	0.05	0.30	0.30
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	26	198	0	357	479	128	158	1048	0	65	438	77
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1525
Q Serve(g_s), s	0.8	4.4	0.0	10.5	22.3	5.6	8.5	24.6	0.0	3.5	9.0	3.3
Cycle Q Clear(g_c), s	0.8	4.4	0.0	10.5	22.3	5.6	8.5	24.6	0.0	3.5	9.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	79	654		417	550	466	188	1268		81	1042	465
V/C Ratio(X)	0.33	0.30		0.86	0.87	0.27	0.84	0.83		0.81	0.42	0.17
Avail Cap(c_a), veh/h	167	1274		427	829	703	214	1730		137	1568	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	30.7	0.0	37.2	29.1	23.3	38.3	25.3	0.0	41.7	24.6	22.6
Incr Delay (d2), s/veh	0.9	0.3	0.0	14.7	6.7	0.3	20.5	2.5	0.0	6.9	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.7	0.0	4.4	9.7	1.9	4.2	9.1	0.0	1.5	3.3	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	31.0	0.0	51.9	35.8	23.6	58.8	27.8	0.0	48.6	24.8	22.7
LnGrp LOS	D	C		D	D	C	E	C		D	C	C
Approach Vol, veh/h		224	A		964			1206	A		580	
Approach Delay, s/veh		32.4			40.1			31.9			27.2	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	39.3	17.1	23.1	14.9	33.5	7.0	33.3
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	5.5	26.6	12.5	6.4	10.5	11.0	2.8	24.3
Green Ext Time (p_c), s	0.0	6.2	0.0	1.0	0.0	2.8	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Notes

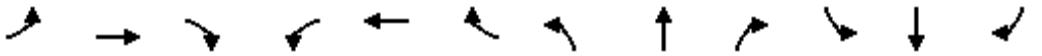
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	60	1485	10	20	804
Future Volume (vph)	6	60	1485	10	20	804
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	13.6%	13.6%	59.1%	59.1%	13.7%	72.9%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.0	5.0	51.3	51.3	5.0	53.1
Actuated g/C Ratio	0.08	0.08	0.79	0.79	0.08	0.82
v/c Ratio	0.02	0.16	0.58	0.01	0.17	0.30
Control Delay	28.5	0.9	8.3	5.9	31.6	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	0.9	8.3	5.9	31.6	3.3
LOS	C	A	A	A	C	A
Approach Delay			8.2			4.0
Approach LOS			A			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 64.6	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 6.6	Intersection LOS: A
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	6	0	60	0	1485	10	20	804	0
Future Volume (veh/h)	0	0	0	6	0	60	0	1485	10	20	804	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				6	0	7	0	1580	11	21	855	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, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				51	0	44	0	2334	1019	40	2697	0
Arrive On Green				0.02	0.00	0.02	0.00	0.68	0.68	0.02	0.79	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1494	1619	3510	0
Grp Volume(v), veh/h				6	0	7	0	1580	11	21	855	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1494	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.1	0.0	15.4	0.1	0.7	4.0	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.1	0.0	15.4	0.1	0.7	4.0	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				51	0	44	0	2334	1019	40	2697	0
V/C Ratio(X)				0.12	0.00	0.16	0.00	0.68	0.01	0.52	0.32	0.00
Avail Cap(c_a), veh/h				278	0	238	0	2334	1019	143	2697	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.3	0.0	27.4	0.0	5.3	2.9	27.2	1.7	0.0
Incr Delay (d2), s/veh				1.0	0.0	1.7	0.0	1.6	0.0	3.8	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				0.0	0.0	0.1	0.0	1.9	0.0	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.4	0.0	29.0	0.0	6.9	2.9	31.0	2.0	0.0
LnGrp LOS				C	A	C	A	A	A	C	A	A
Approach Vol, veh/h					13			1591			876	
Approach Delay, s/veh					28.7			6.9			2.7	
Approach LOS					C			A			A	

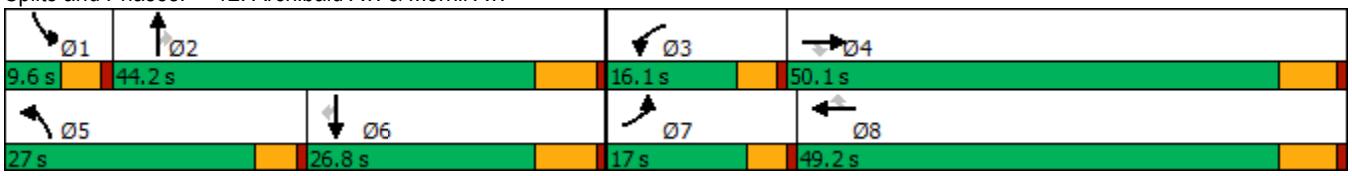
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	6.0	45.0				51.0		5.4				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	2.7	17.4				6.0		2.1				
Green Ext Time (p_c), s	0.0	9.9				5.8		0.0				

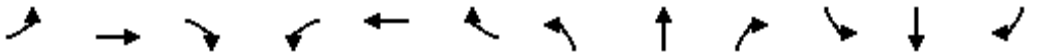
Intersection Summary		
HCM 6th Ctrl Delay		5.5
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	20	135	76	45	124	462	1178	37	38	558	270
Future Volume (vph)	203	20	135	76	45	124	462	1178	37	38	558	270
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.6	21.6	21.6	8.4	15.3	15.3	22.8	42.5	42.5	5.1	20.6	20.6
Actuated g/C Ratio	0.13	0.23	0.23	0.09	0.16	0.16	0.24	0.45	0.45	0.05	0.22	0.22
v/c Ratio	0.96	0.05	0.29	0.54	0.16	0.34	1.21	0.78	0.05	0.24	0.76	0.60
Control Delay	95.1	28.8	5.0	56.9	32.6	4.9	150.5	28.9	0.1	50.1	43.3	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.1	28.8	5.0	56.9	32.6	4.9	150.5	28.9	0.1	50.1	43.3	20.8
LOS	F	C	A	E	C	A	F	C	A	D	D	C
Approach Delay		57.4			26.1			61.8			36.6	
Approach LOS		E			C			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 51.6	Intersection LOS: D
Intersection Capacity Utilization 78.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	20	135	76	45	124	462	1178	37	38	558	270
Future Volume (veh/h)	203	20	135	76	45	124	462	1178	37	38	558	270
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	209	21	84	78	46	33	476	1214	19	39	575	212
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	239	372	315	97	214	181	432	1494	666	105	703	314
Arrive On Green	0.15	0.21	0.21	0.06	0.12	0.12	0.27	0.44	0.44	0.04	0.21	0.21
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	209	21	84	78	46	33	476	1214	19	39	575	212
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1525	1478	1710	1525
Q Serve(g_s), s	10.6	0.8	3.9	4.0	1.9	1.6	22.4	26.0	0.6	1.1	13.5	10.8
Cycle Q Clear(g_c), s	10.6	0.8	3.9	4.0	1.9	1.6	22.4	26.0	0.6	1.1	13.5	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	372	315	97	214	181	432	1494	666	105	703	314
V/C Ratio(X)	0.87	0.06	0.27	0.80	0.21	0.18	1.10	0.81	0.03	0.37	0.82	0.68
Avail Cap(c_a), veh/h	239	941	798	222	922	782	432	1536	685	176	827	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	26.7	28.0	38.9	33.4	33.3	30.8	20.6	13.5	39.6	31.8	30.8
Incr Delay (d2), s/veh	27.1	0.1	0.4	5.6	0.5	0.5	73.7	3.4	0.0	0.8	5.6	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.3	1.4	1.7	0.9	0.6	16.6	9.3	0.2	0.4	5.6	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.1	26.8	28.4	44.6	33.9	33.8	104.5	24.0	13.5	40.4	37.5	34.6
LnGrp LOS	E	C	C	D	C	C	F	C	B	D	D	C
Approach Vol, veh/h		314			157			1709			826	
Approach Delay, s/veh		50.7			39.2			46.3			36.9	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	43.2	9.6	23.5	27.0	23.8	17.0	16.2
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.1	28.0	6.0	5.9	24.4	15.5	12.6	3.9
Green Ext Time (p_c), s	0.0	5.1	0.0	0.3	0.0	1.8	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	43.8
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1414	742	8
Future Vol, veh/h	0	3	0	1414	742	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	1537	807	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	408	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	598	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	598	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

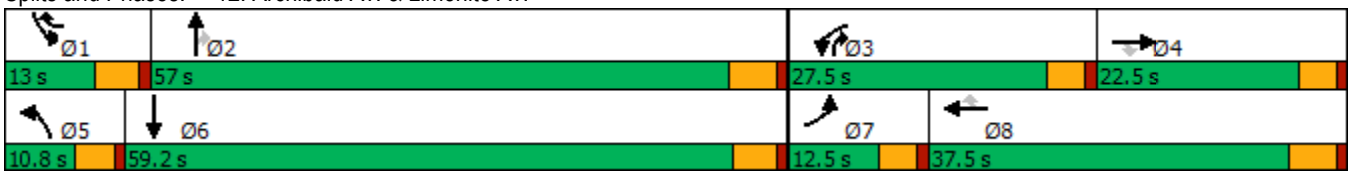
Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	598	-	-
HCM Lane V/C Ratio	-	0.005	-	-
HCM Control Delay (s)	-	11.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	19	17	7	353	55	542	28	855	338	146	557
Future Volume (vph)	19	17	7	353	55	542	28	855	338	146	557
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	11.0	9.5	46.3	9.5	11.0	11.0
Total Split (s)	12.5	22.5	22.5	27.5	37.5	13.0	10.8	57.0	27.5	13.0	59.2
Total Split (%)	10.4%	18.8%	18.8%	22.9%	31.3%	10.8%	9.0%	47.5%	22.9%	10.8%	49.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	4.0	3.5	4.3	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	5.0	4.5	5.3	4.5	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	6.1	8.2	8.2	23.1	26.3	39.7	6.1	52.0	76.0	8.1	59.3
Actuated g/C Ratio	0.06	0.08	0.08	0.22	0.25	0.37	0.06	0.49	0.71	0.08	0.56
v/c Ratio	0.10	0.06	0.03	0.94	0.06	0.80	0.28	0.96	0.28	1.12	0.31
Control Delay	51.6	46.5	0.1	75.1	31.8	31.8	58.1	49.3	1.3	157.8	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.6	46.5	0.1	75.1	31.8	31.8	58.1	49.3	1.3	157.8	15.2
LOS	D	D	A	E	C	C	E	D	A	F	B
Approach Delay		41.5			47.9			36.2			43.0
Approach LOS		D			D			D			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay: 41.7	Intersection LOS: D
Intersection Capacity Utilization 95.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	17	7	353	55	542	28	855	338	146	557	45
Future Volume (veh/h)	19	17	7	353	55	542	28	855	338	146	557	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	20	18	7	368	57	446	29	891	253	152	580	47
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	72	317	141	369	979	551	48	872	1050	128	1717	139
Arrive On Green	0.02	0.09	0.09	0.20	0.27	0.27	0.03	0.46	0.46	0.07	0.51	0.51
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	1900	1573	1810	3382	274
Grp Volume(v), veh/h	20	18	7	368	57	446	29	891	253	152	309	318
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	1900	1573	1810	1805	1851
Q Serve(g_s), s	0.6	0.5	0.4	22.9	1.3	28.4	1.8	51.7	7.3	8.0	11.5	11.5
Cycle Q Clear(g_c), s	0.6	0.5	0.4	22.9	1.3	28.4	1.8	51.7	7.3	8.0	11.5	11.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	72	317	141	369	979	551	48	872	1050	128	916	940
V/C Ratio(X)	0.28	0.06	0.05	1.00	0.06	0.81	0.61	1.02	0.24	1.18	0.34	0.34
Avail Cap(c_a), veh/h	249	577	257	369	1031	574	101	872	1050	128	916	940
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	47.1	47.1	44.8	30.4	33.7	54.3	30.5	7.6	52.3	16.5	16.5
Incr Delay (d2), s/veh	2.0	0.1	0.1	45.8	0.0	7.5	11.7	36.2	0.1	137.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.2	14.5	0.6	11.5	0.9	30.0	2.1	8.4	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.4	47.2	47.2	90.6	30.4	41.2	66.0	66.7	7.8	189.3	16.6	16.6
LnGrp LOS	E	D	D	F	C	D	E	F	A	F	B	B
Approach Vol, veh/h		45			871			1173			779	
Approach Delay, s/veh		51.3			61.4			54.0			50.3	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	57.0	27.5	15.2	7.5	62.5	6.8	35.9
Change Period (Y+Rc), s	5.0	5.3	4.5	* 5.3	4.5	* 5.3	4.5	5.3
Max Green Setting (Gmax), s	8.0	51.7	23.0	* 18	6.3	* 54	8.0	32.2
Max Q Clear Time (g_c+I1), s	10.0	53.7	24.9	2.5	3.8	13.5	2.6	30.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	55.2
HCM 6th LOS	E

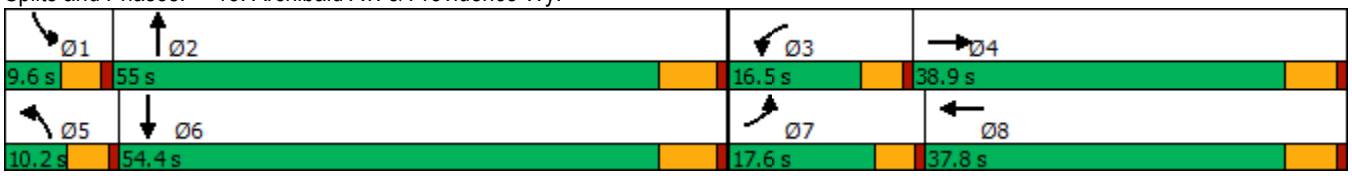
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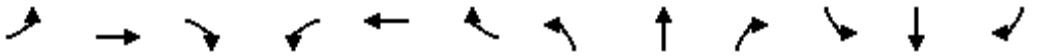
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	28	0	37	0	27	1205	45	868
Future Volume (vph)	28	0	37	0	27	1205	45	868
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	17.6	38.9	16.5	37.8	10.2	55.0	9.6	54.4
Total Split (%)	14.7%	32.4%	13.8%	31.5%	8.5%	45.8%	8.0%	45.3%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	7.0	14.9	10.1	15.1	6.3	46.0	6.0	51.1
Actuated g/C Ratio	0.09	0.20	0.14	0.20	0.08	0.62	0.08	0.68
v/c Ratio	0.18	0.02	0.16	0.08	0.19	0.62	0.34	0.42
Control Delay	46.5	0.1	41.8	0.3	48.7	18.5	52.0	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	0.1	41.8	0.3	48.7	18.5	52.0	15.0
LOS	D	A	D	A	D	B	D	B
Approach Delay		34.9		20.8		19.1		16.7
Approach LOS		C		C		B		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 74.7	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	0	9	37	0	38	27	1205	49	45	868	65
Future Volume (veh/h)	28	0	9	37	0	38	27	1205	49	45	868	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	30	0	9	40	0	41	29	1310	53	49	943	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	102	0	220	70	0	191	56	1677	68	80	1658	125
Arrive On Green	0.06	0.00	0.14	0.04	0.00	0.12	0.03	0.47	0.47	0.04	0.49	0.49
Sat Flow, veh/h	1810	0	1610	1810	0	1610	1810	3536	143	1810	3403	256
Grp Volume(v), veh/h	30	0	9	40	0	41	29	668	695	49	500	514
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1610	1810	1805	1874	1810	1805	1854
Q Serve(g_s), s	1.1	0.0	0.3	1.5	0.0	1.6	1.1	21.4	21.4	1.8	13.6	13.6
Cycle Q Clear(g_c), s	1.1	0.0	0.3	1.5	0.0	1.6	1.1	21.4	21.4	1.8	13.6	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		0.14
Lane Grp Cap(c), veh/h	102	0	220	70	0	191	56	856	889	80	880	903
V/C Ratio(X)	0.29	0.00	0.04	0.57	0.00	0.21	0.52	0.78	0.78	0.61	0.57	0.57
Avail Cap(c_a), veh/h	340	0	770	311	0	745	146	1273	1322	131	1258	1292
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	0.0	25.9	32.7	0.0	27.6	33.0	15.2	15.2	32.5	12.6	12.6
Incr Delay (d2), s/veh	0.6	0.0	0.1	2.7	0.0	0.6	2.8	1.9	1.8	2.8	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.1	0.7	0.0	0.6	0.5	7.1	7.4	0.8	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	0.0	26.0	35.4	0.0	28.1	35.8	17.1	17.0	35.3	13.2	13.1
LnGrp LOS	C	A	C	D	A	C	D	B	B	D	B	B
Approach Vol, veh/h		39			81			1392			1063	
Approach Delay, s/veh		30.5			31.7			17.4			14.2	
Approach LOS		C			C			B			B	

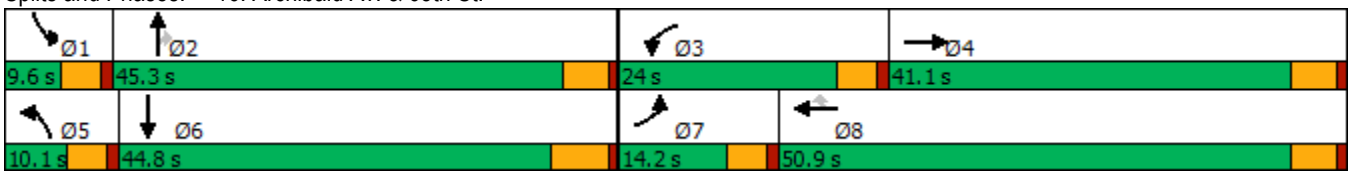
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	39.0	7.3	15.2	6.7	39.9	8.5	14.0
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	48.8	11.9	33.1	5.6	48.2	13.0	32.0
Max Q Clear Time (g_c+I1), s	3.8	23.4	3.5	2.3	3.1	15.6	3.1	3.6
Green Ext Time (p_c), s	0.0	9.4	0.0	0.0	0.0	6.5	0.0	0.2

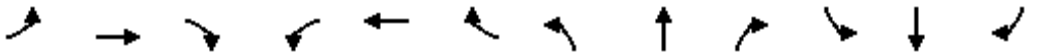
Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	58	47	233	27	66	18	1111	138	38	814
Future Volume (vph)	58	47	233	27	66	18	1111	138	38	814
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	7.5	14.3	17.6	26.7	26.7	5.4	41.1	41.1	5.1	41.7
Actuated g/C Ratio	0.08	0.15	0.19	0.29	0.29	0.06	0.44	0.44	0.05	0.45
v/c Ratio	0.44	0.21	0.76	0.06	0.14	0.19	0.77	0.19	0.42	0.40
Control Delay	55.0	18.5	53.2	26.5	1.9	52.6	28.9	5.3	61.7	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	18.5	53.2	26.5	1.9	52.6	28.9	5.3	61.7	20.4
LOS	E	B	D	C	A	D	C	A	E	C
Approach Delay		31.6		40.5			26.6			22.2
Approach LOS		C		D			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93.4	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 27.2	Intersection LOS: C
Intersection Capacity Utilization 60.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	47	56	233	27	66	18	1111	138	38	814	22
Future Volume (veh/h)	58	47	56	233	27	66	18	1111	138	38	814	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	64	52	27	256	30	32	20	1221	116	42	895	15
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	83	281	135	293	447	374	40	1632	718	66	2450	41
Arrive On Green	0.05	0.12	0.12	0.16	0.24	0.24	0.02	0.45	0.45	0.04	0.47	0.47
Sat Flow, veh/h	1810	2358	1136	1810	1900	1589	1810	3610	1589	1810	5254	88
Grp Volume(v), veh/h	64	39	40	256	30	32	20	1221	116	42	589	321
Grp Sat Flow(s),veh/h/ln	1810	1805	1689	1810	1900	1589	1810	1805	1589	1810	1729	1884
Q Serve(g_s), s	3.1	1.7	1.9	12.3	1.1	1.4	1.0	24.9	3.8	2.0	9.7	9.8
Cycle Q Clear(g_c), s	3.1	1.7	1.9	12.3	1.1	1.4	1.0	24.9	3.8	2.0	9.7	9.8
Prop In Lane	1.00		0.67	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	83	215	201	293	447	374	40	1632	718	66	1613	879
V/C Ratio(X)	0.77	0.18	0.20	0.87	0.07	0.09	0.50	0.75	0.16	0.64	0.37	0.37
Avail Cap(c_a), veh/h	195	731	684	395	978	818	112	1632	718	102	1613	879
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	35.3	35.4	36.4	26.4	26.5	43.0	20.2	14.4	42.3	15.3	15.3
Incr Delay (d2), s/veh	5.6	0.4	0.5	12.2	0.1	0.1	3.6	3.2	0.5	3.8	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.8	0.8	6.2	0.5	0.5	0.5	10.1	1.4	0.9	3.5	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	35.7	35.8	48.6	26.5	26.6	46.7	23.4	14.9	46.1	15.9	16.4
LnGrp LOS	D	D	D	D	C	C	D	C	B	D	B	B
Approach Vol, veh/h		143			318			1357			952	
Approach Delay, s/veh		41.0			44.3			23.0			17.4	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	46.4	19.0	15.7	6.5	47.7	8.7	26.0
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	4.0	26.9	14.3	3.9	3.0	11.8	5.1	3.4
Green Ext Time (p_c), s	0.0	7.1	0.2	0.4	0.0	5.6	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

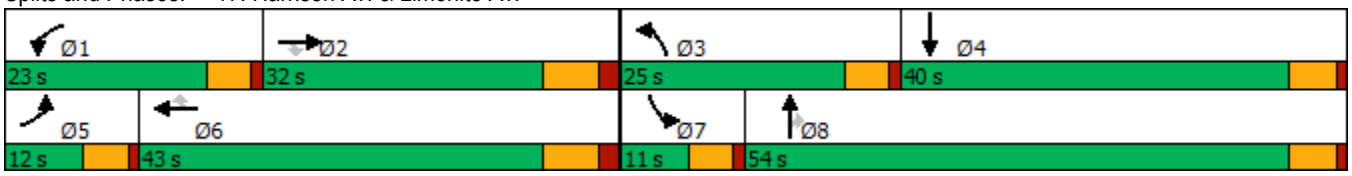
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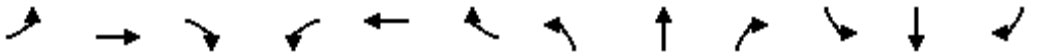
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	40	417	11	163	732	5	112	106	220	21	120
Future Volume (vph)	40	417	11	163	732	5	112	106	220	21	120
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.3	13.3	13.3	11.4	24.3	24.3	9.5	22.6	22.6	5.8	14.6
Actuated g/C Ratio	0.09	0.19	0.19	0.16	0.35	0.35	0.14	0.32	0.32	0.08	0.21
v/c Ratio	0.26	0.45	0.03	0.59	0.43	0.01	0.49	0.18	0.35	0.15	0.46
Control Delay	42.9	29.8	0.1	41.2	22.6	0.0	41.0	19.7	4.8	42.7	28.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	29.8	0.1	41.2	22.6	0.0	41.0	19.7	4.8	42.7	28.4
LOS	D	C	A	D	C	A	D	B	A	D	C
Approach Delay		30.2			25.8			17.7			30.0
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 70.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 52.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	417	11	163	732	5	112	106	220	21	120	49
Future Volume (veh/h)	40	417	11	163	732	5	112	106	220	21	120	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	444	9	173	779	3	119	113	141	22	128	35
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	1014	315	222	1415	439	155	387	323	48	207	57
Arrive On Green	0.05	0.20	0.20	0.12	0.27	0.27	0.09	0.20	0.20	0.03	0.14	0.14
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	1900	1587	1810	1437	393
Grp Volume(v), veh/h	43	444	9	173	779	3	119	113	141	22	0	163
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	1900	1587	1810	0	1829
Q Serve(g_s), s	1.1	3.7	0.2	4.6	6.3	0.1	3.2	2.5	3.8	0.6	0.0	4.1
Cycle Q Clear(g_c), s	1.1	3.7	0.2	4.6	6.3	0.1	3.2	2.5	3.8	0.6	0.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	82	1014	315	222	1415	439	155	387	323	48	0	264
V/C Ratio(X)	0.53	0.44	0.03	0.78	0.55	0.01	0.77	0.29	0.44	0.46	0.00	0.62
Avail Cap(c_a), veh/h	257	2629	816	660	3786	1175	734	1876	1567	220	0	1287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.0	17.5	16.1	21.0	15.3	13.1	22.1	16.6	17.2	23.7	0.0	19.8
Incr Delay (d2), s/veh	1.9	0.3	0.0	2.3	0.3	0.0	3.0	0.4	0.9	2.6	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	0.1	1.7	1.9	0.0	1.3	0.9	1.2	0.3	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.0	17.8	16.1	23.2	15.7	13.1	25.1	17.0	18.1	26.2	0.0	22.2
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	A	C
Approach Vol, veh/h		496			955			373			185	
Approach Delay, s/veh		18.4			17.0			20.0			22.6	
Approach LOS		B			B			C			C	

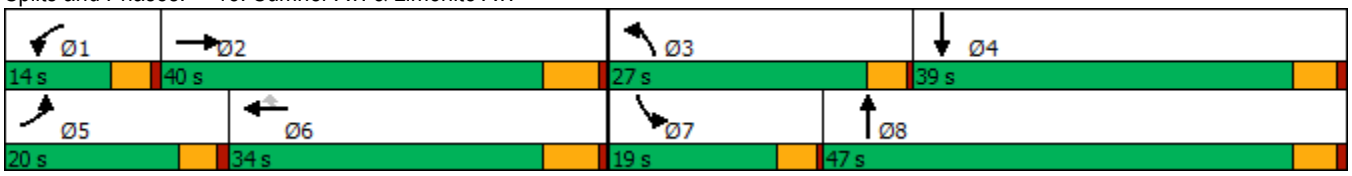
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	16.6	9.2	12.4	7.2	20.5	6.3	15.3
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	6.6	5.7	5.2	6.1	3.1	8.3	2.6	5.8
Green Ext Time (p_c), s	0.1	2.5	0.1	0.8	0.0	5.1	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	238	465	91	624	38	125	433	86	270
Future Volume (vph)	238	465	91	624	38	125	433	86	270
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	10.1	23.1	6.5	16.8	16.8	10.2	21.9	8.3	17.4
Actuated g/C Ratio	0.13	0.31	0.09	0.22	0.22	0.14	0.29	0.11	0.23
v/c Ratio	0.54	0.33	0.32	0.57	0.08	0.55	0.59	0.46	0.51
Control Delay	38.2	23.3	40.9	30.0	0.3	43.3	25.6	44.1	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	23.3	40.9	30.0	0.3	43.3	25.6	44.1	23.6
LOS	D	C	D	C	A	D	C	D	C
Approach Delay		28.2		29.8			28.8		27.1
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 75.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 28.6	Intersection LOS: C
Intersection Capacity Utilization 56.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	465	22	91	624	38	125	433	145	86	270	139
Future Volume (veh/h)	238	465	22	91	624	38	125	433	145	86	270	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	253	495	14	97	664	22	133	461	93	91	287	69
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	380	1445	41	202	1183	367	173	688	138	117	577	136
Arrive On Green	0.11	0.28	0.28	0.06	0.23	0.23	0.10	0.23	0.23	0.06	0.20	0.20
Sat Flow, veh/h	3510	5183	146	3510	5187	1610	1810	2996	600	1810	2897	685
Grp Volume(v), veh/h	253	330	179	97	664	22	133	277	277	91	177	179
Grp Sat Flow(s),veh/h/ln	1755	1729	1871	1755	1729	1610	1810	1805	1791	1810	1805	1777
Q Serve(g_s), s	3.7	4.0	4.0	1.4	6.0	0.6	3.8	7.4	7.5	2.6	4.6	4.7
Cycle Q Clear(g_c), s	3.7	4.0	4.0	1.4	6.0	0.6	3.8	7.4	7.5	2.6	4.6	4.7
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.34	1.00		0.39
Lane Grp Cap(c), veh/h	380	964	522	202	1183	367	173	414	411	117	359	354
V/C Ratio(X)	0.67	0.34	0.34	0.48	0.56	0.06	0.77	0.67	0.67	0.77	0.49	0.51
Avail Cap(c_a), veh/h	1030	2226	1205	632	2750	854	788	1436	1424	514	1162	1144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	15.2	15.2	24.1	18.0	16.0	23.3	18.5	18.5	24.3	18.8	18.8
Incr Delay (d2), s/veh	0.8	0.2	0.4	0.7	0.4	0.1	2.7	1.4	1.4	4.1	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.3	1.4	0.5	2.0	0.2	1.5	2.7	2.7	1.1	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	15.4	15.6	24.8	18.5	16.0	26.1	19.9	20.0	28.4	19.6	19.7
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		762			783			687			447	
Approach Delay, s/veh		18.1			19.2			21.1			21.4	
Approach LOS		B			B			C			C	

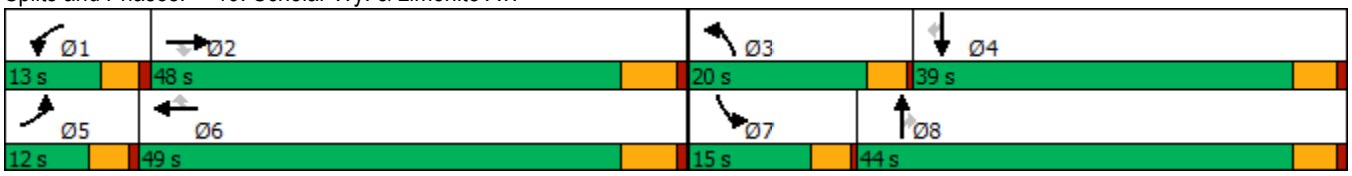
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	20.7	9.0	15.5	10.2	18.0	7.4	17.1
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	3.4	6.0	5.8	6.7	5.7	8.0	4.6	9.5
Green Ext Time (p_c), s	0.0	2.9	0.1	1.5	0.2	4.0	0.0	2.5

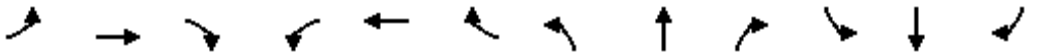
Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	685	65	62	598	36	91	174	115	54	201	33
Future Volume (vph)	40	685	65	62	598	36	91	174	115	54	201	33
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	6.3	21.8	21.8	7.1	24.7	24.7	8.7	16.9	16.9	7.1	13.3	13.3
Actuated g/C Ratio	0.09	0.33	0.33	0.11	0.37	0.37	0.13	0.25	0.25	0.11	0.20	0.20
v/c Ratio	0.25	0.62	0.11	0.34	0.47	0.06	0.41	0.38	0.25	0.30	0.30	0.11
Control Delay	41.5	24.2	0.4	41.7	20.5	0.2	39.5	26.8	6.7	40.2	26.9	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	24.2	0.4	41.7	20.5	0.2	39.5	26.8	6.7	40.2	26.9	27.0
LOS	D	C	A	D	C	A	D	C	A	D	C	C
Approach Delay		23.1			21.4			23.8			29.4	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 66.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization 54.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	685	65	62	598	36	91	174	115	54	201	33
Future Volume (veh/h)	40	685	65	62	598	36	91	174	115	54	201	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	729	49	66	636	27	97	185	77	57	214	35
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	1164	518	88	1209	538	125	341	285	80	558	239
Arrive On Green	0.04	0.32	0.32	0.05	0.33	0.33	0.07	0.18	0.18	0.04	0.15	0.15
Sat Flow, veh/h	1810	3610	1606	1810	3610	1608	1810	1900	1589	1810	3610	1548
Grp Volume(v), veh/h	43	729	49	66	636	27	97	185	77	57	214	35
Grp Sat Flow(s),veh/h/ln	1810	1805	1606	1810	1805	1608	1810	1900	1589	1810	1805	1548
Q Serve(g_s), s	1.1	8.3	1.0	1.7	6.8	0.5	2.5	4.3	2.0	1.5	2.6	0.9
Cycle Q Clear(g_c), s	1.1	8.3	1.0	1.7	6.8	0.5	2.5	4.3	2.0	1.5	2.6	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1164	518	88	1209	538	125	341	285	80	558	239
V/C Ratio(X)	0.65	0.63	0.09	0.75	0.53	0.05	0.77	0.54	0.27	0.71	0.38	0.15
Avail Cap(c_a), veh/h	282	3149	1401	319	3224	1436	601	1539	1287	413	2549	1093
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	13.8	11.4	22.6	12.9	10.8	22.0	18.0	17.0	22.7	18.3	17.6
Incr Delay (d2), s/veh	4.0	0.6	0.1	4.7	0.4	0.0	3.8	1.0	0.4	4.3	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.5	0.3	0.7	2.0	0.2	1.1	1.7	0.7	0.7	1.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	14.4	11.5	27.3	13.3	10.9	25.8	19.0	17.4	27.0	18.6	17.8
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		821			729			359			306	
Approach Delay, s/veh		14.9			14.5			20.5			20.1	
Approach LOS		B			B			C			C	

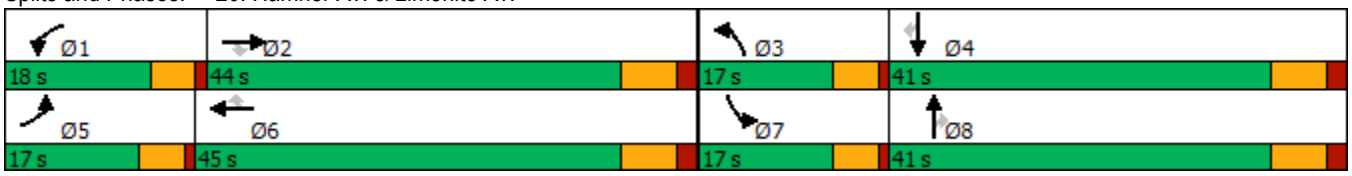
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	21.5	7.3	12.4	6.2	22.1	6.1	13.6
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	3.7	10.3	4.5	4.6	3.1	8.8	3.5	6.3
Green Ext Time (p_c), s	0.0	5.0	0.0	1.2	0.0	4.2	0.0	1.0

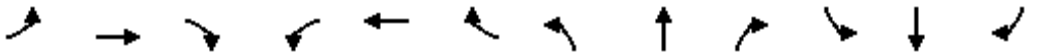
Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	161	578	36	212	465	100	140	581	301	197	324	97
Future Volume (vph)	161	578	36	212	465	100	140	581	301	197	324	97
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	8.6	21.4	21.4	9.9	22.7	22.7	8.1	24.3	24.3	9.4	25.6	25.6
Actuated g/C Ratio	0.10	0.24	0.24	0.11	0.25	0.25	0.09	0.27	0.27	0.10	0.29	0.29
v/c Ratio	0.52	0.51	0.08	0.60	0.55	0.22	0.48	0.45	0.52	0.59	0.24	0.19
Control Delay	47.4	32.0	0.3	47.5	32.8	5.2	47.3	28.9	9.7	48.0	25.9	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	32.0	0.3	47.5	32.8	5.2	47.3	28.9	9.7	48.0	25.9	4.2
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		33.8			33.2			25.8			29.5	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 89.8	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 30.3	Intersection LOS: C
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 20: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	578	36	212	465	100	140	581	301	197	324	97
Future Volume (veh/h)	161	578	36	212	465	100	140	581	301	197	324	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	175	628	29	230	505	72	152	632	163	214	352	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	263	1246	381	323	929	409	237	1316	402	306	1418	435
Arrive On Green	0.07	0.24	0.24	0.09	0.26	0.26	0.07	0.25	0.25	0.09	0.27	0.27
Sat Flow, veh/h	3510	5187	1586	3510	3610	1589	3510	5187	1584	3510	5187	1590
Grp Volume(v), veh/h	175	628	29	230	505	72	152	632	163	214	352	41
Grp Sat Flow(s),veh/h/ln	1755	1729	1586	1755	1805	1589	1755	1729	1584	1755	1729	1590
Q Serve(g_s), s	3.6	7.7	1.0	4.7	8.9	2.6	3.1	7.6	6.3	4.4	3.9	1.4
Cycle Q Clear(g_c), s	3.6	7.7	1.0	4.7	8.9	2.6	3.1	7.6	6.3	4.4	3.9	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	1246	381	323	929	409	237	1316	402	306	1418	435
V/C Ratio(X)	0.67	0.50	0.08	0.71	0.54	0.18	0.64	0.48	0.41	0.70	0.25	0.09
Avail Cap(c_a), veh/h	574	2614	799	622	1868	823	574	2402	734	574	2402	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	24.1	21.6	32.4	23.5	21.2	33.4	23.3	22.8	32.6	20.8	19.9
Incr Delay (d2), s/veh	1.1	0.7	0.2	1.1	1.1	0.4	1.1	0.6	1.4	1.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.9	0.4	1.9	3.5	0.9	1.3	2.9	2.3	1.8	1.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.1	24.8	21.8	33.5	24.6	21.6	34.5	23.9	24.2	33.7	21.0	20.1
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		832			807			947			607	
Approach Delay, s/veh		26.6			26.9			25.6			25.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	24.6	10.0	27.1	10.5	25.9	11.4	25.6
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	6.7	9.7	5.1	5.9	5.6	10.9	6.4	9.6
Green Ext Time (p_c), s	0.1	8.0	0.1	4.5	0.1	6.6	0.1	8.8

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	743	462	505	622	88	0	354
Future Volume (vph)	743	462	505	622	88	0	354
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	36.5	36.5	23.5	23.5	23.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.5	73.5	73.5	73.5	7.0	7.0	7.0
Actuated g/C Ratio	0.80	0.80	0.80	0.80	0.08	0.08	0.08
v/c Ratio	0.18	0.35	0.13	0.45	0.35	0.35	0.66
Control Delay	2.3	0.9	2.1	1.3	47.3	47.6	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.3	0.9	2.1	1.3	47.3	47.6	10.9
LOS	A	A	A	A	D	D	B
Approach Delay	1.8		1.7			18.2	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 4.3	Intersection LOS: A
Intersection Capacity Utilization 43.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 21: I-15 SB Ramps & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰	↱↱
Traffic Volume (veh/h)	0	743	462	0	505	622	0	0	0	88	0	354
Future Volume (veh/h)	0	743	462	0	505	622	0	0	0	88	0	354
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	766	439	0	521	641				91	0	157
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4176	1280	0	4176	1296				270	0	239
Arrive On Green	0.00	0.81	0.81	0.00	0.81	0.81				0.07	0.00	0.07
Sat Flow, veh/h	0	5358	1590	0	5358	1610				3619	0	3207
Grp Volume(v), veh/h	0	766	439	0	521	641				91	0	157
Grp Sat Flow(s),veh/h/ln	0	1729	1590	0	1729	1610				1810	0	1604
Q Serve(g_s), s	0.0	3.1	6.8	0.0	2.0	11.8				2.2	0.0	4.3
Cycle Q Clear(g_c), s	0.0	3.1	6.8	0.0	2.0	11.8				2.2	0.0	4.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4176	1280	0	4176	1296				270	0	239
V/C Ratio(X)	0.00	0.18	0.34	0.00	0.12	0.49				0.34	0.00	0.66
Avail Cap(c_a), veh/h	0	4176	1280	0	4176	1296				1407	0	1247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.0	2.4	0.0	1.9	2.9				40.1	0.0	41.1
Incr Delay (d2), s/veh	0.0	0.1	0.7	0.0	0.1	1.4				0.3	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	1.4	0.0	0.4	2.5				0.9	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.1	3.1	0.0	2.0	4.2				40.4	0.0	42.3
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1205			1162						248	
Approach Delay, s/veh		2.5			3.2						41.6	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		12.3		79.0						
Change Period (Y+Rc), s		5.5		5.5		5.5						
Max Green Setting (Gmax), s		73.5		35.5		73.5						
Max Q Clear Time (g_c+I1), s		8.8		6.3		13.8						
Green Ext Time (p_c), s		4.7		0.5		3.8						

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

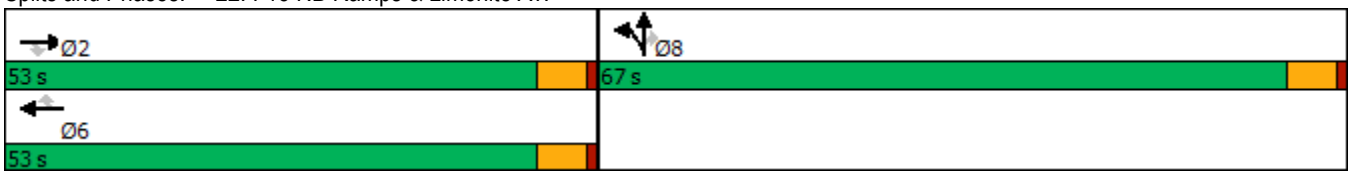
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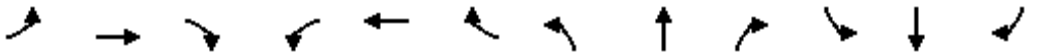
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	304	527	894	245	233	0	295
Future Volume (vph)	304	527	894	245	233	0	295
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.6	47.6	47.6	47.6	10.6	10.6	10.6
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.15	0.15	0.15
v/c Ratio	0.09	0.43	0.26	0.21	0.46	0.46	0.44
Control Delay	4.0	1.7	4.6	1.2	32.2	32.2	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.0	1.7	4.6	1.2	32.2	32.2	5.7
LOS	A	A	A	A	C	C	A
Approach Delay	2.5		3.9			17.4	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 69.2	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 37.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 22: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↕	↱↱			
Traffic Volume (veh/h)	0	304	527	0	894	245	233	0	295	0	0	0
Future Volume (veh/h)	0	304	527	0	894	245	233	0	295	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	310	538	0	912	217	238	0	103			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3743	1161	0	3743	1162	402	0	358			
Arrive On Green	0.00	0.72	0.72	0.00	0.72	0.72	0.11	0.00	0.11			
Sat Flow, veh/h	0	5358	1609	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	310	538	0	912	217	238	0	103			
Grp Sat Flow(s),veh/h/ln	0	1729	1609	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	1.2	9.2	0.0	3.9	2.9	4.1	0.0	1.9			
Cycle Q Clear(g_c), s	0.0	1.2	9.2	0.0	3.9	2.9	4.1	0.0	1.9			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3743	1161	0	3743	1162	402	0	358			
V/C Ratio(X)	0.00	0.08	0.46	0.00	0.24	0.19	0.59	0.00	0.29			
Avail Cap(c_a), veh/h	0	3743	1161	0	3743	1162	3382	0	3009			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	2.7	3.8	0.0	3.1	2.9	27.8	0.0	26.9			
Incr Delay (d2), s/veh	0.0	0.0	1.3	0.0	0.2	0.4	1.4	0.0	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.2	2.0	0.0	0.8	0.6	1.7	0.0	0.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.8	5.2	0.0	3.2	3.3	29.2	0.0	27.3			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		848			1129			341				
Approach Delay, s/veh		4.3			3.3			28.6				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		12.8				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		11.2				5.9		6.1				
Green Ext Time (p_c), s		2.4				5.1		1.2				

Intersection Summary	
HCM 6th Ctrl Delay	7.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	2	0	3	0	0	6	9	0	0
Future Vol, veh/h	0	0	0	2	0	3	0	0	6	9	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	2	0	3	0	0	7	10	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3	0	0	1	0	0	5	8	1	7	7	2
Stage 1	-	-	-	-	-	-	1	1	-	6	6	-
Stage 2	-	-	-	-	-	-	4	7	-	1	1	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1632	-	-	1635	-	-	1020	891	1089	1017	892	1088
Stage 1	-	-	-	-	-	-	1027	899	-	1020	895	-
Stage 2	-	-	-	-	-	-	1023	894	-	1027	899	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1632	-	-	1635	-	-	1019	890	1089	1010	891	1088
Mov Cap-2 Maneuver	-	-	-	-	-	-	1019	890	-	1010	891	-
Stage 1	-	-	-	-	-	-	1027	899	-	1020	894	-
Stage 2	-	-	-	-	-	-	1022	893	-	1021	899	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.9	8.3	8.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1089	1632	-	-	1635	-	-	1010
HCM Lane V/C Ratio	0.006	-	-	-	0.001	-	-	0.01
HCM Control Delay (s)	8.3	0	-	-	7.2	0	-	8.6
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	2.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	16	78	42	35
Demand Flow Rate, veh/h	16	78	42	35
Vehicles Circulating, veh/h	96	0	51	66
Vehicles Exiting, veh/h	5	93	61	12
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	2.9	2.9	2.9	2.9
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	L	TR	LTR	LTR
RT Channelized						
Lane Util	0.500	0.500	0.782	0.218	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
Entry Flow, veh/h	8	8	61	17	42	35
Cap Entry Lane, veh/h	1236	1309	1350	1420	1360	1343
Entry HV Adj Factor	0.940	1.060	1.000	1.000	1.000	1.000
Flow Entry, veh/h	8	8	61	17	42	35
Cap Entry, veh/h	1162	1387	1350	1420	1360	1343
V/C Ratio	0.006	0.006	0.045	0.012	0.031	0.026
Control Delay, s/veh	3.2	2.6	3.0	2.6	2.9	2.9
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	118	17	0	41	11	0	0	39	0	0	31
Future Vol, veh/h	0	118	17	0	41	11	0	0	39	0	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	128	18	0	45	12	0	0	42	0	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	73	-	-	29
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	981	0	0	1046
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	981	-	-	1046
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.8	8.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	981	-	-	-	-	1046
HCM Lane V/C Ratio	0.043	-	-	-	-	0.032
HCM Control Delay (s)	8.8	-	-	-	-	8.6
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	102	36	8	14	0
Future Vol, veh/h	0	102	36	8	14	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, %	0	0	0	0	0	0
Mvmt Flow	0	111	39	9	15	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	48	0	-	0	155	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	111	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1572	-	-	-	841	1032
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	919	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1572	-	-	-	841	1032
Mov Cap-2 Maneuver	-	-	-	-	841	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	919	-

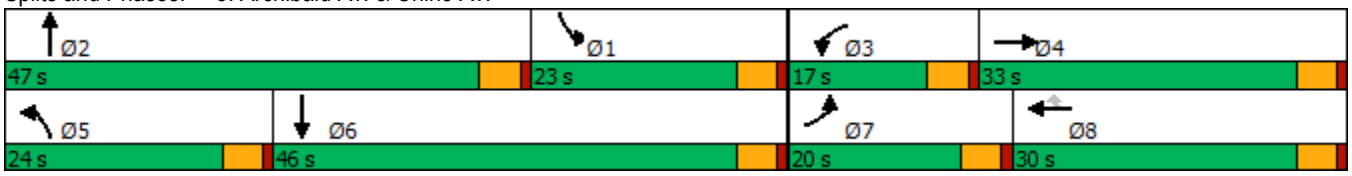
Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

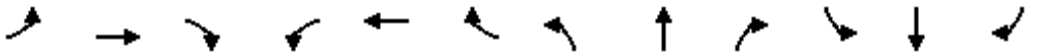
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1572	-	-	-	841
HCM Lane V/C Ratio	-	-	-	-	0.018
HCM Control Delay (s)	0	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	125	161	23	44	110	56	884	141	1123
Future Volume (vph)	125	161	23	44	110	56	884	141	1123
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.2	23.2	7.1	10.9	10.9	8.9	24.9	23.8	42.5
Actuated g/C Ratio	0.13	0.26	0.08	0.12	0.12	0.10	0.27	0.26	0.47
v/c Ratio	0.60	0.60	0.19	0.21	0.38	0.37	0.72	0.35	0.77
Control Delay	52.0	35.2	47.8	39.7	7.7	48.9	33.2	34.9	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	35.2	47.8	39.7	7.7	48.9	33.2	34.9	27.3
LOS	D	D	D	D	A	D	C	C	C
Approach Delay		40.6		20.8			34.1		28.2
Approach LOS		D		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 31.4	Intersection LOS: C
Intersection Capacity Utilization 71.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	161	99	23	44	110	56	884	44	141	1123	58
Future Volume (veh/h)	125	161	99	23	44	110	56	884	44	141	1123	58
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	130	168	103	24	46	76	58	921	43	147	1170	55
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	164	212	130	44	232	196	80	1389	65	329	1471	69
Arrive On Green	0.10	0.20	0.20	0.03	0.13	0.13	0.05	0.29	0.29	0.20	0.44	0.44
Sat Flow, veh/h	1619	1044	640	1619	1800	1525	1619	4811	224	1619	3326	156
Grp Volume(v), veh/h	130	0	271	24	46	76	58	627	337	147	601	624
Grp Sat Flow(s),veh/h/ln	1619	0	1685	1619	1800	1525	1619	1638	1760	1619	1710	1772
Q Serve(g_s), s	5.2	0.0	10.1	1.0	1.5	1.8	2.3	11.1	11.2	5.3	20.0	20.0
Cycle Q Clear(g_c), s	5.2	0.0	10.1	1.0	1.5	1.8	2.3	11.1	11.2	5.3	20.0	20.0
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.13	1.00		0.09
Lane Grp Cap(c), veh/h	164	0	342	44	232	196	80	946	508	329	757	784
V/C Ratio(X)	0.79	0.00	0.79	0.55	0.20	0.39	0.72	0.66	0.66	0.45	0.79	0.80
Avail Cap(c_a), veh/h	377	0	723	304	691	586	475	2100	1128	450	1070	1109
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	25.0	31.8	25.8	9.7	31.0	20.7	20.7	23.1	15.9	15.9
Incr Delay (d2), s/veh	8.4	0.0	4.2	10.4	0.4	1.2	11.6	0.8	1.5	0.9	2.8	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	4.0	0.5	0.6	1.1	1.1	3.6	4.0	1.8	6.6	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	0.0	29.2	42.1	26.2	11.0	42.6	21.5	22.2	24.0	18.7	18.6
LnGrp LOS	D	A	C	D	C	B	D	C	C	C	B	B
Approach Vol, veh/h		401			146			1022			1372	
Approach Delay, s/veh		31.9			20.9			22.9			19.2	
Approach LOS		C			C			C			B	

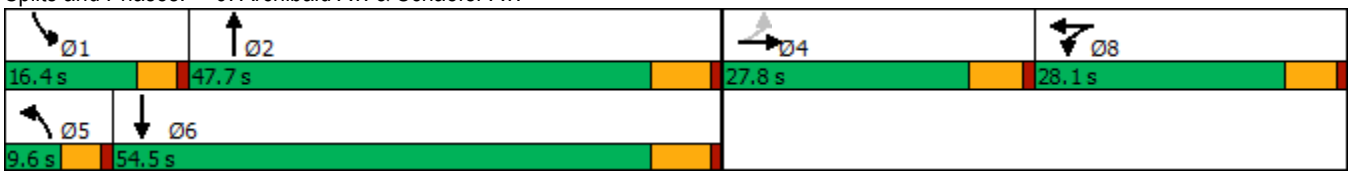
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	23.7	6.4	18.0	7.9	33.9	11.3	13.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	7.3	13.2	3.0	12.1	4.3	22.0	7.2	3.8
Green Ext Time (p_c), s	0.2	5.9	0.0	1.3	0.1	7.2	0.2	0.4

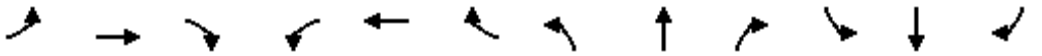
Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	10	0	879	36	1165		
Future Volume (vph)	10	0	879	36	1165		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	47.7	16.4	54.5	27.8	9.6
Total Split (%)	23.4%	23.4%	39.8%	13.7%	45.4%	23%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	16.0	16.0	32.0	8.5	35.5		
Actuated g/C Ratio	0.32	0.32	0.64	0.17	0.71		
v/c Ratio	0.02	0.05	0.30	0.14	0.51		
Control Delay	26.4	0.1	13.8	32.6	12.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	26.4	0.1	13.8	32.6	12.0		
LOS	C	A	B	C	B		
Approach Delay		5.5	13.8		12.6		
Approach LOS		A	B		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 50.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 52.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	0	41	0	879	23	36	1165	0
Future Volume (veh/h)	0	0	0	10	0	41	0	879	23	36	1165	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	11	0	27	0	925	23	38	1226	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	5	0	142	0	134	5	1946	48	71	1941	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.39	0.39	0.04	0.57	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4928	122	1619	3510	0
Grp Volume(v), veh/h	0	0	0	11	0	27	0	615	333	38	1226	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1775	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.6	0.0	5.0	5.0	0.8	8.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.2	0.0	0.6	0.0	5.0	5.0	0.8	8.6	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	0	5	0	142	0	134	5	1293	701	71	1941	0
V/C Ratio(X)	0.00	0.00	0.00	0.08	0.00	0.20	0.00	0.48	0.48	0.53	0.63	0.00
Avail Cap(c_a), veh/h	0	1109	0	1011	0	953	227	3780	2048	535	4598	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	15.0	0.0	15.1	0.0	8.0	8.1	16.7	5.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.7	0.0	0.3	0.5	2.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.8	0.9	0.3	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	15.2	0.0	15.8	0.0	8.3	8.6	19.0	5.5	0.0
LnGrp LOS	A	A	A	B	A	B	A	A	A	B	A	A
Approach Vol, veh/h		0			38			948			1264	
Approach Delay, s/veh		0.0			15.7			8.4			6.0	
Approach LOS					B			A			A	

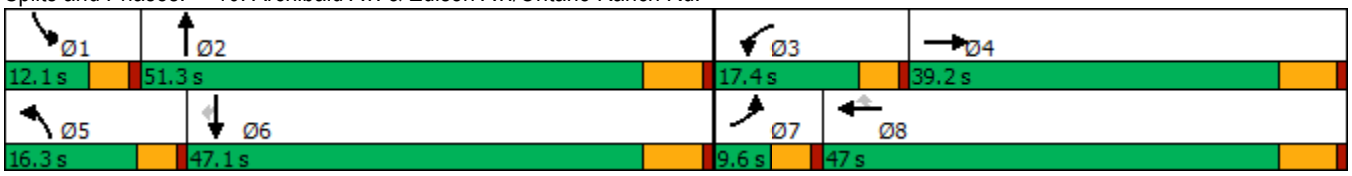
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	20.6		0.0	0.0	26.8		8.9				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	2.8	7.0		0.0	0.0	10.6		2.6				
Green Ext Time (p_c), s	0.0	5.9		0.0	0.0	9.6		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		7.1
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	595	110	288	209	87	55	511	294	131	967	84
Future Volume (vph)	85	595	110	288	209	87	55	511	294	131	967	84
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.2	24.1	100.7	12.9	31.9	31.9	8.1	33.0	100.7	7.8	35.5	35.5
Actuated g/C Ratio	0.05	0.24	1.00	0.13	0.32	0.32	0.08	0.33	1.00	0.08	0.35	0.35
v/c Ratio	0.58	0.75	0.07	0.79	0.38	0.16	0.44	0.47	0.20	1.08	0.83	0.14
Control Delay	68.3	42.8	0.1	61.6	30.6	3.4	59.7	27.9	0.3	153.2	38.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.3	42.8	0.1	61.6	30.6	3.4	59.7	27.9	0.3	153.2	38.1	0.5
LOS	E	D	A	E	C	A	E	C	A	F	D	A
Approach Delay		39.7			41.8			20.5			48.2	
Approach LOS		D			D			C			D	

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 100.7		
Natural Cycle: 115		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 1.08		
Intersection Signal Delay: 38.2	Intersection LOS: D	
Intersection Capacity Utilization 77.9%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 10: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	595	110	288	209	87	55	511	294	131	967	84
Future Volume (veh/h)	85	595	110	288	209	87	55	511	294	131	967	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	88	613	0	297	215	56	57	527	0	135	997	71
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	149	782		362	541	459	70	1070		139	1215	529
Arrive On Green	0.05	0.23	0.00	0.12	0.30	0.30	0.04	0.31	0.00	0.09	0.36	0.36
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1490
Grp Volume(v), veh/h	88	613	0	297	215	56	57	527	0	135	997	71
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1490
Q Serve(g_s), s	2.5	14.7	0.0	8.6	8.3	2.3	3.1	11.0	0.0	7.3	23.2	2.8
Cycle Q Clear(g_c), s	2.5	14.7	0.0	8.6	8.3	2.3	3.1	11.0	0.0	7.3	23.2	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	782		362	541	459	70	1070		139	1215	529
V/C Ratio(X)	0.59	0.78		0.82	0.40	0.12	0.81	0.49		0.97	0.82	0.13
Avail Cap(c_a), veh/h	169	1290		432	839	711	216	1751		139	1587	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	31.7	0.0	37.5	24.3	22.2	41.5	24.4	0.0	39.9	25.7	19.1
Incr Delay (d2), s/veh	2.0	1.8	0.0	8.7	0.5	0.1	8.0	0.4	0.0	67.6	2.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.8	0.0	3.3	3.3	0.8	1.3	4.0	0.0	5.3	8.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	33.5	0.0	46.2	24.8	22.3	49.5	24.8	0.0	107.5	28.4	19.2
LnGrp LOS	D	C		D	C	C	D	C		F	C	B
Approach Vol, veh/h		701	A		568			584	A		1203	
Approach Delay, s/veh		34.6			35.7			27.2			36.7	
Approach LOS		C			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	33.9	15.3	26.2	8.4	37.6	9.0	32.5
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	9.3	13.0	10.6	16.7	5.1	25.2	4.5	10.3
Green Ext Time (p_c), s	0.0	3.2	0.1	3.3	0.0	5.6	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	34.2
HCM 6th LOS	C

Notes

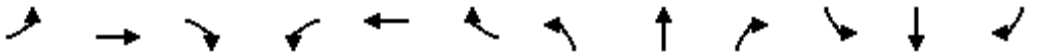
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	19	842	7	52	1312
Future Volume (vph)	3	19	842	7	52	1312
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	13.6%	13.6%	59.1%	59.1%	13.7%	72.9%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.1	5.1	47.0	47.0	5.1	56.4
Actuated g/C Ratio	0.08	0.08	0.77	0.77	0.08	0.93
v/c Ratio	0.01	0.05	0.33	0.01	0.40	0.43
Control Delay	26.3	0.2	5.3	6.0	36.2	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	0.2	5.3	6.0	36.2	2.7
LOS	C	A	A	A	D	A
Approach Delay			5.3			4.0
Approach LOS			A			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 60.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 4.5	Intersection LOS: A
Intersection Capacity Utilization 50.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	3	0	19	0	842	7	52	1312	0
Future Volume (veh/h)	0	0	0	3	0	19	0	842	7	52	1312	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				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				3	0	1	0	868	6	54	1353	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				17	0	14	0	2272	1013	82	2727	0
Arrive On Green				0.01	0.00	0.01	0.00	0.66	0.66	0.05	0.80	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1525	1619	3510	0
Grp Volume(v), veh/h				3	0	1	0	868	6	54	1353	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1525	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.0	0.0	6.4	0.1	1.8	7.4	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.0	0.0	6.4	0.1	1.8	7.4	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				17	0	14	0	2272	1013	82	2727	0
V/C Ratio(X)				0.18	0.00	0.07	0.00	0.38	0.01	0.66	0.50	0.00
Avail Cap(c_a), veh/h				281	0	241	0	2272	1013	145	2727	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.6	0.0	27.6	0.0	4.2	3.2	26.0	1.9	0.0
Incr Delay (d2), s/veh				4.9	0.0	2.0	0.0	0.5	0.0	3.3	0.6	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.0	0.0	0.0	0.0	0.8	0.0	0.7	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.5	0.0	29.6	0.0	4.7	3.2	29.3	2.5	0.0
LnGrp LOS				C	A	C	A	A	A	C	A	A
Approach Vol, veh/h					4			874			1407	
Approach Delay, s/veh					31.8			4.7			3.6	
Approach LOS					C			A			A	

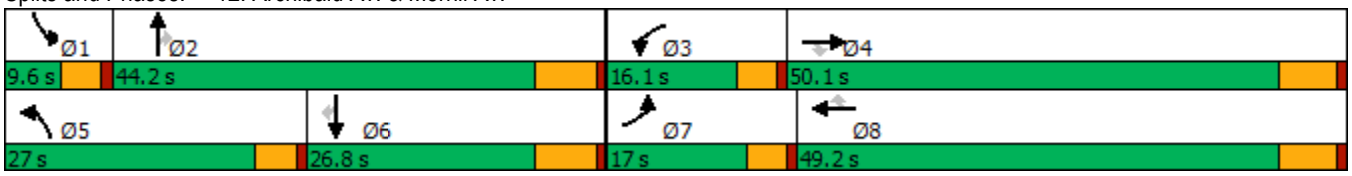
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	7.4	43.6				51.0		4.8				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	3.8	8.4				9.4		2.1				
Green Ext Time (p_c), s	0.0	5.6				11.0		0.0				

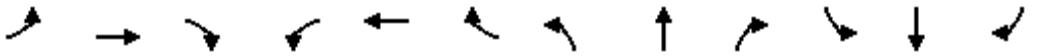
Intersection Summary		
HCM 6th Ctrl Delay		4.0
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	305	71	478	45	24	52	165	652	40	70	949	186
Future Volume (vph)	305	71	478	45	24	52	165	652	40	70	949	186
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.2	21.3	21.3	7.2	15.1	15.1	12.9	32.0	32.0	5.3	21.6	21.6
Actuated g/C Ratio	0.16	0.26	0.26	0.09	0.19	0.19	0.16	0.39	0.39	0.07	0.27	0.27
v/c Ratio	1.20	0.15	0.64	0.32	0.07	0.13	0.66	0.50	0.06	0.38	1.08	0.37
Control Delay	156.2	25.8	6.9	46.8	28.5	0.7	48.3	23.9	0.2	49.0	85.5	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	156.2	25.8	6.9	46.8	28.5	0.7	48.3	23.9	0.2	49.0	85.5	11.8
LOS	F	C	A	D	C	A	D	C	A	D	F	B
Approach Delay		61.8			23.2			27.5			72.0	
Approach LOS		E			C			C			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 81.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 54.6	Intersection LOS: D
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	305	71	478	45	24	52	165	652	40	70	949	186
Future Volume (veh/h)	305	71	478	45	24	52	165	652	40	70	949	186
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	314	73	308	46	25	15	170	672	27	72	978	134
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	271	470	398	67	243	206	206	1195	533	154	938	418
Arrive On Green	0.17	0.26	0.26	0.04	0.14	0.14	0.13	0.35	0.35	0.05	0.27	0.27
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	314	73	308	46	25	15	170	672	27	72	978	134
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1525	1478	1710	1525
Q Serve(g_s), s	12.4	2.3	13.8	2.1	0.9	0.6	7.6	11.8	0.9	1.8	20.3	5.2
Cycle Q Clear(g_c), s	12.4	2.3	13.8	2.1	0.9	0.6	7.6	11.8	0.9	1.8	20.3	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	470	398	67	243	206	206	1195	533	154	938	418
V/C Ratio(X)	1.16	0.16	0.77	0.69	0.10	0.07	0.82	0.56	0.05	0.47	1.04	0.32
Avail Cap(c_a), veh/h	271	1067	904	251	1045	886	490	1741	777	200	938	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	21.1	25.3	35.0	28.1	28.0	31.5	19.5	15.9	34.1	26.9	21.4
Incr Delay (d2), s/veh	104.3	0.2	3.2	4.6	0.2	0.1	3.1	0.4	0.0	0.8	41.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	0.9	5.0	0.9	0.4	0.2	2.8	4.0	0.3	0.6	12.4	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	135.1	21.2	28.5	39.6	28.3	28.1	34.6	19.9	16.0	34.9	68.1	21.8
LnGrp LOS	F	C	C	D	C	C	C	B	B	C	F	C
Approach Vol, veh/h		695			86			869			1184	
Approach Delay, s/veh		75.9			34.3			22.7			60.8	
Approach LOS		E			C			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	32.4	7.7	25.5	14.0	26.8	17.0	16.2
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.8	13.8	4.1	15.8	9.6	22.3	14.4	2.9
Green Ext Time (p_c), s	0.0	4.1	0.0	1.4	0.2	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	9	0	838	1455	3
Future Vol, veh/h	0	9	0	838	1455	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	10	0	911	1582	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	793	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	336	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	336	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

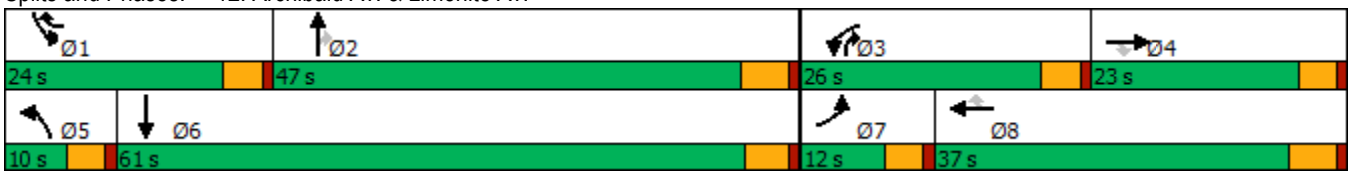
Approach	EB	NB	SB
HCM Control Delay, s	16	0	0
HCM LOS	C		

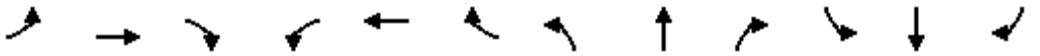
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	336	-	-
HCM Lane V/C Ratio	-	0.029	-	-
HCM Control Delay (s)	-	16	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	69	61	27	403	22	228	12	526	370	460	1004
Future Volume (vph)	69	61	27	403	22	228	12	526	370	460	1004
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	5.0	6.0	5.0	5.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	9.5	9.5	46.3	9.5	9.5	11.0
Total Split (s)	12.0	23.0	23.0	26.0	37.0	24.0	10.0	47.0	26.0	24.0	61.0
Total Split (%)	10.0%	19.2%	19.2%	21.7%	30.8%	20.0%	8.3%	39.2%	21.7%	20.0%	50.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	3.5	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	4.5	4.5	5.3	4.5	4.5	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	12.4	8.9	8.9	22.0	19.9	42.9	5.6	33.9	56.7	19.9	57.1
Actuated g/C Ratio	0.12	0.09	0.09	0.22	0.20	0.42	0.06	0.33	0.56	0.20	0.56
v/c Ratio	0.17	0.20	0.09	1.07	0.03	0.31	0.13	0.86	0.37	1.35	0.52
Control Delay	47.6	47.0	0.6	107.0	34.7	8.9	54.8	46.7	2.6	209.3	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	47.0	0.6	107.0	34.7	8.9	54.8	46.7	2.6	209.3	16.2
LOS	D	D	A	F	C	A	D	D	A	F	B
Approach Delay		39.3			70.3			28.9			76.2
Approach LOS		D			E			C			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay: 59.7	Intersection LOS: E
Intersection Capacity Utilization 94.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	61	27	403	22	228	12	526	370	460	1004	17
Future Volume (veh/h)	69	61	27	403	22	228	12	526	370	460	1004	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	72	64	28	420	23	119	12	548	304	479	1046	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	152	217	97	390	839	689	26	631	871	354	1865	32
Arrive On Green	0.04	0.06	0.06	0.22	0.23	0.23	0.01	0.33	0.33	0.20	0.51	0.51
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	1900	1576	1810	3631	62
Grp Volume(v), veh/h	72	64	28	420	23	119	12	548	304	479	520	544
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	1900	1576	1810	1805	1889
Q Serve(g_s), s	2.0	1.7	1.7	21.5	0.5	4.6	0.7	27.0	10.8	19.5	19.6	19.6
Cycle Q Clear(g_c), s	2.0	1.7	1.7	21.5	0.5	4.6	0.7	27.0	10.8	19.5	19.6	19.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	152	217	97	390	839	689	26	631	871	354	927	970
V/C Ratio(X)	0.47	0.29	0.29	1.08	0.03	0.17	0.47	0.87	0.35	1.35	0.56	0.56
Avail Cap(c_a), veh/h	264	670	299	390	1147	826	100	794	1006	354	1013	1060
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	44.9	44.8	39.1	29.6	17.6	48.8	31.2	12.6	40.1	16.6	16.6
Incr Delay (d2), s/veh	2.3	0.7	1.6	67.6	0.0	0.0	12.7	8.8	0.3	176.9	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.8	0.7	16.2	0.2	1.6	0.4	12.9	3.4	25.4	7.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.9	45.6	46.5	106.8	29.6	17.7	61.4	40.1	12.9	217.0	16.8	16.8
LnGrp LOS	D	D	D	F	C	B	E	D	B	F	B	B
Approach Vol, veh/h		164			562			864			1543	
Approach Delay, s/veh		47.2			84.7			30.8			79.0	
Approach LOS		D			F			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	38.4	26.0	11.3	5.9	56.5	8.8	28.5
Change Period (Y+Rc), s	4.5	5.3	4.5	* 5.3	4.5	* 5.3	4.5	5.3
Max Green Setting (Gmax), s	19.5	41.7	21.5	* 19	5.5	* 56	7.5	31.7
Max Q Clear Time (g_c+I1), s	21.5	29.0	23.5	3.7	2.7	21.6	4.0	6.6
Green Ext Time (p_c), s	0.0	4.2	0.0	0.3	0.0	3.7	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	65.1
HCM 6th LOS	E

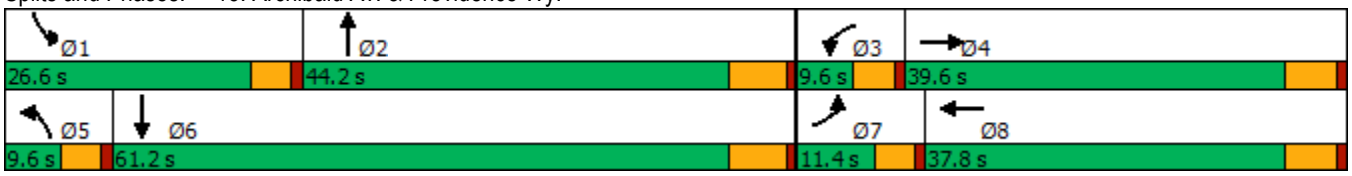
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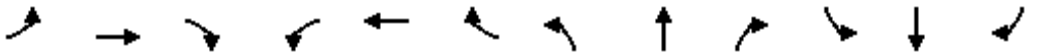
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	85	0	49	0	17	839	47	1426
Future Volume (vph)	85	0	49	0	17	839	47	1426
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	16.2	26.6	28.2
Total Split (s)	11.4	39.6	9.6	37.8	9.6	44.2	26.6	61.2
Total Split (%)	9.5%	33.0%	8.0%	31.5%	8.0%	36.8%	22.2%	51.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	8.3	14.7	9.4	13.7	5.2	43.3	8.9	48.9
Actuated g/C Ratio	0.10	0.17	0.11	0.16	0.06	0.50	0.10	0.56
v/c Ratio	0.53	0.08	0.27	0.10	0.17	0.54	0.28	0.77
Control Delay	57.1	0.4	49.4	0.4	51.8	20.9	43.4	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	0.4	49.4	0.4	51.8	20.9	43.4	21.0
LOS	E	A	D	A	D	C	D	C
Approach Delay		42.0		24.4		21.5		21.7
Approach LOS		D		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 87.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 22.6	Intersection LOS: C
Intersection Capacity Utilization 61.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	0	31	49	0	51	17	839	52	47	1426	28
Future Volume (veh/h)	85	0	31	49	0	51	17	839	52	47	1426	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	91	0	24	53	0	55	18	902	57	51	1533	30
Peak Hour Factor	0.93	0.92	0.93	0.92	0.92	0.92	0.93	0.93	0.92	0.92	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	131	0	235	79	0	192	37	1721	109	77	1886	37
Arrive On Green	0.07	0.00	0.15	0.04	0.00	0.12	0.02	0.50	0.50	0.04	0.52	0.52
Sat Flow, veh/h	1810	0	1588	1810	0	1610	1810	3448	218	1810	3620	71
Grp Volume(v), veh/h	91	0	24	53	0	55	18	472	487	51	763	800
Grp Sat Flow(s),veh/h/ln	1810	0	1588	1810	0	1610	1810	1805	1861	1810	1805	1886
Q Serve(g_s), s	3.9	0.0	1.0	2.3	0.0	2.5	0.8	14.1	14.1	2.2	27.9	28.0
Cycle Q Clear(g_c), s	3.9	0.0	1.0	2.3	0.0	2.5	0.8	14.1	14.1	2.2	27.9	28.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.04
Lane Grp Cap(c), veh/h	131	0	235	79	0	192	37	901	929	77	940	982
V/C Ratio(X)	0.69	0.00	0.10	0.67	0.00	0.29	0.48	0.52	0.52	0.66	0.81	0.81
Avail Cap(c_a), veh/h	155	0	676	114	0	648	114	901	929	501	1249	1305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	29.3	37.5	0.0	31.9	38.5	13.5	13.5	37.5	15.8	15.8
Incr Delay (d2), s/veh	7.1	0.0	0.2	3.7	0.0	0.8	3.5	0.6	0.5	3.6	3.1	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.4	1.0	0.0	0.9	0.4	4.8	4.9	1.0	9.8	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	0.0	29.5	41.2	0.0	32.7	42.0	14.1	14.0	41.1	18.9	18.9
LnGrp LOS	D	A	C	D	A	C	D	B	B	D	B	B
Approach Vol, veh/h		115			108			977			1614	
Approach Delay, s/veh		40.2			36.9			14.6			19.6	
Approach LOS		D			D			B			B	

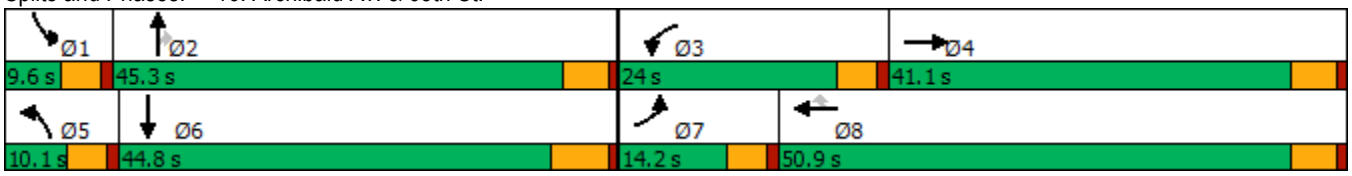
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	45.9	8.0	17.6	6.2	47.6	10.4	15.3
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	22.0	38.0	5.0	33.8	5.0	55.0	6.8	32.0
Max Q Clear Time (g_c+I1), s	4.2	16.1	4.3	3.0	2.8	30.0	5.9	4.5
Green Ext Time (p_c), s	0.0	5.5	0.0	0.1	0.0	11.4	0.0	0.2

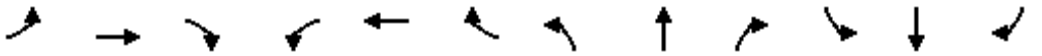
Intersection Summary	
HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	36	29	131	39	36	47	786	228	121	1237
Future Volume (vph)	36	29	131	39	36	47	786	228	121	1237
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	6.6	14.2	12.2	20.6	20.6	5.5	42.2	42.2	5.1	43.0
Actuated g/C Ratio	0.07	0.16	0.14	0.23	0.23	0.06	0.47	0.47	0.06	0.48
v/c Ratio	0.29	0.13	0.56	0.09	0.08	0.45	0.49	0.27	1.25	0.57
Control Delay	49.4	17.6	48.2	27.4	0.4	58.7	20.8	4.0	206.3	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	17.6	48.2	27.4	0.4	58.7	20.8	4.0	206.3	21.9
LOS	D	B	D	C	A	E	C	A	F	C
Approach Delay		28.7		35.9			18.9			37.2
Approach LOS		C		D			B			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 89.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay: 29.9	Intersection LOS: C
Intersection Capacity Utilization 57.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	29	38	131	39	36	47	786	228	121	1237	94
Future Volume (veh/h)	36	29	38	131	39	36	47	786	228	121	1237	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	31	17	138	41	19	49	827	186	127	1302	83
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	63	276	138	174	342	290	73	1734	764	108	2489	159
Arrive On Green	0.04	0.12	0.12	0.10	0.18	0.18	0.04	0.48	0.48	0.06	0.50	0.50
Sat Flow, veh/h	1810	2314	1160	1810	1900	1610	1810	3610	1590	1810	4983	318
Grp Volume(v), veh/h	38	24	24	138	41	19	49	827	186	127	903	482
Grp Sat Flow(s),veh/h/ln	1810	1805	1669	1810	1900	1610	1810	1805	1590	1810	1729	1843
Q Serve(g_s), s	1.7	1.0	1.1	6.2	1.5	0.8	2.2	12.9	5.8	5.0	14.8	14.8
Cycle Q Clear(g_c), s	1.7	1.0	1.1	6.2	1.5	0.8	2.2	12.9	5.8	5.0	14.8	14.8
Prop In Lane	1.00		0.70	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	63	215	199	174	342	290	73	1734	764	108	1727	920
V/C Ratio(X)	0.60	0.11	0.12	0.80	0.12	0.07	0.67	0.48	0.24	1.17	0.52	0.52
Avail Cap(c_a), veh/h	208	776	718	419	1040	881	119	1734	764	108	1727	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	32.9	33.0	37.0	28.8	28.5	39.6	14.7	12.8	39.4	14.2	14.2
Incr Delay (d2), s/veh	3.3	0.2	0.3	3.1	0.2	0.1	3.8	0.9	0.8	141.1	1.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.4	0.4	2.8	0.7	0.3	1.0	4.9	2.0	6.3	5.1	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	33.1	33.2	40.2	28.9	28.6	43.4	15.6	13.6	180.5	15.3	16.3
LnGrp LOS	D	C	C	D	C	C	D	B	B	F	B	B
Approach Vol, veh/h		86			198			1062			1512	
Approach Delay, s/veh		37.6			36.7			16.5			29.5	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	46.4	12.6	15.1	8.0	48.0	7.5	20.2
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	7.0	14.9	8.2	3.1	4.2	16.8	3.7	3.5
Green Ext Time (p_c), s	0.0	6.5	0.1	0.2	0.0	8.9	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

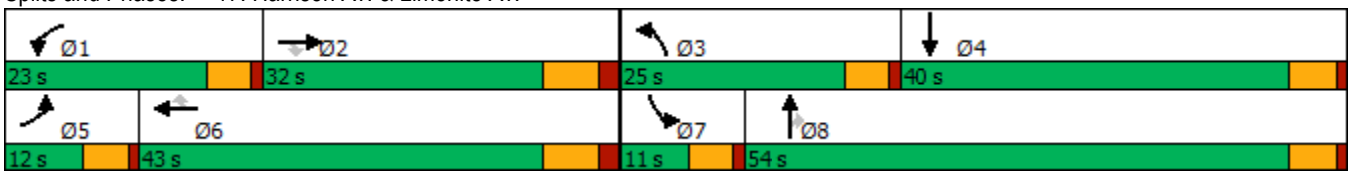
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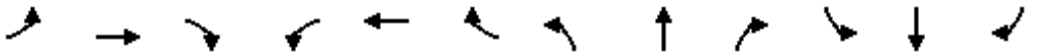
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	61	707	40	238	567	15	41	53	188	16	75
Future Volume (vph)	61	707	40	238	567	15	41	53	188	16	75
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.0	18.2	18.2	18.0	35.7	35.7	6.5	17.4	17.4	5.6	12.6
Actuated g/C Ratio	0.08	0.25	0.25	0.24	0.48	0.48	0.09	0.24	0.24	0.08	0.17
v/c Ratio	0.23	0.61	0.08	0.60	0.25	0.02	0.28	0.13	0.38	0.13	0.35
Control Delay	43.7	28.8	0.3	36.6	15.9	0.1	43.0	22.8	5.9	43.7	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.7	28.8	0.3	36.6	15.9	0.1	43.0	22.8	5.9	43.7	28.3
LOS	D	C	A	D	B	A	D	C	A	D	C
Approach Delay		27.9			21.6			14.4			30.5
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 73.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 23.6	Intersection LOS: C
Intersection Capacity Utilization 50.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	707	40	238	567	15	41	53	188	16	75	27
Future Volume (veh/h)	61	707	40	238	567	15	41	53	188	16	75	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	777	34	262	623	13	45	58	133	18	82	11
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	67	1306	397	318	2026	627	82	263	223	40	188	25
Arrive On Green	0.04	0.25	0.25	0.18	0.39	0.39	0.05	0.14	0.14	0.02	0.11	0.11
Sat Flow, veh/h	1810	5187	1576	1810	5187	1606	1810	1900	1610	1810	1637	220
Grp Volume(v), veh/h	34	777	34	262	623	13	45	58	133	18	0	93
Grp Sat Flow(s),veh/h/ln	1810	1729	1576	1810	1729	1606	1810	1900	1610	1810	0	1856
Q Serve(g_s), s	1.0	7.1	0.9	7.6	4.5	0.3	1.3	1.5	4.2	0.5	0.0	2.5
Cycle Q Clear(g_c), s	1.0	7.1	0.9	7.6	4.5	0.3	1.3	1.5	4.2	0.5	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	67	1306	397	318	2026	627	82	263	223	40	0	213
V/C Ratio(X)	0.51	0.59	0.09	0.82	0.31	0.02	0.55	0.22	0.60	0.45	0.00	0.44
Avail Cap(c_a), veh/h	234	2397	728	602	3452	1069	669	1710	1450	201	0	1191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.6	17.8	15.5	21.5	11.4	10.1	25.3	20.7	21.9	26.1	0.0	22.3
Incr Delay (d2), s/veh	2.2	0.4	0.1	2.1	0.1	0.0	2.1	0.4	2.5	3.0	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.3	0.3	2.8	1.3	0.1	0.5	0.6	1.5	0.2	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	18.2	15.6	23.6	11.5	10.1	27.4	21.1	24.4	29.1	0.0	23.7
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	A	C
Approach Vol, veh/h		845			898			236			111	
Approach Delay, s/veh		18.5			15.0			24.2			24.6	
Approach LOS		B			B			C			C	

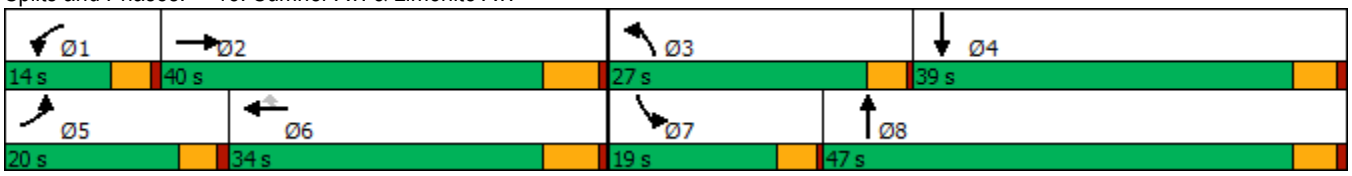
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	20.6	7.5	11.5	7.0	28.1	6.2	12.8
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	9.6	9.1	3.3	4.5	3.0	6.5	2.5	6.2
Green Ext Time (p_c), s	0.1	4.4	0.0	0.4	0.0	4.0	0.0	0.7

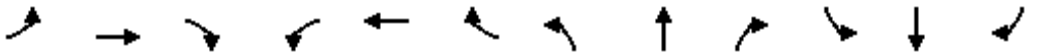
Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	212	701	201	572	69	31	231	142	490
Future Volume (vph)	212	701	201	572	69	31	231	142	490
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.3	19.0	8.6	18.3	18.3	5.7	15.3	10.5	24.6
Actuated g/C Ratio	0.13	0.26	0.12	0.25	0.25	0.08	0.21	0.14	0.33
v/c Ratio	0.51	0.60	0.52	0.47	0.14	0.24	0.50	0.58	0.61
Control Delay	37.9	27.4	40.0	27.2	0.6	43.0	19.1	43.4	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	27.4	40.0	27.2	0.6	43.0	19.1	43.4	23.1
LOS	D	C	D	C	A	D	B	D	C
Approach Delay		29.7		28.0			20.9		26.6
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 74.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 27.2	Intersection LOS: C
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Sumner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	701	57	201	572	69	31	231	151	142	490	197
Future Volume (veh/h)	212	701	57	201	572	69	31	231	151	142	490	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	223	738	33	212	602	27	33	243	65	149	516	128
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	344	1280	57	327	1280	392	52	524	137	192	752	186
Arrive On Green	0.10	0.25	0.25	0.09	0.25	0.25	0.03	0.19	0.19	0.11	0.26	0.26
Sat Flow, veh/h	3510	5087	227	3510	5187	1587	1810	2828	740	1810	2869	708
Grp Volume(v), veh/h	223	501	270	212	602	27	33	153	155	149	324	320
Grp Sat Flow(s),veh/h/ln	1755	1729	1856	1755	1729	1587	1810	1805	1763	1810	1805	1773
Q Serve(g_s), s	3.3	6.8	6.8	3.1	5.3	0.7	1.0	4.0	4.2	4.3	8.6	8.7
Cycle Q Clear(g_c), s	3.3	6.8	6.8	3.1	5.3	0.7	1.0	4.0	4.2	4.3	8.6	8.7
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.42	1.00		0.40
Lane Grp Cap(c), veh/h	344	870	467	327	1280	392	52	334	326	192	473	465
V/C Ratio(X)	0.65	0.58	0.58	0.65	0.47	0.07	0.63	0.46	0.47	0.78	0.68	0.69
Avail Cap(c_a), veh/h	1016	2195	1178	623	2712	830	777	1416	1382	507	1146	1125
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	17.5	17.6	23.4	17.2	15.5	25.7	19.4	19.5	23.3	17.8	17.8
Incr Delay (d2), s/veh	0.8	0.6	1.1	0.8	0.3	0.1	4.5	0.7	0.8	2.6	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.2	2.5	1.1	1.7	0.2	0.4	1.5	1.5	1.7	3.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	18.1	18.7	24.2	17.5	15.5	30.3	20.2	20.3	25.9	19.1	19.2
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	B	B
Approach Vol, veh/h		994			841			341			793	
Approach Delay, s/veh		19.6			19.1			21.2			20.4	
Approach LOS		B			B			C			C	

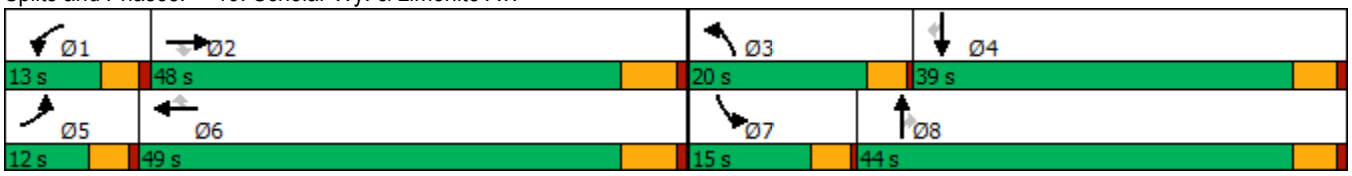
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	19.5	5.6	19.0	9.8	19.2	9.7	14.9
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	5.1	8.8	3.0	10.7	5.3	7.3	6.3	6.2
Green Ext Time (p_c), s	0.1	4.5	0.0	2.9	0.2	3.6	0.1	1.3

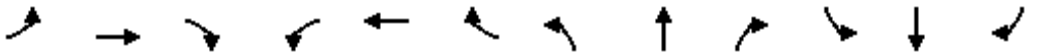
Intersection Summary	
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	926	52	152	780	70	46	72	114	53	148	36
Future Volume (vph)	37	926	52	152	780	70	46	72	114	53	148	36
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	5.9	26.9	26.9	9.4	35.5	35.5	6.5	11.5	11.5	6.8	11.7	11.7
Actuated g/C Ratio	0.08	0.38	0.38	0.13	0.50	0.50	0.09	0.16	0.16	0.10	0.16	0.16
v/c Ratio	0.26	0.71	0.08	0.67	0.46	0.09	0.29	0.25	0.33	0.33	0.26	0.15
Control Delay	43.6	23.8	0.2	52.0	17.0	0.5	42.5	30.8	8.9	42.4	28.9	29.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	23.8	0.2	52.0	17.0	0.5	42.5	30.8	8.9	42.4	28.9	29.6
LOS	D	C	A	D	B	A	D	C	A	D	C	C
Approach Delay		23.3			21.1			22.4			32.1	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 71.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 23.2	Intersection LOS: C
Intersection Capacity Utilization 62.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 19: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	926	52	152	780	70	46	72	114	53	148	36
Future Volume (veh/h)	37	926	52	152	780	70	46	72	114	53	148	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	975	38	160	821	63	48	76	62	56	156	38
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	1399	614	203	1686	751	68	219	185	75	430	185
Arrive On Green	0.03	0.39	0.39	0.11	0.47	0.47	0.04	0.12	0.12	0.04	0.12	0.12
Sat Flow, veh/h	1810	3610	1584	1810	3610	1607	1810	1900	1610	1810	3610	1557
Grp Volume(v), veh/h	39	975	38	160	821	63	48	76	62	56	156	38
Grp Sat Flow(s),veh/h/ln	1810	1805	1584	1810	1805	1607	1810	1900	1610	1810	1805	1557
Q Serve(g_s), s	1.2	12.8	0.9	4.9	8.9	1.2	1.5	2.1	2.0	1.7	2.3	1.2
Cycle Q Clear(g_c), s	1.2	12.8	0.9	4.9	8.9	1.2	1.5	2.1	2.0	1.7	2.3	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	59	1399	614	203	1686	751	68	219	185	75	430	185
V/C Ratio(X)	0.67	0.70	0.06	0.79	0.49	0.08	0.71	0.35	0.33	0.75	0.36	0.20
Avail Cap(c_a), veh/h	239	2674	1173	271	2738	1219	511	1307	1108	351	2165	934
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	14.6	10.9	24.5	10.4	8.4	27.0	23.1	23.1	26.9	23.0	22.5
Incr Delay (d2), s/veh	4.7	0.6	0.0	7.6	0.2	0.0	5.0	0.7	0.8	5.5	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.0	0.3	2.2	2.5	0.4	0.7	0.9	0.7	0.8	0.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	15.2	10.9	32.1	10.6	8.4	32.0	23.8	23.9	32.3	23.4	22.9
LnGrp LOS	C	B	B	C	B	A	C	C	C	C	C	C
Approach Vol, veh/h		1052			1044			186			250	
Approach Delay, s/veh		15.7			13.8			25.9			25.3	
Approach LOS		B			B			C			C	

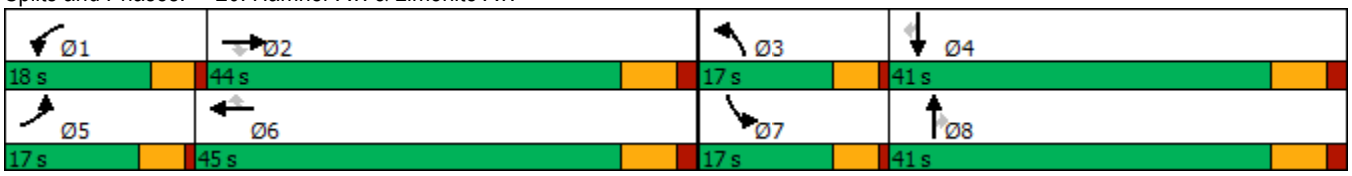
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	28.0	6.1	11.8	6.3	32.5	6.3	11.5
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	6.9	14.8	3.5	4.3	3.2	10.9	3.7	4.1
Green Ext Time (p_c), s	0.0	6.9	0.0	0.9	0.0	5.8	0.0	0.5

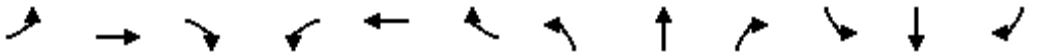
Intersection Summary	
HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	709	85	393	545	187	197	566	219	239	706	199
Future Volume (vph)	300	709	85	393	545	187	197	566	219	239	706	199
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	11.5	25.3	25.3	13.3	27.0	27.0	9.5	25.2	25.2	10.2	25.9	25.9
Actuated g/C Ratio	0.12	0.26	0.26	0.14	0.27	0.27	0.10	0.26	0.26	0.10	0.26	0.26
v/c Ratio	0.75	0.55	0.18	0.86	0.57	0.33	0.60	0.44	0.40	0.68	0.53	0.36
Control Delay	56.9	33.6	2.7	62.6	33.9	6.0	52.9	32.3	6.5	54.6	33.1	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	33.6	2.7	62.6	33.9	6.0	52.9	32.3	6.5	54.6	33.1	6.3
LOS	E	C	A	E	C	A	D	C	A	D	C	A
Approach Delay		37.6			39.3			30.7			32.9	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.4	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 35.2	Intersection LOS: D
Intersection Capacity Utilization 72.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 20: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	709	85	393	545	187	197	566	219	239	706	199
Future Volume (veh/h)	300	709	85	393	545	187	197	566	219	239	706	199
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	309	731	58	405	562	125	203	584	140	246	728	90
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	384	1341	405	476	1029	458	279	1281	385	322	1345	411
Arrive On Green	0.11	0.26	0.26	0.14	0.28	0.28	0.08	0.25	0.25	0.09	0.26	0.26
Sat Flow, veh/h	3510	5187	1565	3510	3610	1608	3510	5187	1559	3510	5187	1586
Grp Volume(v), veh/h	309	731	58	405	562	125	203	584	140	246	728	90
Grp Sat Flow(s),veh/h/ln	1755	1729	1565	1755	1805	1608	1755	1729	1559	1755	1729	1586
Q Serve(g_s), s	7.7	10.9	2.6	10.1	11.9	5.4	5.1	8.6	6.7	6.2	10.9	4.0
Cycle Q Clear(g_c), s	7.7	10.9	2.6	10.1	11.9	5.4	5.1	8.6	6.7	6.2	10.9	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	384	1341	405	476	1029	458	279	1281	385	322	1345	411
V/C Ratio(X)	0.81	0.54	0.14	0.85	0.55	0.27	0.73	0.46	0.36	0.76	0.54	0.22
Avail Cap(c_a), veh/h	469	2135	644	508	1526	680	469	1962	590	469	1962	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	28.8	25.7	38.0	27.2	24.9	40.4	28.7	28.0	39.9	28.7	26.1
Incr Delay (d2), s/veh	6.7	0.7	0.3	11.5	1.0	0.7	1.4	0.5	1.2	2.2	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	4.3	0.9	4.9	4.9	2.0	2.1	3.4	2.5	2.6	4.3	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	29.5	26.0	49.5	28.2	25.6	41.8	29.3	29.2	42.1	29.4	26.7
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1098			1092			927			1064	
Approach Delay, s/veh		33.9			35.8			32.0			32.1	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	30.2	12.1	30.3	14.8	32.6	13.2	29.2
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	12.1	12.9	7.1	12.9	9.7	13.9	8.2	10.6
Green Ext Time (p_c), s	0.1	9.1	0.1	8.7	0.1	7.5	0.1	7.9

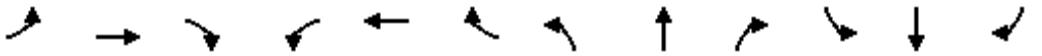
Intersection Summary	
HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	813	438	838	386	166	1	408
Future Volume (vph)	813	438	838	386	166	1	408
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	22.5	22.5	22.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	4.5	4.5	4.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.6	73.6	73.6	73.6	11.3	11.3	11.3
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.12	0.12	0.12
v/c Ratio	0.21	0.34	0.21	0.30	0.42	0.43	0.70
Control Delay	3.3	1.1	3.3	1.0	44.6	44.8	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.3	1.1	3.3	1.0	44.6	44.8	18.3
LOS	A	A	A	A	D	D	B
Approach Delay	2.5		2.6			26.0	
Approach LOS	A		A			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.9	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 40.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 21: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰↑	↱↱
Traffic Volume (veh/h)	0	813	438	0	838	386	0	0	0	166	1	408
Future Volume (veh/h)	0	813	438	0	838	386	0	0	0	166	1	408
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	838	422	0	864	398				172	0	157
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4192	1284	0	4192	1301				296	0	263
Arrive On Green	0.00	0.81	0.81	0.00	0.81	0.81				0.08	0.00	0.08
Sat Flow, veh/h	0	5358	1588	0	5358	1610				3619	0	3220
Grp Volume(v), veh/h	0	838	422	0	864	398				172	0	157
Grp Sat Flow(s),veh/h/ln	0	1729	1588	0	1729	1610				1810	0	1610
Q Serve(g_s), s	0.0	3.4	6.3	0.0	3.5	5.7				4.2	0.0	4.3
Cycle Q Clear(g_c), s	0.0	3.4	6.3	0.0	3.5	5.7				4.2	0.0	4.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4192	1284	0	4192	1301				296	0	263
V/C Ratio(X)	0.00	0.20	0.33	0.00	0.21	0.31				0.58	0.00	0.60
Avail Cap(c_a), veh/h	0	4192	1284	0	4192	1301				1453	0	1293
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.0	2.3	0.0	2.0	2.2				40.2	0.0	40.3
Incr Delay (d2), s/veh	0.0	0.1	0.7	0.0	0.1	0.6				1.8	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	1.2	0.0	0.6	1.1				1.8	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.1	3.0	0.0	2.1	2.8				42.1	0.0	42.5
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1260			1262						329	
Approach Delay, s/veh		2.4			2.3						42.2	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		11.9		79.0						
Change Period (Y+Rc), s		5.5		4.5		5.5						
Max Green Setting (Gmax), s		73.5		36.5		73.5						
Max Q Clear Time (g_c+I1), s		8.3		6.3		7.7						
Green Ext Time (p_c), s		5.2		1.2		5.3						

Intersection Summary												
HCM 6th Ctrl Delay			7.0									
HCM 6th LOS			A									

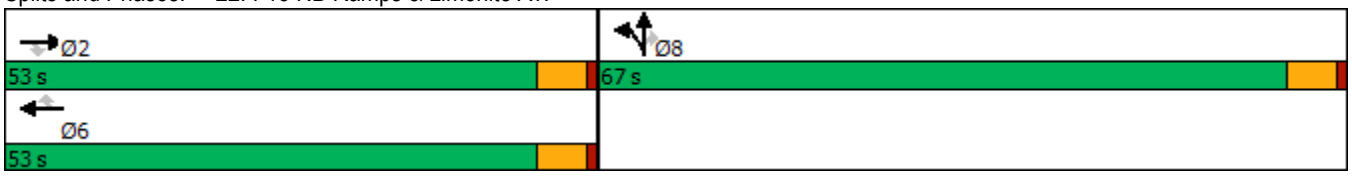
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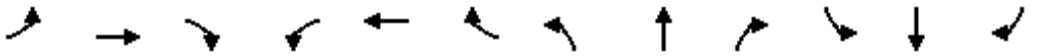
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	691	288	804	109	420	2	705
Future Volume (vph)	691	288	804	109	420	2	705
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.8	47.8	47.8	47.8	25.4	25.4	25.4
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.30	0.30	0.30
v/c Ratio	0.24	0.29	0.28	0.12	0.41	0.42	0.73
Control Delay	10.3	2.3	10.6	2.8	25.5	25.5	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.3	2.3	10.6	2.8	25.5	25.5	23.8
LOS	B	A	B	A	C	C	C
Approach Delay	8.0		9.7			24.4	
Approach LOS	A		A			C	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 84.3			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 14.6		Intersection LOS: B	
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↰	↱↱			
Traffic Volume (veh/h)	0	691	288	0	804	109	420	2	705	0	0	0
Future Volume (veh/h)	0	691	288	0	804	109	420	2	705	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	705	294	0	820	106	430	0	416			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3396	1030	0	3396	1054	700	0	623			
Arrive On Green	0.00	0.65	0.65	0.00	0.65	0.65	0.19	0.00	0.19			
Sat Flow, veh/h	0	5358	1573	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	705	294	0	820	106	430	0	416			
Grp Sat Flow(s),veh/h/ln	0	1729	1573	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	3.9	5.8	0.0	4.7	1.8	7.9	0.0	8.7			
Cycle Q Clear(g_c), s	0.0	3.9	5.8	0.0	4.7	1.8	7.9	0.0	8.7			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3396	1030	0	3396	1054	700	0	623			
V/C Ratio(X)	0.00	0.21	0.29	0.00	0.24	0.10	0.61	0.00	0.67			
Avail Cap(c_a), veh/h	0	3396	1030	0	3396	1054	3068	0	2730			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.0	5.3	0.0	5.1	4.6	26.8	0.0	27.1			
Incr Delay (d2), s/veh	0.0	0.1	0.7	0.0	0.2	0.2	0.9	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	1.1	1.6	0.0	1.3	0.5	3.2	0.0	3.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.1	6.0	0.0	5.3	4.8	27.6	0.0	28.3			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		999			926			846				
Approach Delay, s/veh		5.4			5.2			28.0				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		19.5				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		7.8				6.7		10.7				
Green Ext Time (p_c), s		4.0				4.3		3.4				
Intersection Summary												
HCM 6th Ctrl Delay			12.2									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 6.3:

OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		2021 WP
				CALC CP	DATE	12/18/19
Jurisdiction: City of Eastvale				CHK CH	DATE	12/18/19
Major Street: Providence Way				Critical Approach Speed (Major)		45 mph
Minor Street: Driveway 5				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **1,171** vpd Minor Street Future ADT = **140** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……... [√]

or

In built up area of isolated community of < 10,000 population …….. [ ]

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **1,171**	*1* **140**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **1,171**	*1* **140**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	A 8% B 14%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 6.4:

OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	758	471	499	641	45	46	345
v/c Ratio	0.18	0.34	0.12	0.45	0.35	0.35	0.65
Control Delay	2.3	0.9	2.1	1.3	47.3	47.6	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.3	0.9	2.1	1.3	47.3	47.6	10.9
Queue Length 50th (ft)	26	0	16	0	26	27	0
Queue Length 95th (ft)	42	17	27	19	62	63	44
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	4167	1373	4167	1423	665	665	1299
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.34	0.12	0.45	0.07	0.07	0.27

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	308	532	907	250	110	111	301
v/c Ratio	0.09	0.42	0.25	0.21	0.43	0.44	0.44
Control Delay	3.9	1.6	4.5	1.2	31.9	32.0	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.9	1.6	4.5	1.2	31.9	32.0	5.8
Queue Length 50th (ft)	12	0	41	0	45	45	0
Queue Length 95th (ft)	25	29	72	21	90	91	32
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3584	1256	3584	1193	1562	1562	2616
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.42	0.25	0.21	0.07	0.07	0.12

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	809	433	856	398	85	87	413
v/c Ratio	0.20	0.32	0.21	0.30	0.42	0.43	0.68
Control Delay	3.2	1.1	3.3	1.0	44.7	45.0	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	1.1	3.3	1.0	44.7	45.0	16.9
Queue Length 50th (ft)	36	0	39	0	50	51	33
Queue Length 95th (ft)	67	24	71	23	98	100	83
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	4025	1333	4025	1342	660	662	1283
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.32	0.21	0.30	0.13	0.13	0.32

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	699	271	818	111	211	213	719
v/c Ratio	0.24	0.27	0.28	0.11	0.41	0.42	0.74
Control Delay	10.2	2.3	10.5	2.8	25.5	25.5	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.2	2.3	10.5	2.8	25.5	25.5	23.8
Queue Length 50th (ft)	61	0	73	0	92	93	142
Queue Length 95th (ft)	109	38	129	26	152	153	207
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200					400
Base Capacity (vph)	2954	1013	2954	967	1264	1268	2144
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.27	0.28	0.11	0.17	0.17	0.34

Intersection Summary

APPENDIX 6.5:

OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	766	476	521	641	45	46	365
v/c Ratio	0.18	0.35	0.13	0.45	0.35	0.35	0.66
Control Delay	2.3	0.9	2.1	1.3	47.3	47.6	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.3	0.9	2.1	1.3	47.3	47.6	10.9
Queue Length 50th (ft)	27	0	17	0	26	27	0
Queue Length 95th (ft)	42	17	28	19	62	63	44
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	4167	1374	4167	1423	665	665	1311
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.35	0.13	0.45	0.07	0.07	0.28

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	310	538	912	250	119	119	301
v/c Ratio	0.09	0.43	0.26	0.21	0.46	0.46	0.44
Control Delay	4.0	1.7	4.6	1.2	32.2	32.2	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.0	1.7	4.6	1.2	32.2	32.2	5.7
Queue Length 50th (ft)	12	0	42	0	49	49	0
Queue Length 95th (ft)	26	30	75	21	96	96	32
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3568	1255	3568	1188	1527	1527	2564
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.43	0.26	0.21	0.08	0.08	0.12

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	838	452	864	398	85	87	421
v/c Ratio	0.21	0.34	0.21	0.30	0.42	0.43	0.70
Control Delay	3.3	1.1	3.3	1.0	44.6	44.8	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.3	1.1	3.3	1.0	44.6	44.8	18.3
Queue Length 50th (ft)	38	0	39	0	50	51	38
Queue Length 95th (ft)	70	24	72	23	98	100	89
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	4022	1336	4022	1341	660	662	1279
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.34	0.21	0.30	0.13	0.13	0.33

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	705	294	820	111	214	217	719
v/c Ratio	0.24	0.29	0.28	0.12	0.41	0.42	0.73
Control Delay	10.3	2.3	10.6	2.8	25.5	25.5	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.3	2.3	10.6	2.8	25.5	25.5	23.8
Queue Length 50th (ft)	62	0	73	0	93	95	143
Queue Length 95th (ft)	111	40	130	26	154	155	209
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200					400
Base Capacity (vph)	2941	1020	2941	963	1258	1262	2134
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.29	0.28	0.12	0.17	0.17	0.34

Intersection Summary

APPENDIX 6.6:

OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2021) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4585	7146	0.64	67.4	22.7	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.893	4585	456	7200	2100	0.64	0.22	64.6	60.5	23.7	26.0	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4145	7146	0.58	68.1	20.3	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.917	4836	691	7200	1900	0.67	0.36	61.7	59.7	26.1	23.9	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4829	7146	0.68	66.8	24.1	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.935	5334	505	7200	2100	0.74	0.24	61.9	60.3	28.7	25.5	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	5339	7146	0.75	65.0	27.4	D

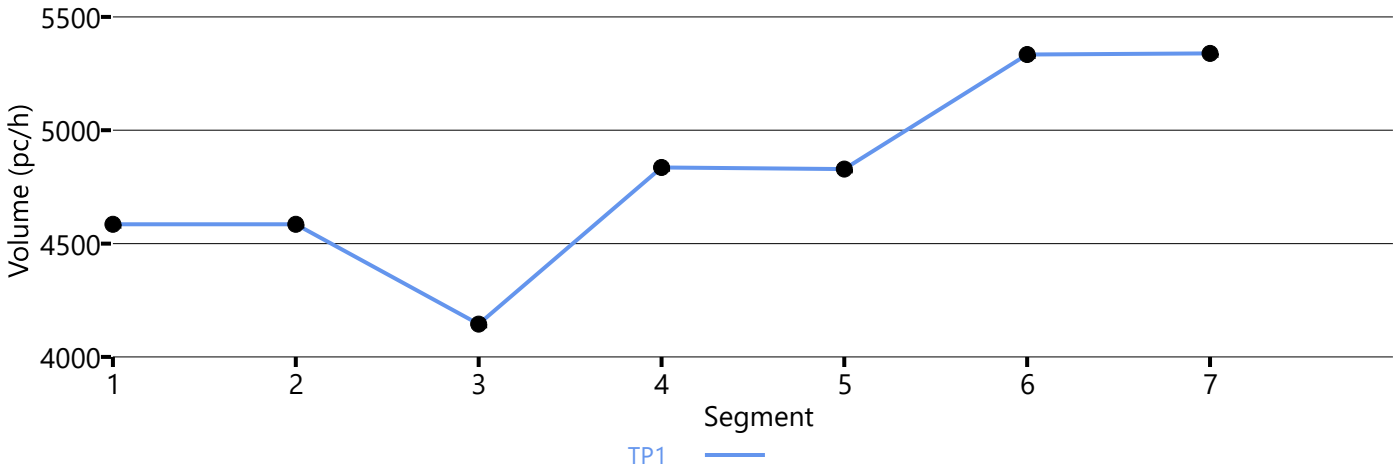
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.1	24.5	22.7	1.7	C

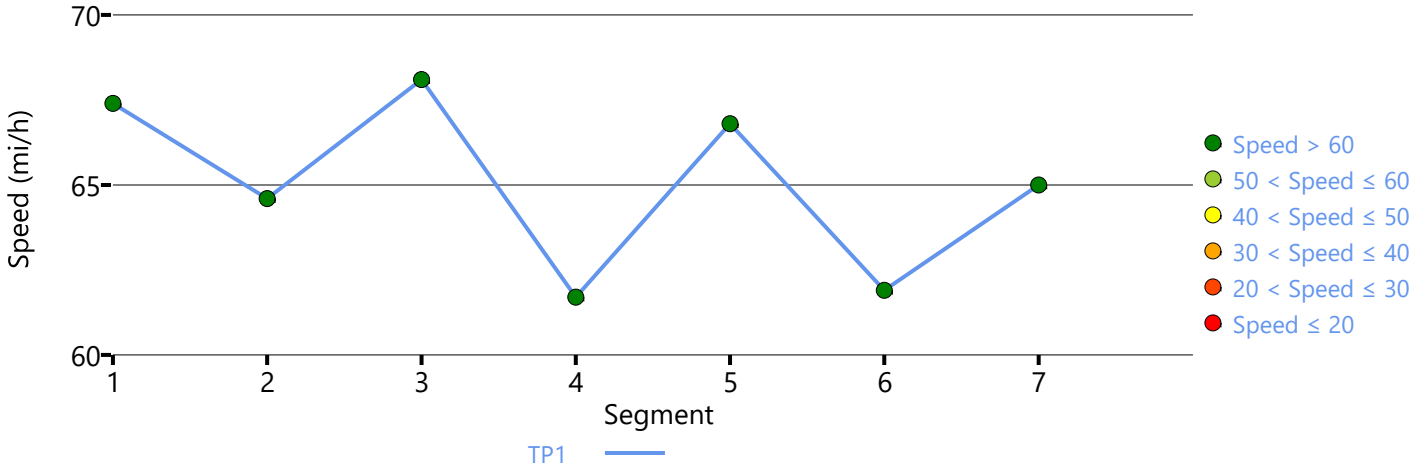
Facility Overall Results

Space Mean Speed, mi/h	65.1	Density, veh/mi/ln	22.7
Average Travel Time, min	1.7	Density, pc/mi/ln	24.5

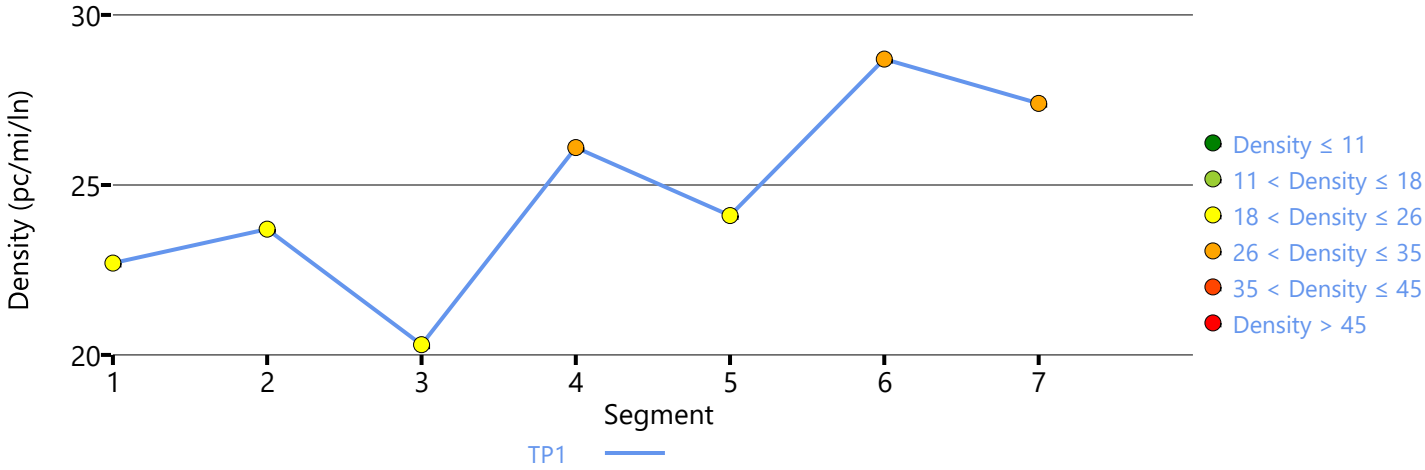
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2021) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4350	7146	0.61	67.8	21.4	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.909	4350	572	7200	2100	0.60	0.27	64.4	60.2	22.5	25.6	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3780	7146	0.53	68.2	18.5	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4349	569	7200	1900	0.60	0.30	62.4	60.5	23.2	21.3	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4343	7146	0.61	67.8	21.4	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4587	244	7200	2100	0.64	0.12	63.5	62.3	24.1	19.9	B

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4585	7146	0.64	67.4	22.7	C

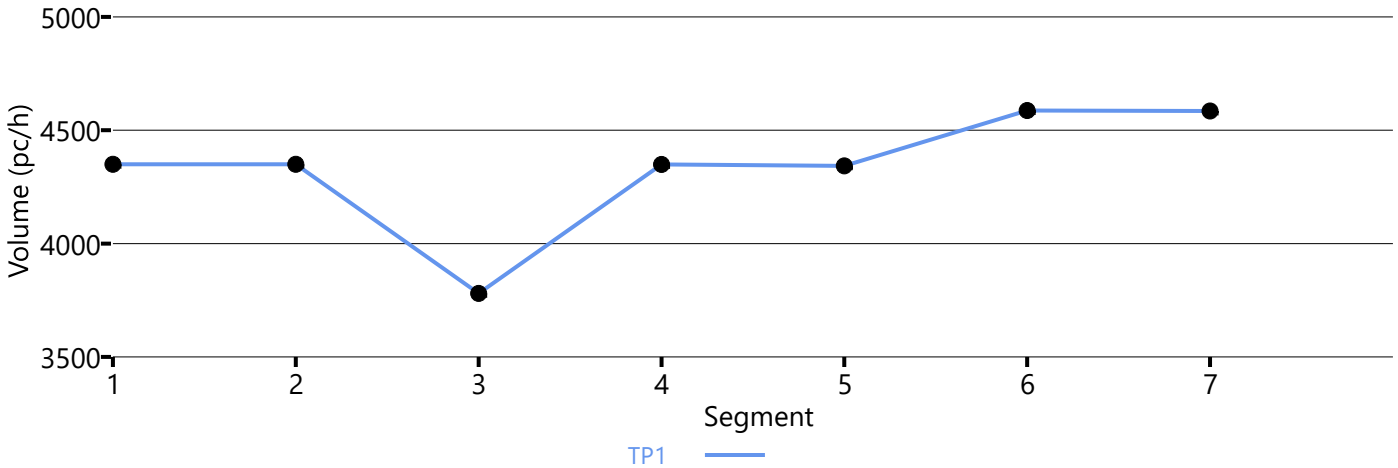
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.8	22.1	21.6	1.6	C

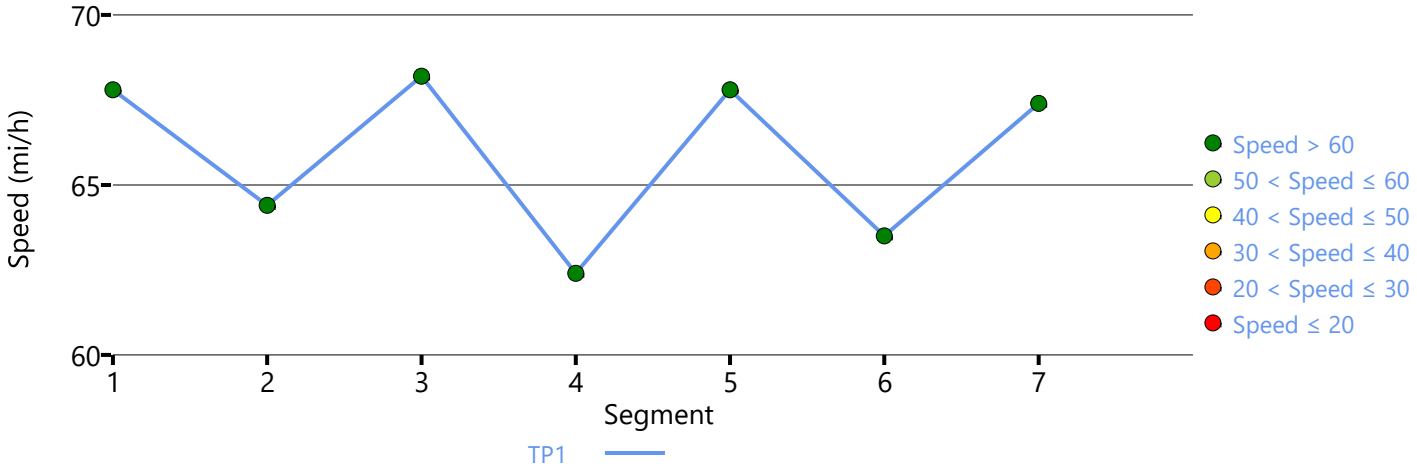
Facility Overall Results

Space Mean Speed, mi/h	65.8	Density, veh/mi/ln	21.6
Average Travel Time, min	1.6	Density, pc/mi/ln	22.1

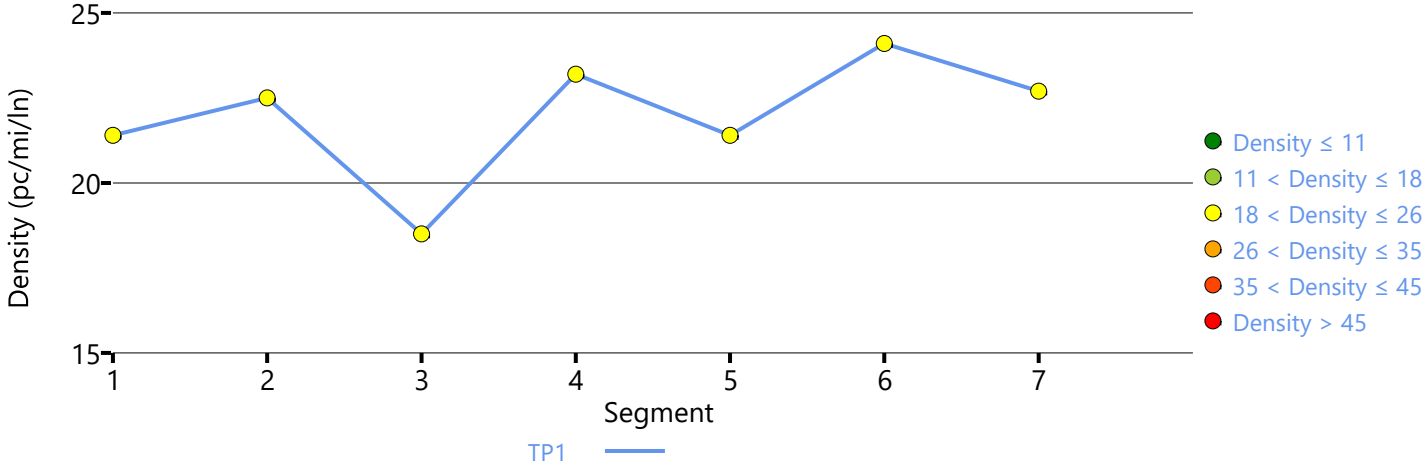
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2021) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3952	7146	0.55	68.2	19.3	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.980	3952	618	7200	2100	0.55	0.29	64.2	60.1	20.5	23.4	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3316	7146	0.46	68.2	16.2	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.943	3742	426	7200	1900	0.52	0.22	63.1	61.2	19.8	18.1	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3738	7146	0.52	68.2	18.3	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.980	4201	463	7200	2100	0.58	0.22	63.5	62.0	22.1	20.0	B

Segment 7: Basic

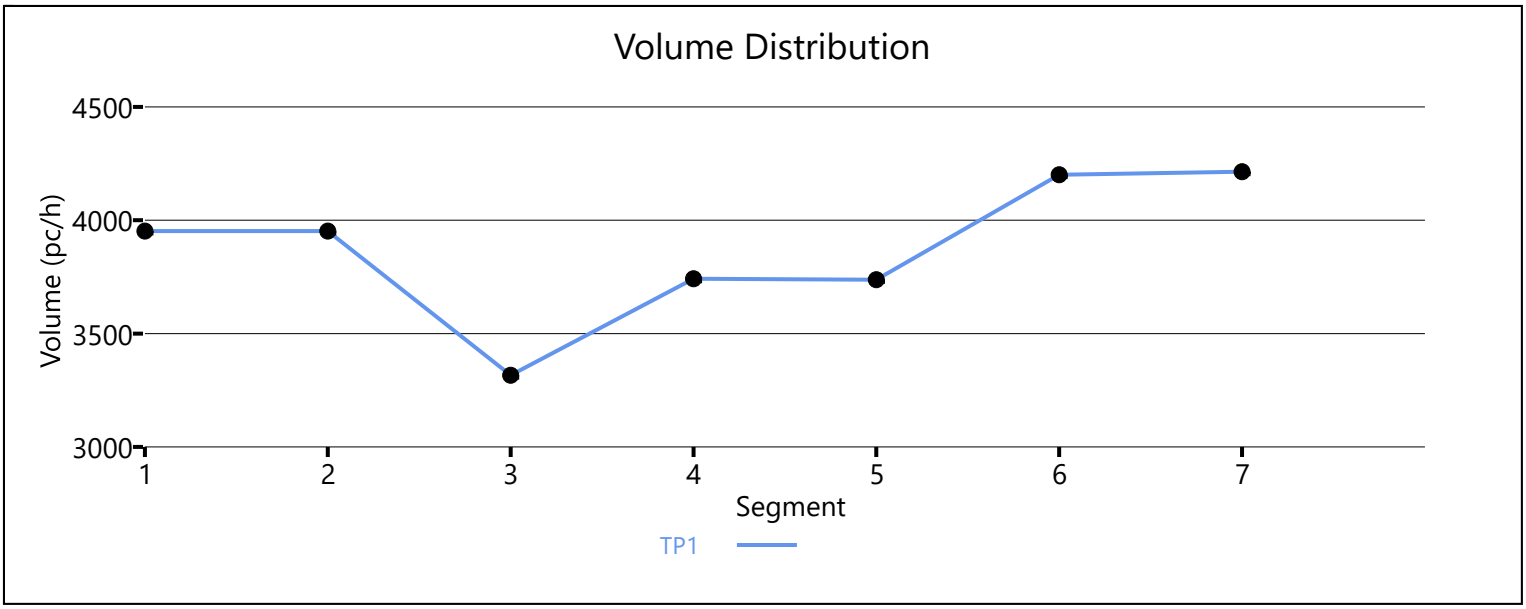
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	4214	7146	0.59	68.0	20.7	C

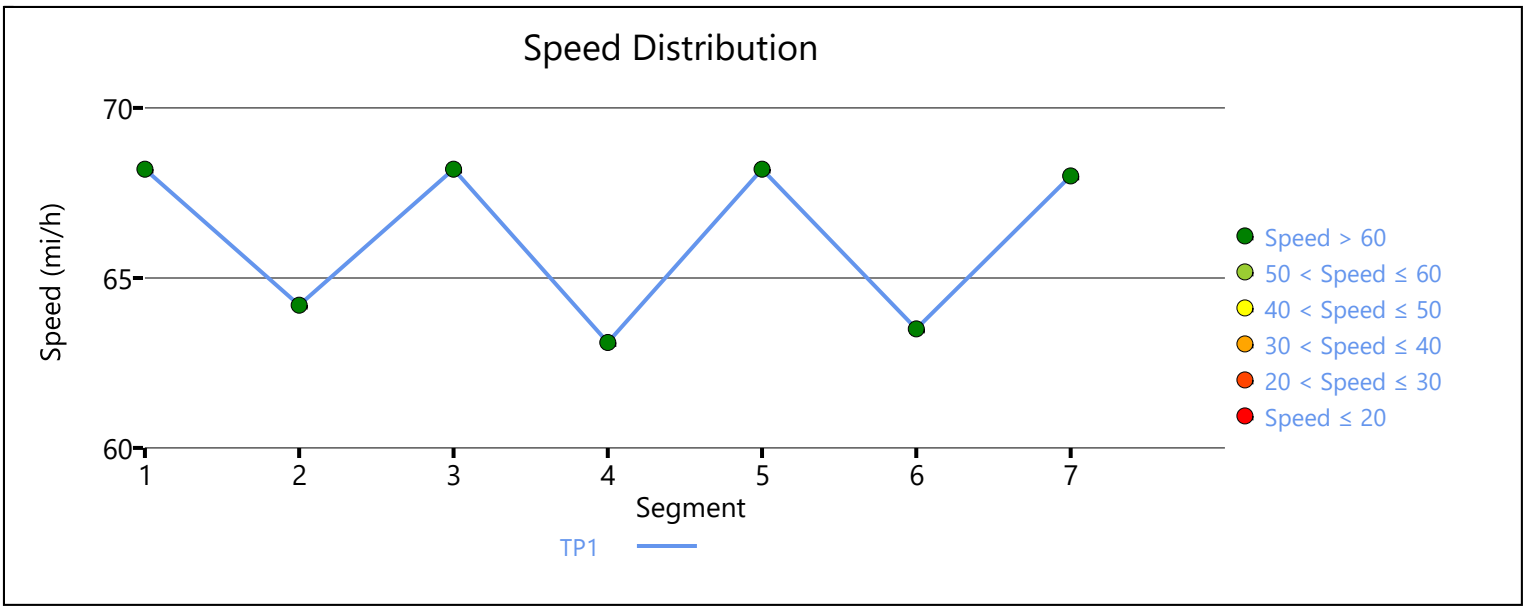
Facility Time Period Results

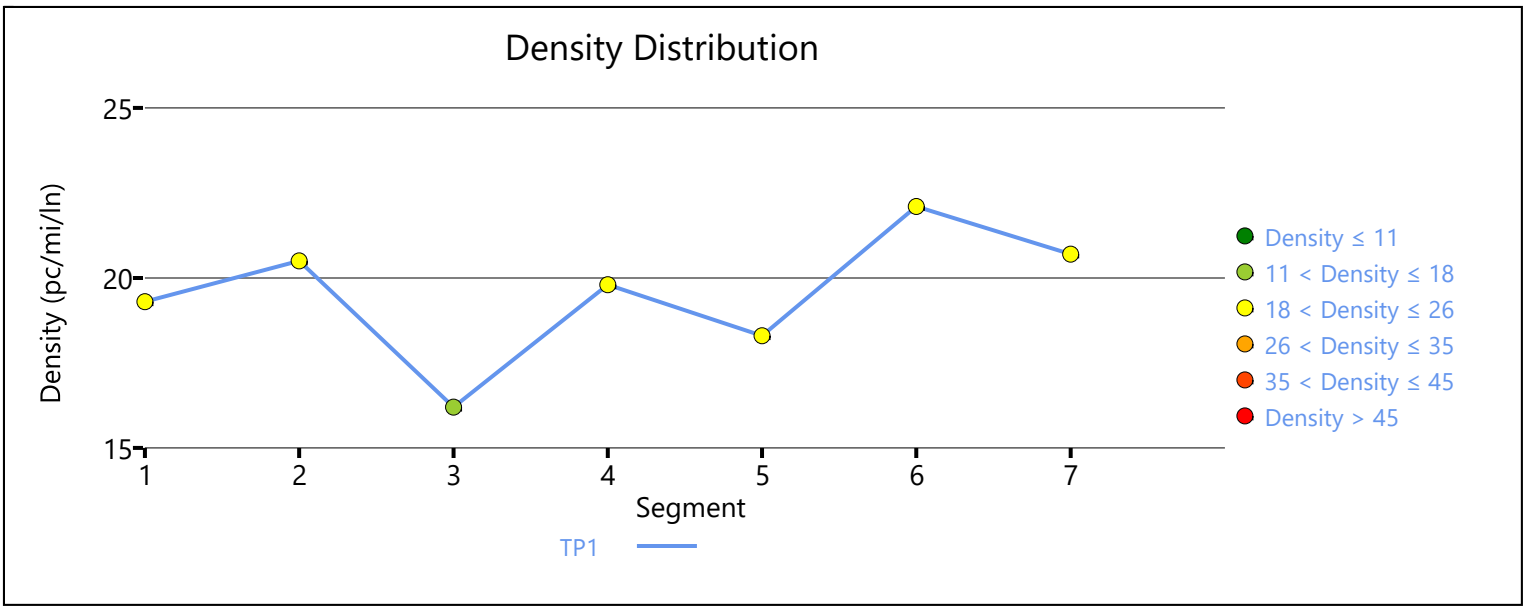
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.2	19.5	18.5	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	66.2	Density, veh/mi/ln	18.5
Average Travel Time, min	1.7	Density, pc/mi/ln	19.5







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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2021) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5326	7146	0.75	65.1	27.3	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	5326	1279	7200	2100	0.74	0.61	62.7	58.4	28.3	31.2	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4058	7146	0.57	68.1	19.9	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.962	4351	293	7200	1900	0.60	0.15	62.5	60.7	23.2	20.6	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4346	7146	0.61	67.8	21.4	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.935	4466	120	7200	2100	0.62	0.06	63.8	62.6	23.3	19.0	B

Segment 7: Basic

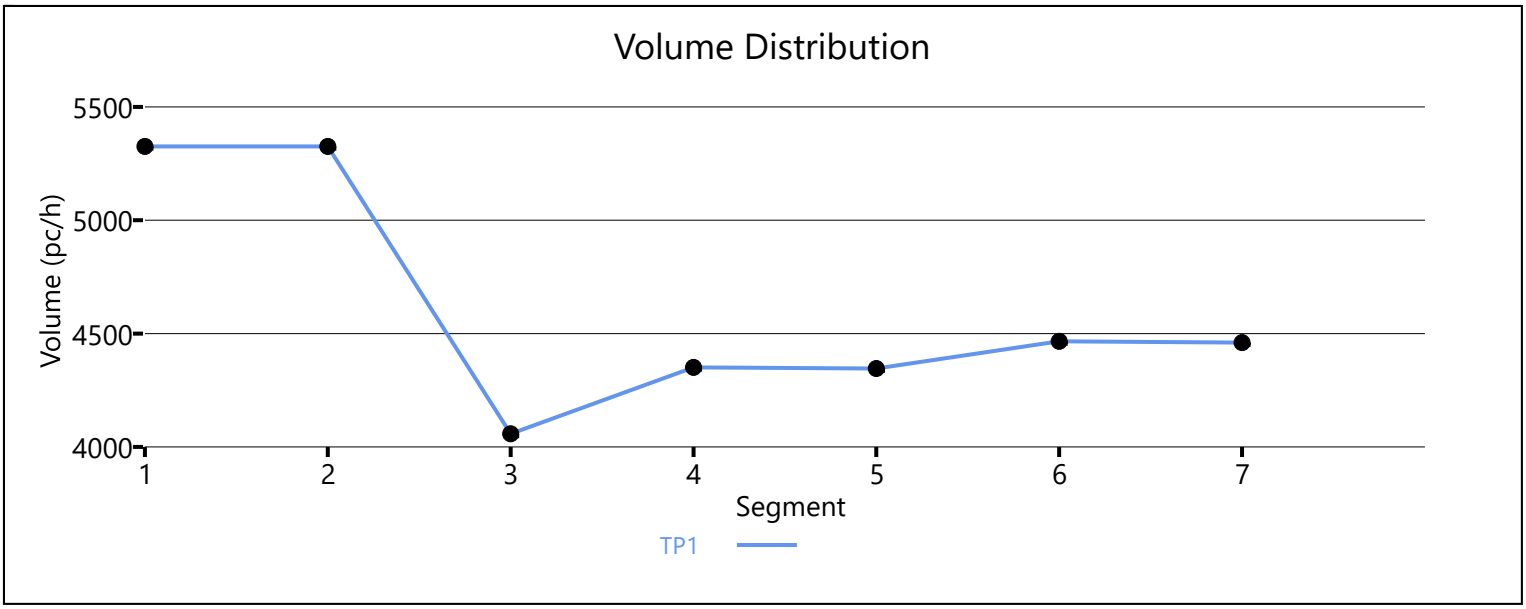
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4460	7146	0.62	67.6	22.0	C

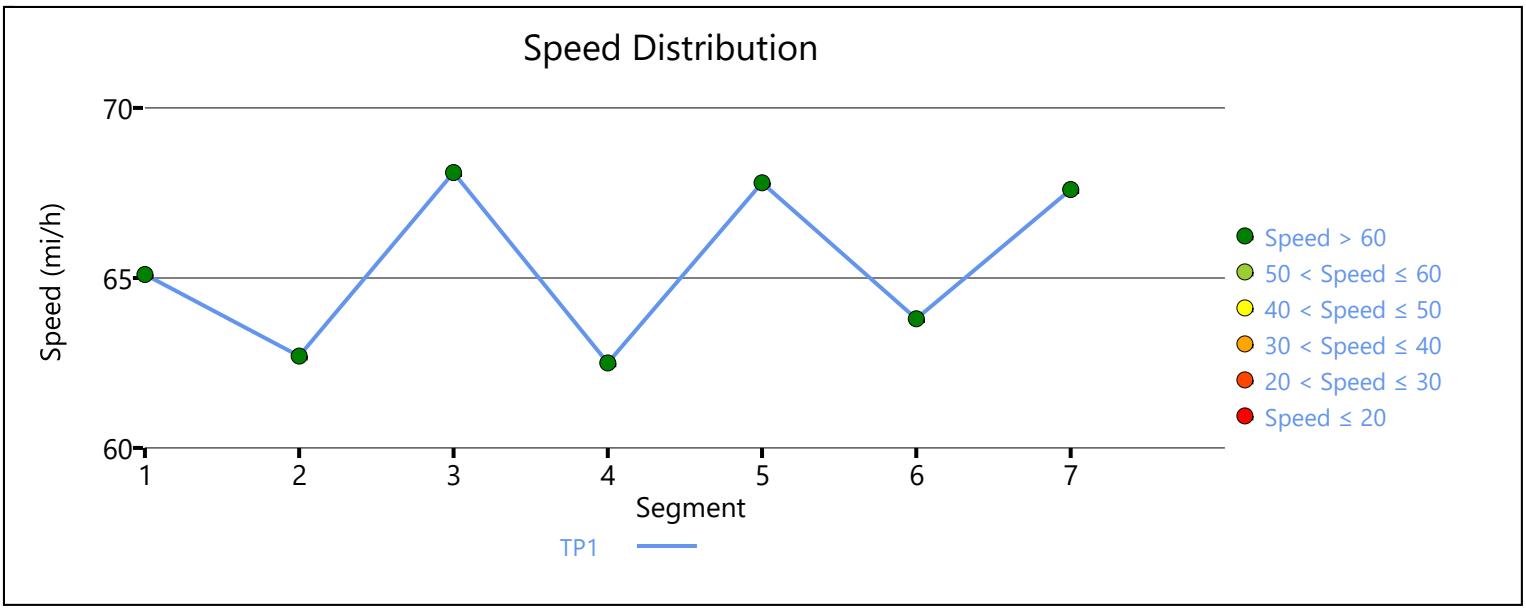
Facility Time Period Results

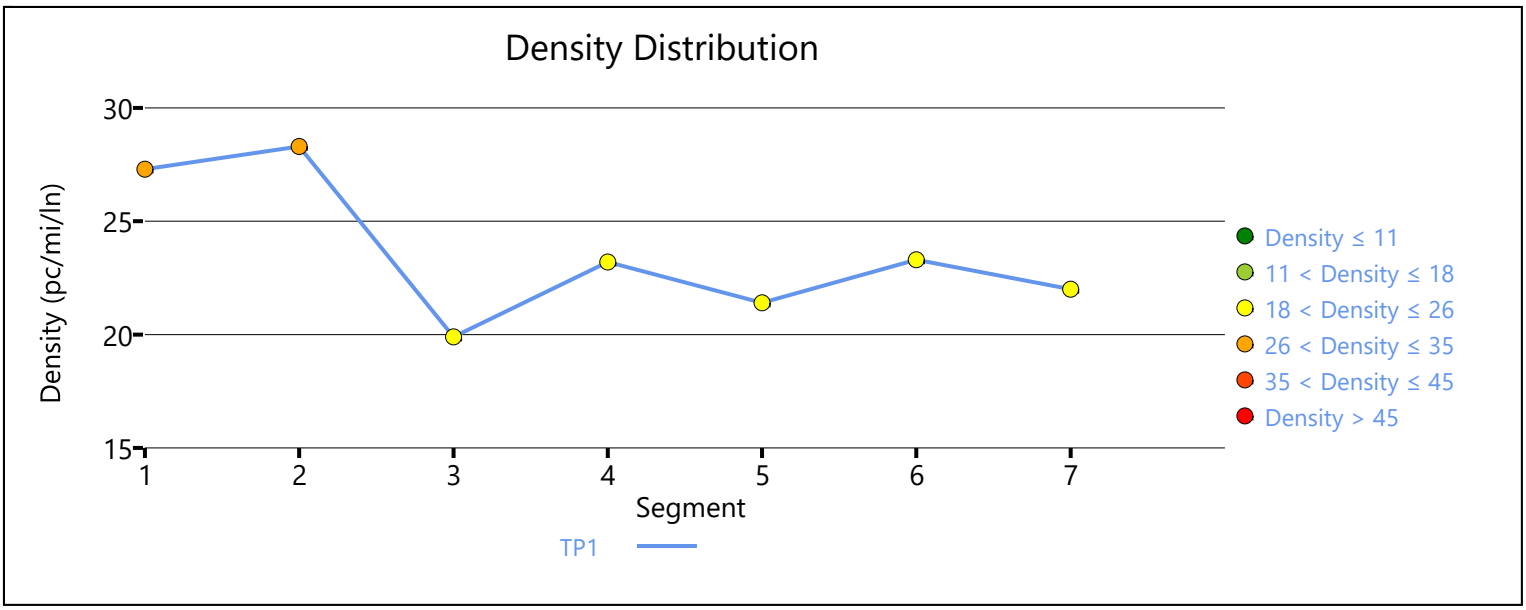
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.1	24.0	23.5	1.6	C

Facility Overall Results

Space Mean Speed, mi/h	65.1	Density, veh/mi/ln	23.5
Average Travel Time, min	1.6	Density, pc/mi/ln	24.0







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APPENDIX 6.7:

OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	4644	7146	0.65	67.3	23.0	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.885	4644	475	7200	2100	0.65	0.23	64.6	60.5	24.0	26.3	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4145	7146	0.58	68.1	20.3	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.917	4836	691	7200	1900	0.67	0.36	61.7	59.7	26.1	23.9	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4829	7146	0.68	66.8	24.1	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.935	5337	508	7200	2100	0.74	0.24	61.9	60.3	28.7	25.5	C

Segment 7: Basic

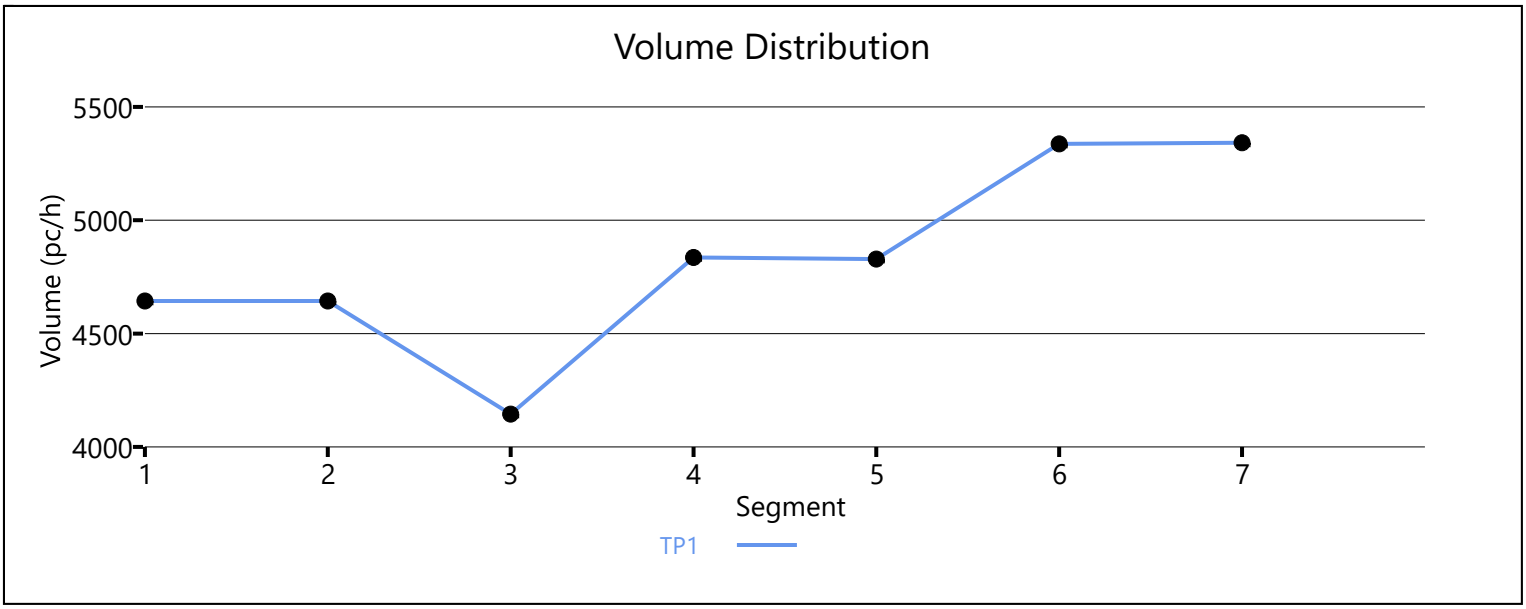
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	5342	7146	0.75	65.0	27.4	D

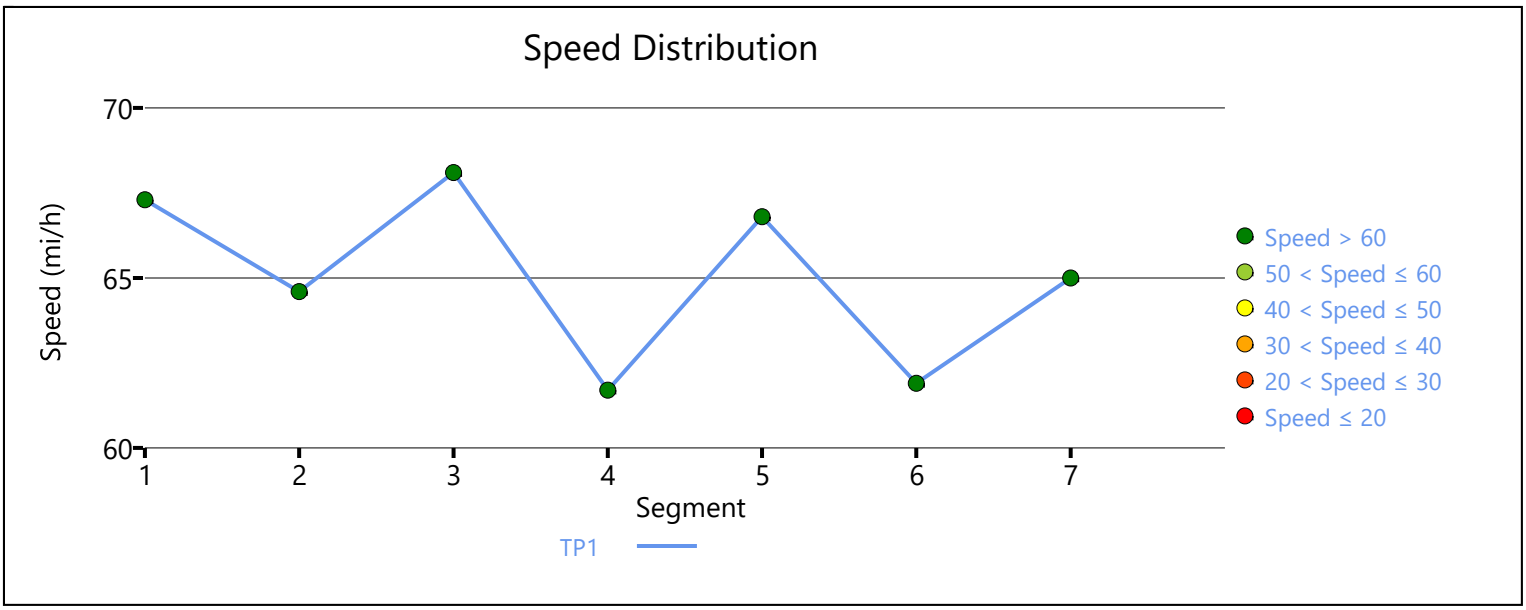
Facility Time Period Results

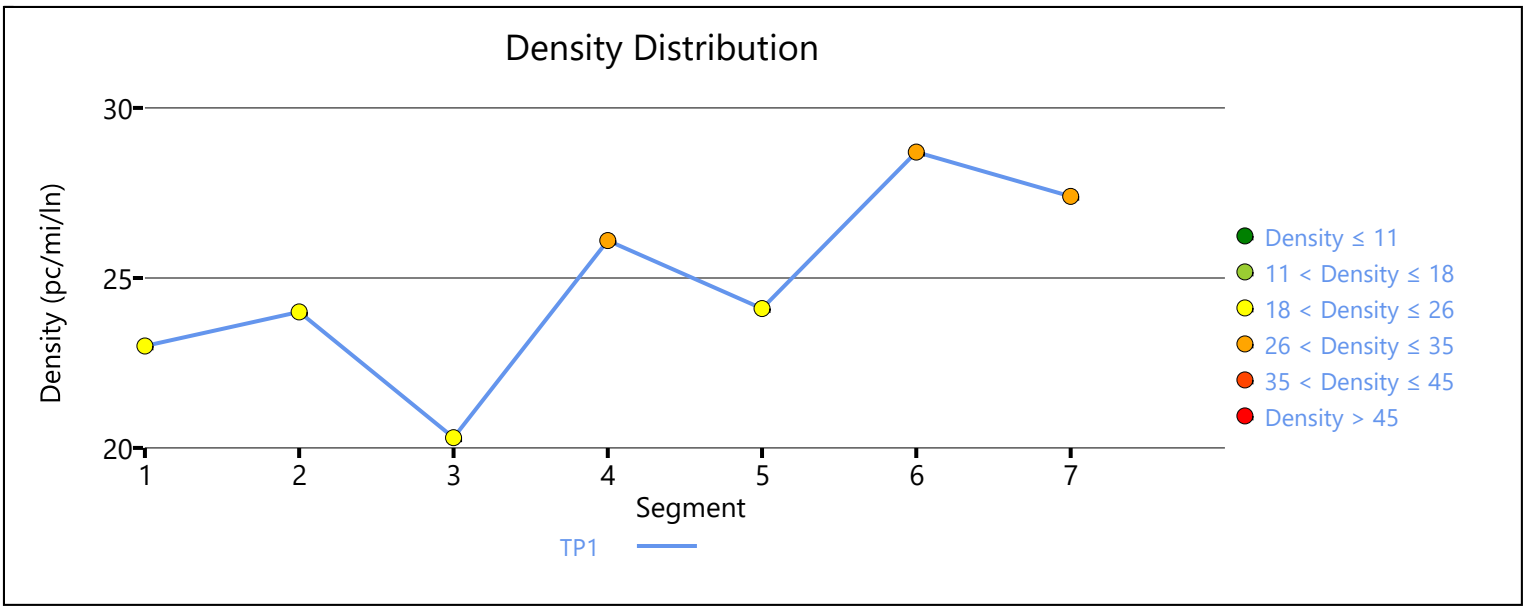
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.0	24.6	22.7	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	65.0	Density, veh/mi/ln	22.7
Average Travel Time, min	1.7	Density, pc/mi/ln	24.6







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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4360	7146	0.61	67.8	21.4	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.901	4360	588	7200	2100	0.61	0.28	64.4	60.2	22.6	25.7	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3780	7146	0.53	68.2	18.5	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4353	573	7200	1900	0.60	0.30	62.4	60.5	23.3	21.4	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4348	7146	0.61	67.8	21.4	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4592	244	7200	2100	0.64	0.12	63.5	62.3	24.1	19.9	B

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4590	7146	0.64	67.4	22.7	C

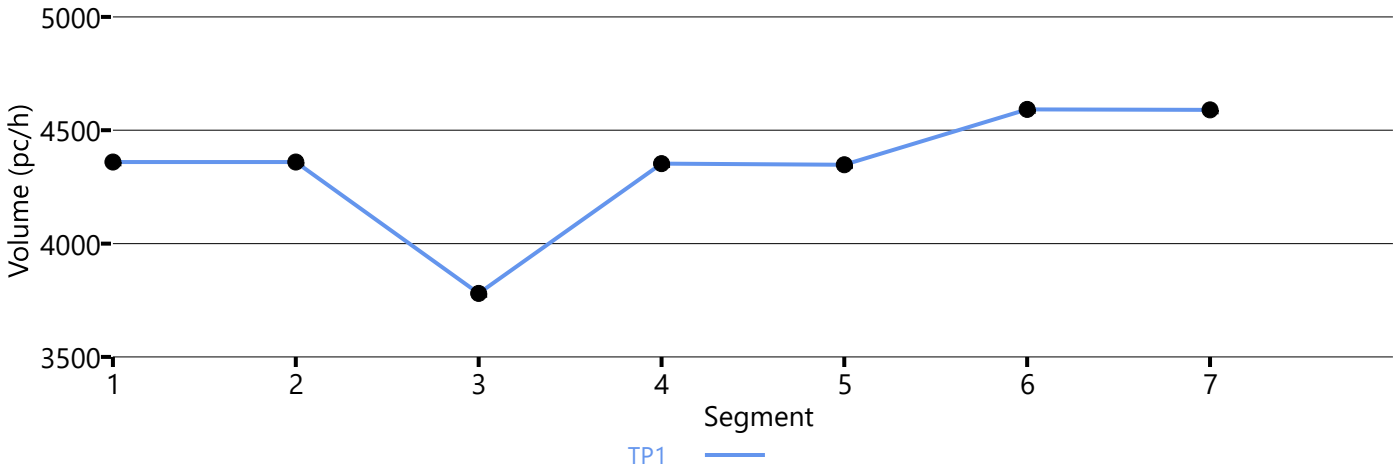
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.8	22.2	21.6	1.6	C

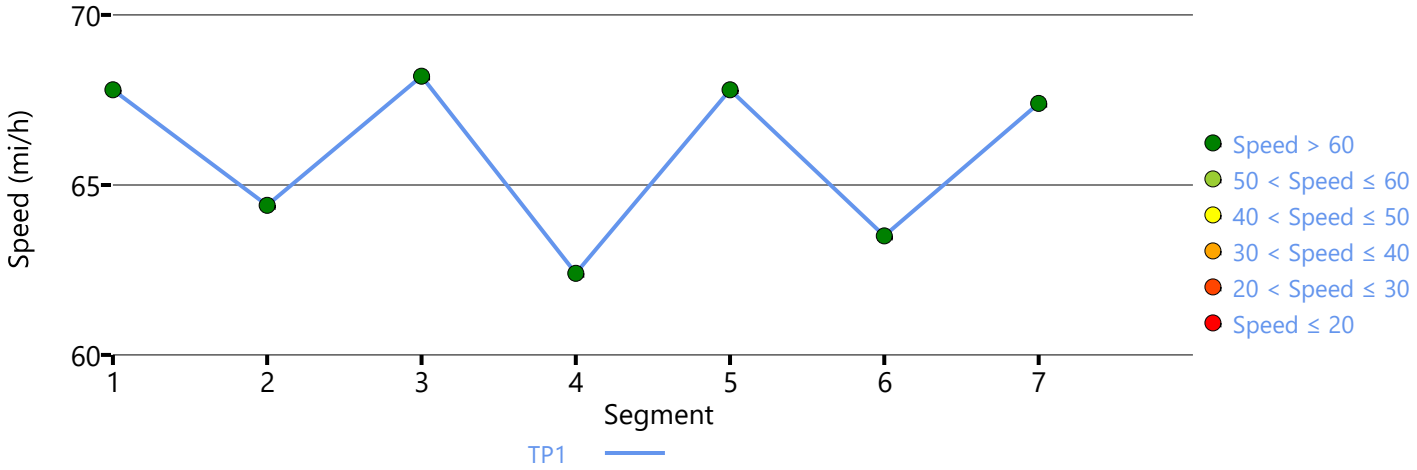
Facility Overall Results

Space Mean Speed, mi/h	65.8	Density, veh/mi/ln	21.6
Average Travel Time, min	1.6	Density, pc/mi/ln	22.2

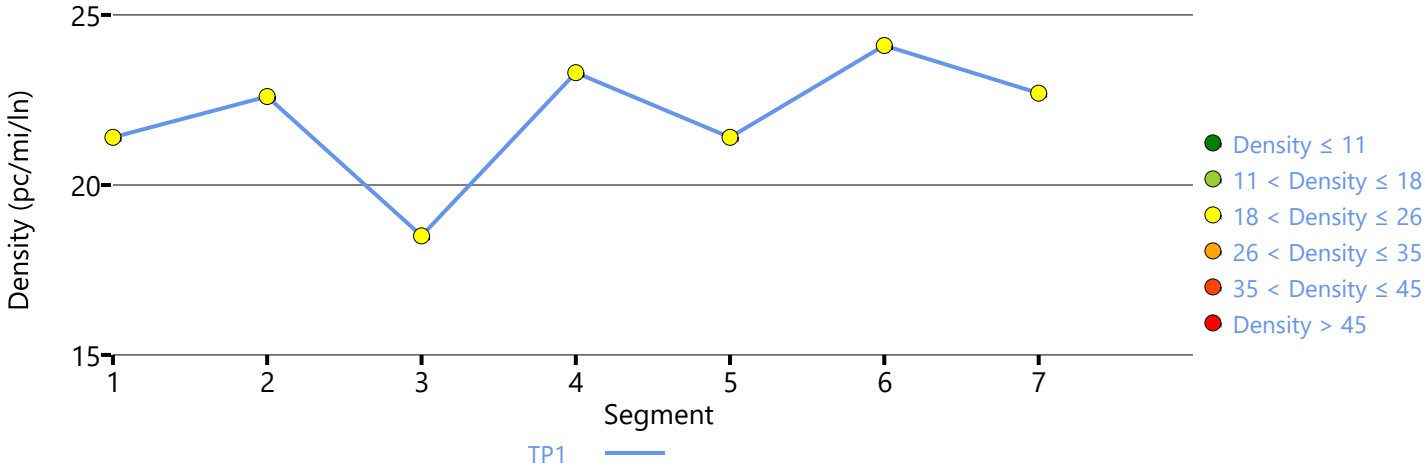
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3957	7146	0.55	68.2	19.3	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.971	3957	629	7200	2100	0.55	0.30	64.2	60.1	20.5	23.4	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3316	7146	0.46	68.2	16.2	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.943	3742	426	7200	1900	0.52	0.22	63.1	61.2	19.8	18.1	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3738	7146	0.52	68.2	18.3	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.971	4217	479	7200	2100	0.59	0.23	63.5	62.0	22.1	20.1	C

Segment 7: Basic

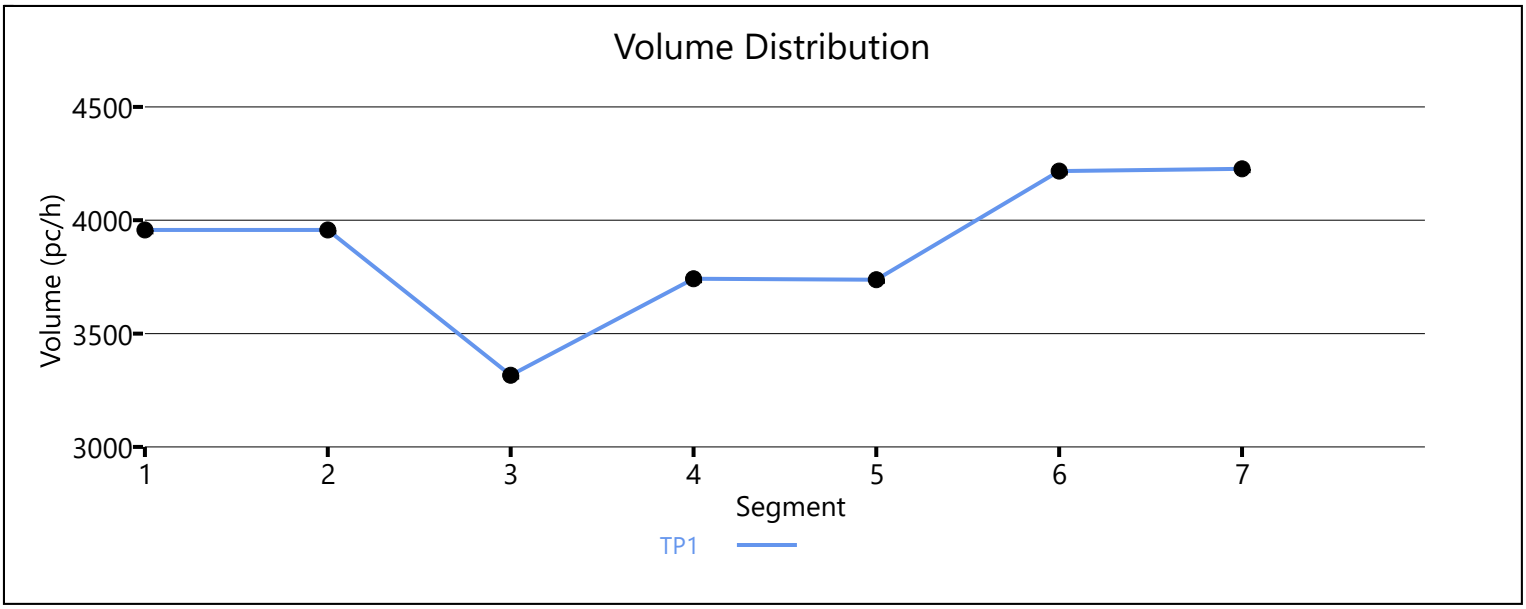
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	4227	7146	0.59	68.0	20.7	C

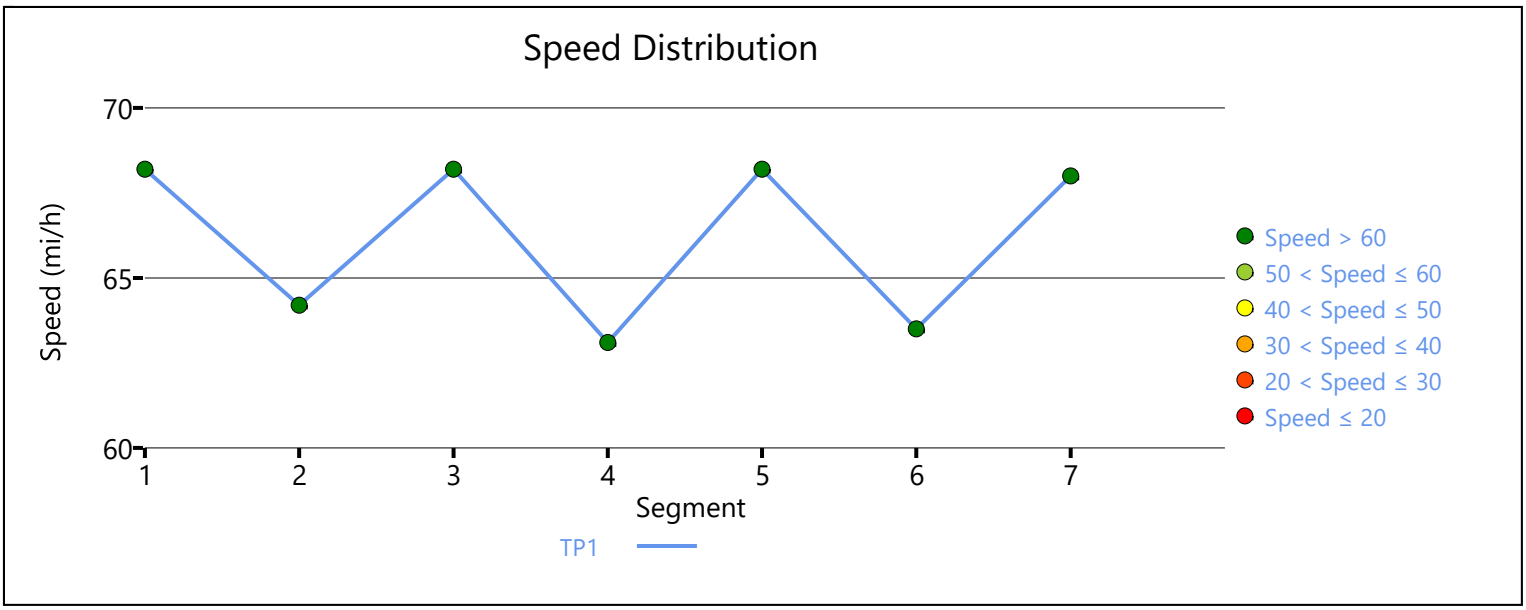
Facility Time Period Results

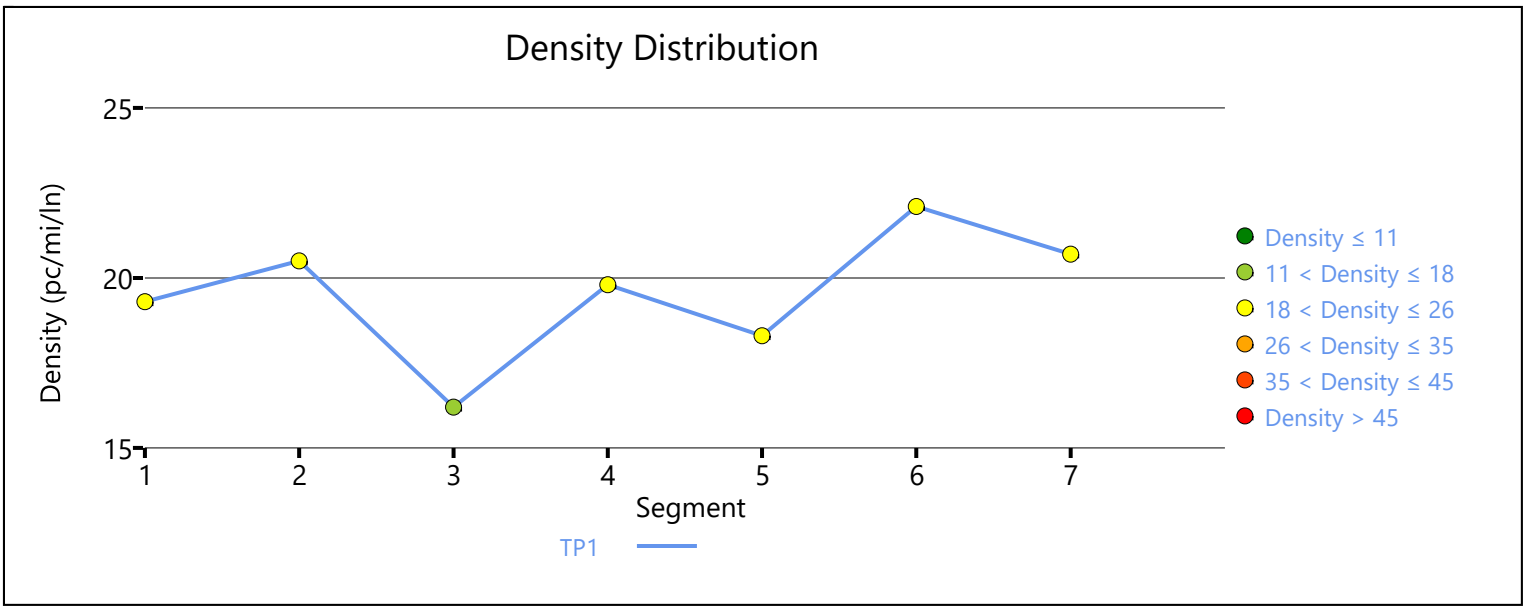
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.2	19.5	18.5	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	66.2	Density, veh/mi/ln	18.5
Average Travel Time, min	1.7	Density, pc/mi/ln	19.5







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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	5380	7146	0.75	64.8	27.7	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	5380	1284	7200	2100	0.75	0.61	62.7	58.4	28.6	31.4	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4058	7146	0.57	68.1	19.9	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.943	4374	316	7200	1900	0.61	0.17	62.5	60.6	23.3	20.8	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4362	7146	0.61	67.8	21.4	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.935	4482	120	7200	2100	0.62	0.06	63.8	62.6	23.4	19.0	B

Segment 7: Basic

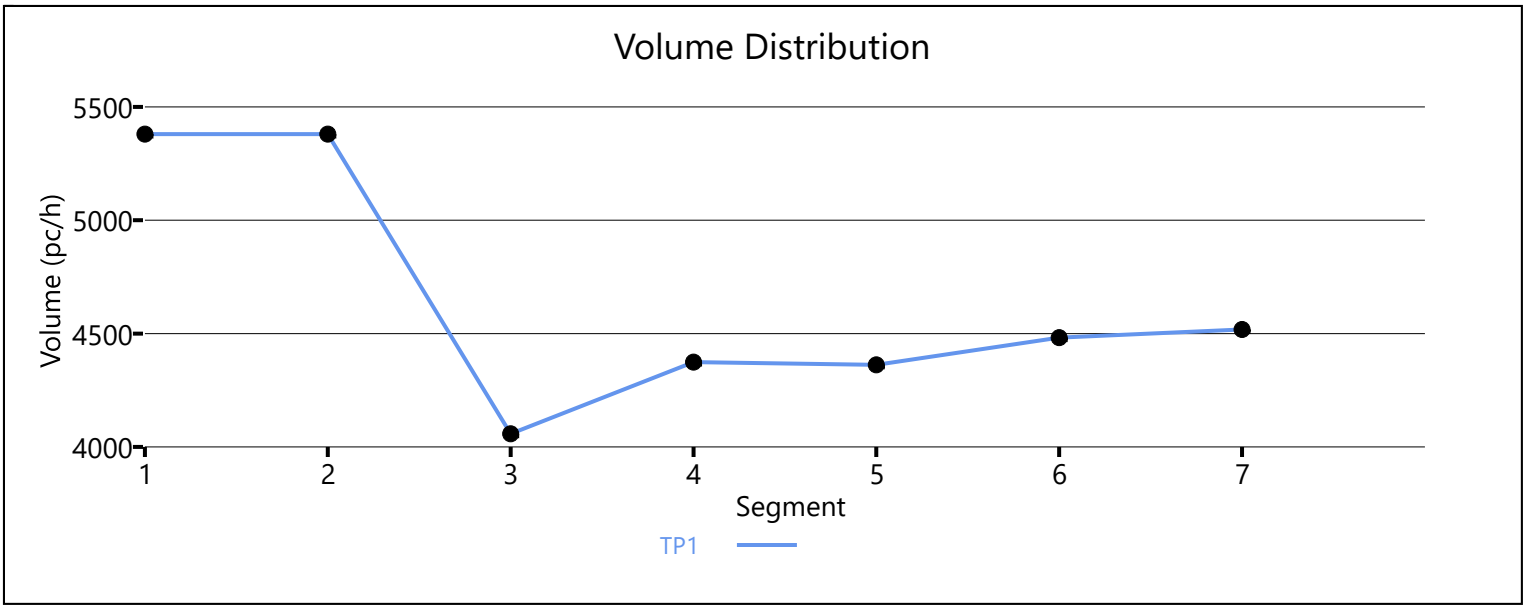
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4518	7146	0.63	67.5	22.3	C

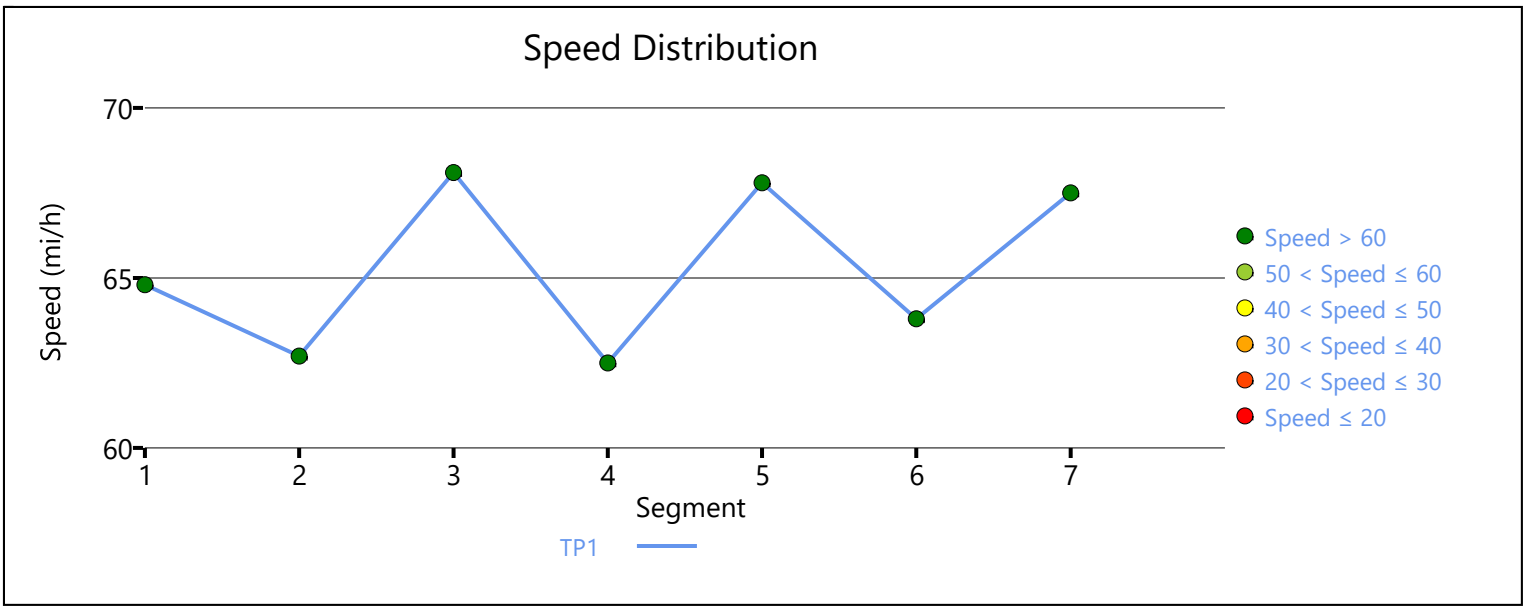
Facility Time Period Results

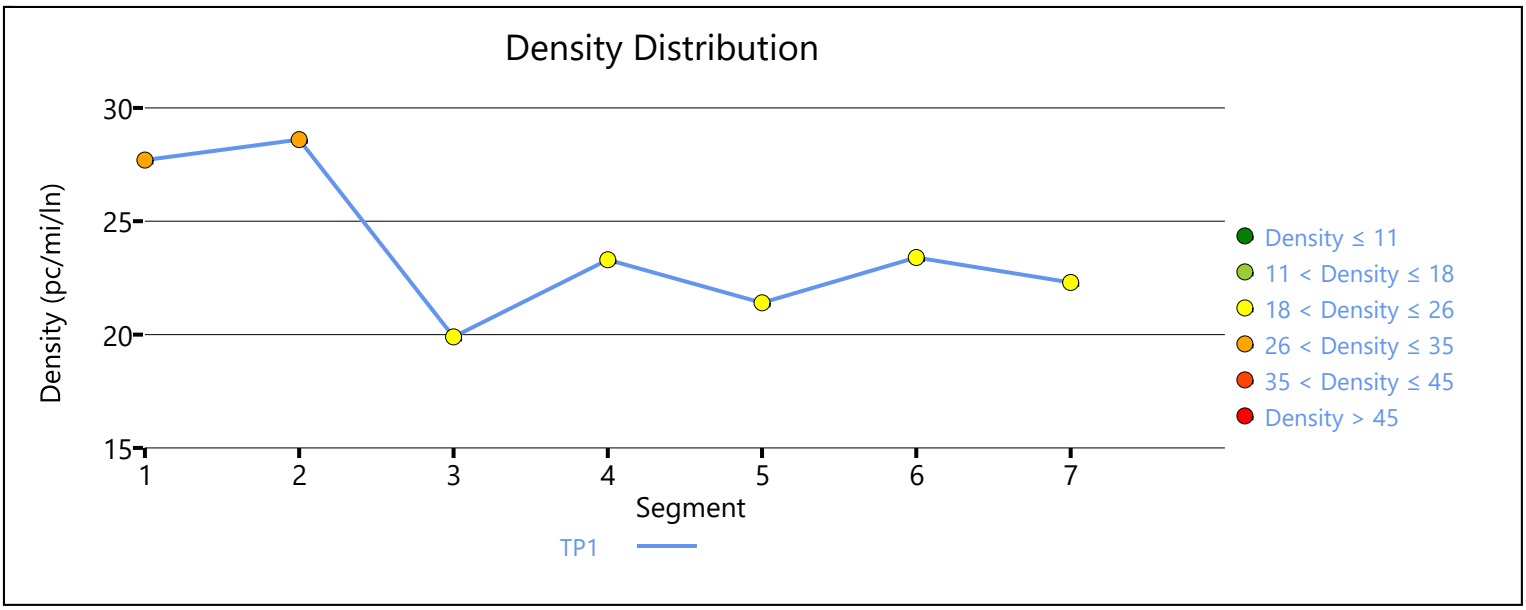
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.0	24.2	23.6	1.6	C

Facility Overall Results

Space Mean Speed, mi/h	65.0	Density, veh/mi/ln	23.6
Average Travel Time, min	1.6	Density, pc/mi/ln	24.2







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APPENDIX 6.8:

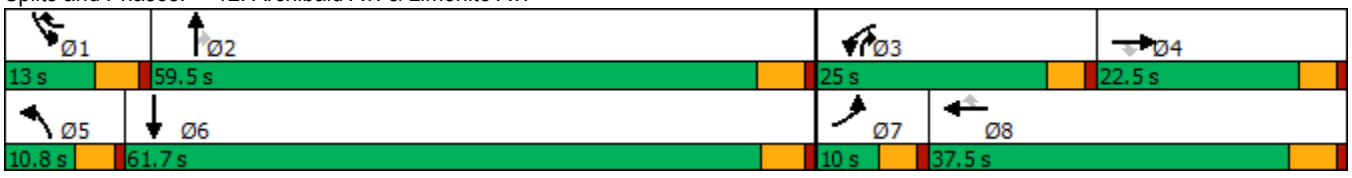
OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	19	17	7	353	55	542	28	855	338	146	557
Future Volume (vph)	19	17	7	353	55	542	28	855	338	146	557
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	11.0	9.5	46.3	9.5	11.0	11.0
Total Split (s)	10.0	22.5	22.5	25.0	37.5	13.0	10.8	59.5	25.0	13.0	61.7
Total Split (%)	8.3%	18.8%	18.8%	20.8%	31.3%	10.8%	9.0%	49.6%	20.8%	10.8%	51.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	4.0	3.5	4.3	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	5.0	4.5	5.3	4.5	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	5.5	8.2	8.2	20.6	24.3	37.5	6.1	54.6	76.0	7.9	61.7
Actuated g/C Ratio	0.05	0.08	0.08	0.19	0.23	0.35	0.06	0.51	0.72	0.07	0.58
v/c Ratio	0.11	0.06	0.03	1.05	0.07	0.86	0.28	0.91	0.28	0.58	0.30
Control Delay	52.9	46.5	0.1	105.0	33.0	39.8	58.1	40.3	1.3	58.7	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	46.5	0.1	105.0	33.0	39.8	58.1	40.3	1.3	58.7	13.8
LOS	D	D	A	F	C	D	E	D	A	E	B
Approach Delay		42.1			63.7			29.9			22.6
Approach LOS		D			E			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 39.1	Intersection LOS: D
Intersection Capacity Utilization 95.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	17	7	353	55	542	28	855	338	146	557	45
Future Volume (veh/h)	19	17	7	353	55	542	28	855	338	146	557	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	20	18	7	368	57	446	29	891	253	152	580	47
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	72	418	186	323	987	537	48	895	1028	210	1722	139
Arrive On Green	0.02	0.12	0.12	0.18	0.27	0.27	0.03	0.47	0.47	0.06	0.51	0.51
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	1900	1573	3510	3382	274
Grp Volume(v), veh/h	20	18	7	368	57	446	29	891	253	152	309	318
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	1900	1573	1755	1805	1851
Q Serve(g_s), s	0.6	0.5	0.4	20.5	1.3	29.4	1.8	53.7	7.7	4.9	11.7	11.7
Cycle Q Clear(g_c), s	0.6	0.5	0.4	20.5	1.3	29.4	1.8	53.7	7.7	4.9	11.7	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	72	418	186	323	987	537	48	895	1028	210	919	942
V/C Ratio(X)	0.28	0.04	0.04	1.14	0.06	0.83	0.61	1.00	0.25	0.72	0.34	0.34
Avail Cap(c_a), veh/h	168	565	252	323	1011	547	99	895	1028	244	919	942
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	45.2	45.2	47.3	30.8	35.3	55.4	30.3	8.4	53.1	16.7	16.7
Incr Delay (d2), s/veh	2.1	0.0	0.1	93.9	0.0	9.6	12.0	28.8	0.1	8.6	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.2	17.2	0.6	12.2	1.0	29.2	2.3	2.3	4.4	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.5	45.2	45.2	141.1	30.8	45.0	67.4	59.1	8.6	61.7	16.8	16.8
LnGrp LOS	E	D	D	F	C	D	E	E	A	E	B	B
Approach Vol, veh/h		45			871			1173			779	
Approach Delay, s/veh		50.7			84.7			48.4			25.6	
Approach LOS		D			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	59.5	25.0	18.6	7.5	63.9	6.9	36.8
Change Period (Y+Rc), s	5.0	5.3	4.5	* 5.3	4.5	* 5.3	4.5	5.3
Max Green Setting (Gmax), s	8.0	54.2	20.5	* 18	6.3	* 57	5.5	32.2
Max Q Clear Time (g_c+I1), s	6.9	55.7	22.5	2.5	3.8	13.7	2.6	31.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	53.2
HCM 6th LOS	D

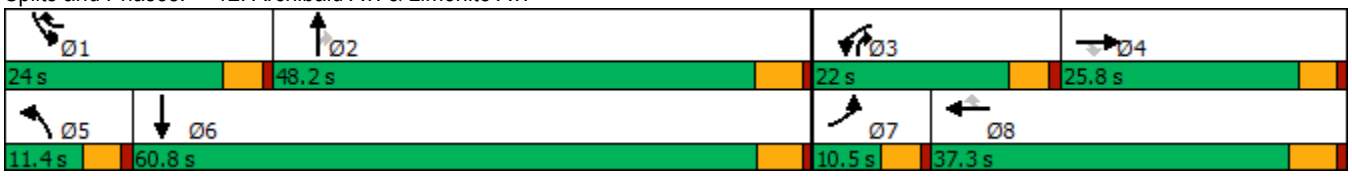
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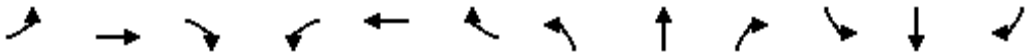
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	69	61	27	403	22	228	12	526	370	460	1004
Future Volume (vph)	69	61	27	403	22	228	12	526	370	460	1004
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	5.0	6.0	5.0	5.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	9.5	9.5	46.3	9.5	9.5	11.0
Total Split (s)	10.5	25.8	25.8	22.0	37.3	24.0	11.4	48.2	22.0	24.0	60.8
Total Split (%)	8.8%	21.5%	21.5%	18.3%	31.1%	20.0%	9.5%	40.2%	18.3%	20.0%	50.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	3.5	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	4.5	4.5	5.3	4.5	4.5	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	15.5	9.2	9.2	18.3	15.7	34.3	6.4	32.5	51.6	17.6	53.4
Actuated g/C Ratio	0.16	0.10	0.10	0.19	0.17	0.36	0.07	0.35	0.55	0.19	0.57
v/c Ratio	0.13	0.18	0.09	1.20	0.04	0.35	0.11	0.84	0.37	0.73	0.52
Control Delay	42.7	43.8	0.5	151.5	35.9	10.8	51.0	42.0	2.3	45.9	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	43.8	0.5	151.5	35.9	10.8	51.0	42.0	2.3	45.9	15.2
LOS	D	D	A	F	D	B	D	D	A	D	B
Approach Delay		35.9			98.4			25.9			24.7
Approach LOS		D			F			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 40.7	Intersection LOS: D
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	61	27	403	22	228	12	526	370	460	1004	17
Future Volume (veh/h)	69	61	27	403	22	228	12	526	370	460	1004	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	72	64	28	420	23	119	12	548	304	479	1046	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	165	247	110	361	797	621	26	653	863	579	1795	31
Arrive On Green	0.05	0.07	0.07	0.20	0.22	0.22	0.01	0.34	0.34	0.16	0.49	0.49
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	1900	1576	3510	3631	62
Grp Volume(v), veh/h	72	64	28	420	23	119	12	548	304	479	520	544
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	1900	1576	1755	1805	1889
Q Serve(g_s), s	1.8	1.5	1.4	17.5	0.4	4.3	0.6	23.3	9.6	11.6	17.9	18.0
Cycle Q Clear(g_c), s	1.8	1.5	1.4	17.5	0.4	4.3	0.6	23.3	9.6	11.6	17.9	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	165	247	110	361	797	621	26	653	863	579	892	934
V/C Ratio(X)	0.44	0.26	0.25	1.16	0.03	0.19	0.46	0.84	0.35	0.83	0.58	0.58
Avail Cap(c_a), veh/h	240	876	391	361	1317	853	142	929	1092	780	1148	1201
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	38.8	38.8	35.1	26.8	17.9	42.9	26.5	11.3	35.4	15.8	15.8
Incr Delay (d2), s/veh	1.8	0.6	1.2	99.8	0.0	0.1	12.0	5.3	0.3	5.5	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.6	0.6	17.1	0.2	1.4	0.3	10.3	2.8	5.0	6.1	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	39.3	40.0	134.9	26.8	17.9	54.9	31.8	11.6	40.9	16.0	16.0
LnGrp LOS	D	D	D	F	C	B	D	C	B	D	B	B
Approach Vol, veh/h		164			562			864			1543	
Approach Delay, s/veh		40.8			105.7			25.0			23.7	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	35.5	22.0	11.3	5.8	48.7	8.6	24.7
Change Period (Y+Rc), s	4.5	5.3	4.5	* 5.3	4.5	* 5.3	4.5	5.3
Max Green Setting (Gmax), s	19.5	42.9	17.5	* 21	6.9	* 56	6.0	32.0
Max Q Clear Time (g_c+I1), s	13.6	25.3	19.5	3.5	2.6	20.0	3.8	6.3
Green Ext Time (p_c), s	0.9	4.8	0.0	0.3	0.0	3.7	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	39.7
HCM 6th LOS	D

Notes

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

APPENDIX 7.1:

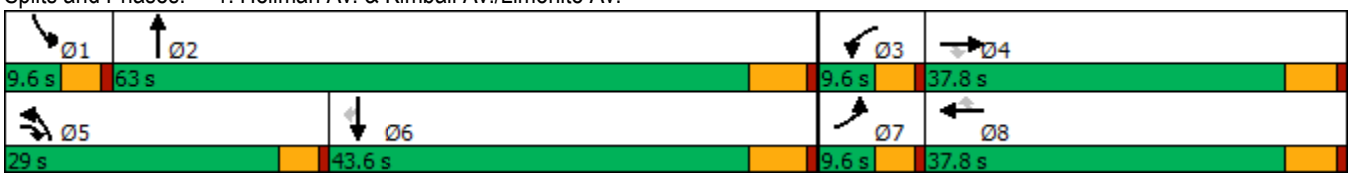
INTERIM YEAR (2023) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

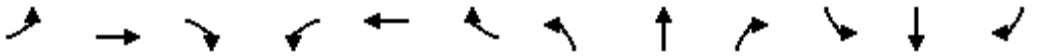
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	37	478	105	263	656	40	130	72	17	35	19
Future Volume (vph)	37	478	105	263	656	40	130	72	17	35	19
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	9.6	37.8	29.0	9.6	37.8	37.8	29.0	63.0	9.6	43.6	43.6
Total Split (%)	8.0%	31.5%	24.2%	8.0%	31.5%	31.5%	24.2%	52.5%	8.0%	36.3%	36.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	5.0	32.0	69.3	5.0	34.0	34.0	31.5	56.9	5.0	27.8	27.8
Actuated g/C Ratio	0.04	0.28	0.61	0.04	0.30	0.30	0.28	0.50	0.04	0.24	0.24
v/c Ratio	0.55	1.00	0.11	1.91	0.68	0.07	0.31	0.20	0.24	0.04	0.04
Control Delay	83.4	81.3	3.0	463.0	40.6	0.2	40.4	4.7	62.6	29.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.4	81.3	3.0	463.0	40.6	0.2	40.4	4.7	62.6	29.7	0.2
LOS	F	F	A	F	D	A	D	A	E	C	A
Approach Delay		68.1			154.7			15.3		29.8	
Approach LOS		E			F			B		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 114.2	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.91	
Intersection Signal Delay: 95.5	Intersection LOS: F
Intersection Capacity Utilization 63.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	478	105	263	656	40	130	72	237	17	35	19
Future Volume (veh/h)	37	478	105	263	656	40	130	72	237	17	35	19
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	1700	1800	1800	1800	1800	1800	1700	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	39	503	111	277	691	42	137	76	249	18	37	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	50	491	734	142	975	435	337	829	739	32	1010	450
Arrive On Green	0.03	0.27	0.27	0.04	0.28	0.28	0.21	0.48	0.48	0.02	0.30	0.30
Sat Flow, veh/h	1619	1800	1525	3326	3420	1525	1619	1710	1525	1714	3420	1525
Grp Volume(v), veh/h	39	503	111	277	691	42	137	76	249	18	37	20
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1663	1710	1525	1619	1710	1525	1714	1710	1525
Q Serve(g_s), s	2.8	32.0	4.8	5.0	21.2	2.4	8.6	2.8	11.8	1.2	0.9	1.1
Cycle Q Clear(g_c), s	2.8	32.0	4.8	5.0	21.2	2.4	8.6	2.8	11.8	1.2	0.9	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	50	491	734	142	975	435	337	829	739	32	1010	450
V/C Ratio(X)	0.79	1.02	0.15	1.95	0.71	0.10	0.41	0.09	0.34	0.56	0.04	0.04
Avail Cap(c_a), veh/h	69	491	734	142	975	435	337	829	739	73	1091	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.4	42.6	17.0	56.1	37.6	30.8	40.1	16.3	18.6	57.0	29.4	29.5
Incr Delay (d2), s/veh	21.6	46.7	0.1	453.3	2.4	0.1	3.6	0.2	1.2	5.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	20.0	1.6	11.0	8.9	0.9	3.6	1.1	4.1	0.6	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.0	89.3	17.1	509.4	40.0	30.9	43.8	16.5	19.8	62.4	29.4	29.5
LnGrp LOS	E	F	B	F	D	C	D	B	B	E	C	C
Approach Vol, veh/h		653			1010			462			75	
Approach Delay, s/veh		76.4			168.3			26.4			37.4	
Approach LOS		E			F			C			D	

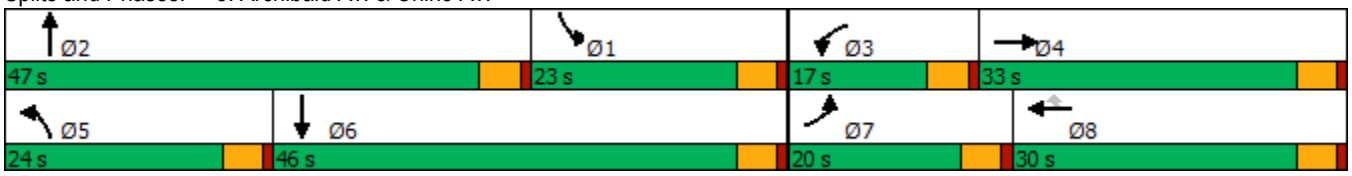
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	63.0	9.6	37.8	29.0	40.8	8.2	39.2
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	56.8	5.0	32.0	24.4	37.4	5.0	32.0
Max Q Clear Time (g_c+I1), s	3.2	13.8	7.0	34.0	10.6	3.1	4.8	23.2
Green Ext Time (p_c), s	0.0	1.9	0.0	0.0	0.1	0.2	0.0	2.9

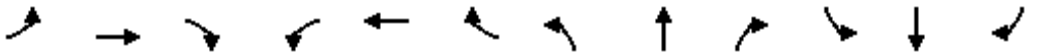
Intersection Summary	
HCM 6th Ctrl Delay	106.8
HCM 6th LOS	F

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	97	28	79	76	254	137	1141	118	872
Future Volume (vph)	97	28	79	76	254	137	1141	118	872
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.1	11.4	9.9	10.3	10.3	13.5	30.3	14.0	30.9
Actuated g/C Ratio	0.14	0.14	0.12	0.13	0.13	0.16	0.37	0.17	0.38
v/c Ratio	0.46	0.29	0.42	0.35	0.62	0.53	0.67	0.44	0.75
Control Delay	46.0	21.3	47.0	42.8	12.5	44.7	25.4	41.5	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	21.3	47.0	42.8	12.5	44.7	25.4	41.5	28.2
LOS	D	C	D	D	B	D	C	D	C
Approach Delay		35.3		24.8			27.4		29.7
Approach LOS		D		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 82	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 28.3	Intersection LOS: C
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	28	46	79	76	254	137	1141	38	118	872	53
Future Volume (veh/h)	97	28	46	79	76	254	137	1141	38	118	872	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	100	29	47	81	78	221	141	1176	36	122	899	49
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	126	102	166	101	270	228	179	1774	54	179	1196	65
Arrive On Green	0.08	0.17	0.17	0.06	0.15	0.15	0.11	0.36	0.36	0.11	0.36	0.36
Sat Flow, veh/h	1619	617	1000	1619	1800	1525	1619	4895	150	1619	3298	180
Grp Volume(v), veh/h	100	0	76	81	78	221	141	787	425	122	466	482
Grp Sat Flow(s),veh/h/ln	1619	0	1618	1619	1800	1525	1619	1638	1769	1619	1710	1768
Q Serve(g_s), s	3.7	0.0	2.5	3.0	2.4	6.1	5.2	12.4	12.4	4.5	14.7	14.7
Cycle Q Clear(g_c), s	3.7	0.0	2.5	3.0	2.4	6.1	5.2	12.4	12.4	4.5	14.7	14.7
Prop In Lane	1.00		0.62	1.00		1.00	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	126	0	268	101	270	228	179	1187	641	179	620	641
V/C Ratio(X)	0.79	0.00	0.28	0.80	0.29	0.97	0.79	0.66	0.66	0.68	0.75	0.75
Avail Cap(c_a), veh/h	405	0	747	326	743	630	511	2258	1219	484	1151	1190
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	0.0	22.5	28.5	23.2	12.5	26.7	16.5	16.5	26.3	17.2	17.2
Incr Delay (d2), s/veh	10.4	0.0	0.6	13.6	0.6	20.9	7.5	0.6	1.2	4.5	1.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.9	1.5	1.0	4.0	2.1	3.7	4.1	1.7	4.9	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	0.0	23.0	42.0	23.8	33.4	34.2	17.1	17.6	30.8	19.0	19.0
LnGrp LOS	D	A	C	D	C	C	C	B	B	C	B	B
Approach Vol, veh/h		176			380			1353			1070	
Approach Delay, s/veh		31.7			33.3			19.0			20.4	
Approach LOS		C			C			B			C	

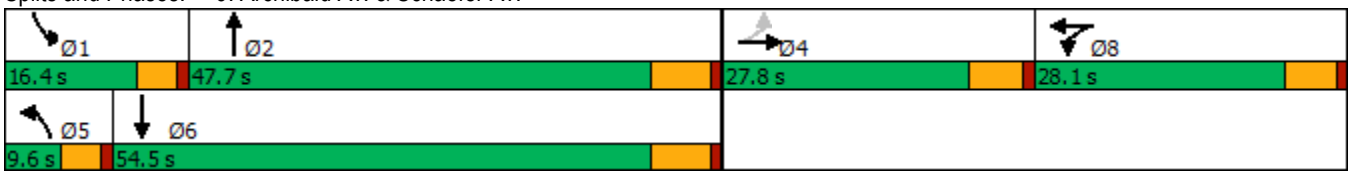
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	26.9	8.4	14.8	11.4	26.9	9.4	13.8
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	6.5	14.4	5.0	4.5	7.2	16.7	5.7	8.1
Green Ext Time (p_c), s	0.2	7.9	0.1	0.3	0.2	5.6	0.1	1.0

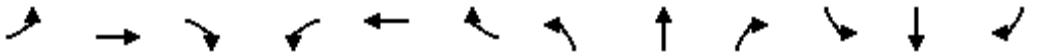
Intersection Summary	
HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	94	0	1301	73	840		
Future Volume (vph)	94	0	1301	73	840		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	47.7	16.4	54.5	27.8	9.6
Total Split (%)	23.4%	23.4%	39.8%	13.7%	45.4%	23%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	13.2	13.2	28.1	8.5	38.3		
Actuated g/C Ratio	0.19	0.19	0.41	0.12	0.56		
v/c Ratio	0.32	0.16	0.69	0.38	0.46		
Control Delay	34.0	0.5	21.2	41.6	11.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	34.0	0.5	21.2	41.6	11.3		
LOS	C	A	C	D	B		
Approach Delay		16.5	21.2		13.7		
Approach LOS		B	C		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 68.8	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 53.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	94	0	104	0	1301	19	73	840	0
Future Volume (veh/h)	0	0	0	94	0	104	0	1301	19	73	840	0
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	98	0	91	0	1355	20	76	875	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	3	0	291	0	275	3	2148	32	104	1995	0
Arrive On Green	0.00	0.00	0.00	0.18	0.00	0.18	0.00	0.43	0.43	0.06	0.58	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4989	74	1619	3510	0
Grp Volume(v), veh/h	0	0	0	98	0	91	0	890	485	76	875	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1787	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	2.7	0.0	2.7	0.0	11.0	11.0	2.4	7.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.7	0.0	2.7	0.0	11.0	11.0	2.4	7.4	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	291	0	275	3	1410	769	104	1995	0
V/C Ratio(X)	0.00	0.00	0.00	0.34	0.00	0.33	0.00	0.63	0.63	0.73	0.44	0.00
Avail Cap(c_a), veh/h	0	763	0	695	0	655	156	2599	1417	368	3161	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	18.6	0.0	18.6	0.0	11.6	11.6	23.9	6.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	0.7	0.0	0.5	0.9	3.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.9	0.0	0.8	0.0	2.7	3.0	0.9	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	19.3	0.0	19.3	0.0	12.0	12.4	27.6	6.2	0.0
LnGrp LOS	A	A	A	B	A	B	A	B	B	C	A	A
Approach Vol, veh/h		0			189			1375			951	
Approach Delay, s/veh		0.0			19.3			12.2			7.9	
Approach LOS					B			B			A	

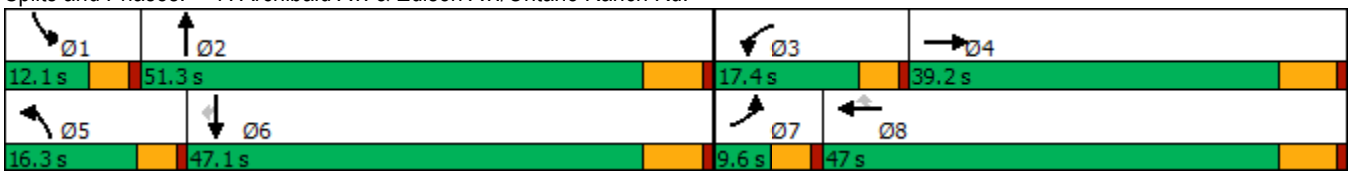
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	28.9		0.0	0.0	36.8		15.1				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	4.4	13.0		0.0	0.0	9.4		4.7				
Green Ext Time (p_c), s	0.0	9.3		0.0	0.0	6.0		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		11.1	
HCM 6th LOS		B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	204	44	378	498	173	159	1060	382	66	435	118
Future Volume (vph)	27	204	44	378	498	173	159	1060	382	66	435	118
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.3	22.7	102.6	13.5	36.1	36.1	12.3	39.1	102.6	7.2	31.0	31.0
Actuated g/C Ratio	0.05	0.22	1.00	0.13	0.35	0.35	0.12	0.38	1.00	0.07	0.30	0.30
v/c Ratio	0.19	0.28	0.03	0.99	0.80	0.27	0.84	0.83	0.26	0.59	0.43	0.21
Control Delay	57.4	34.4	0.0	93.1	43.9	5.6	83.2	37.1	0.4	74.3	30.0	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	34.4	0.0	93.1	43.9	5.6	83.2	37.1	0.4	74.3	30.0	2.8
LOS	E	C	A	F	D	A	F	D	A	E	C	A
Approach Delay		31.2			55.3			32.9			29.6	
Approach LOS		C			E			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 38.8	Intersection LOS: D
Intersection Capacity Utilization 85.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	204	44	378	498	173	159	1060	382	66	435	118
Future Volume (veh/h)	27	204	44	378	498	173	159	1060	382	66	435	118
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	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	28	208	0	386	508	135	162	1082	0	67	444	87
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	81	721		397	572	485	190	1277		83	1051	469
Arrive On Green	0.03	0.21	0.00	0.13	0.32	0.32	0.12	0.37	0.00	0.05	0.31	0.31
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	28	208	0	386	508	135	162	1082	0	67	444	87
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1525
Q Serve(g_s), s	0.9	4.9	0.0	12.4	25.5	6.3	9.3	27.6	0.0	3.9	9.8	4.0
Cycle Q Clear(g_c), s	0.9	4.9	0.0	12.4	25.5	6.3	9.3	27.6	0.0	3.9	9.8	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	721		397	572	485	190	1277		83	1051	469
V/C Ratio(X)	0.34	0.29		0.97	0.89	0.28	0.85	0.85		0.80	0.42	0.19
Avail Cap(c_a), veh/h	155	1185		397	771	654	199	1609		128	1458	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	31.6	0.0	41.0	30.9	24.3	41.2	27.4	0.0	44.7	26.3	24.2
Incr Delay (d2), s/veh	0.9	0.2	0.0	37.3	9.7	0.3	25.7	3.6	0.0	10.1	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.9	0.0	6.3	11.6	2.1	4.8	10.6	0.0	1.7	3.7	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	31.8	0.0	78.3	40.6	24.6	66.9	31.0	0.0	54.7	26.5	24.4
LnGrp LOS	D	C		E	D	C	E	C		D	C	C
Approach Vol, veh/h		236	A		1029			1244	A		598	
Approach Delay, s/veh		33.5			52.6			35.7			29.4	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	42.0	17.4	26.3	15.8	35.7	7.2	36.5
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	5.9	29.6	14.4	6.9	11.3	11.8	2.9	27.5
Green Ext Time (p_c), s	0.0	5.9	0.0	1.1	0.0	2.8	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	39.9
HCM 6th LOS	D

Notes

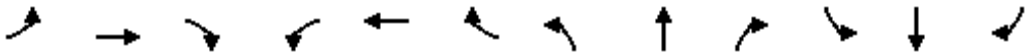
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	62	1538	11	20	837
Future Volume (vph)	6	62	1538	11	20	837
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	15.7%	15.7%	68.4%	68.4%	15.9%	84.3%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.0	5.0	50.8	50.8	5.0	52.8
Actuated g/C Ratio	0.08	0.08	0.81	0.81	0.08	0.84
v/c Ratio	0.02	0.19	0.59	0.01	0.16	0.31
Control Delay	25.8	1.2	6.3	4.1	29.0	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	1.2	6.3	4.1	29.0	2.4
LOS	C	A	A	A	C	A
Approach Delay			6.2			3.0
Approach LOS			A			A

Intersection Summary	
Cycle Length: 60.5	
Actuated Cycle Length: 62.7	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	6	0	62	0	1538	11	20	837	0
Future Volume (veh/h)	0	0	0	6	0	62	0	1538	11	20	837	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				6	0	9	0	1636	12	21	890	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, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				58	0	50	0	2328	1017	40	2691	0
Arrive On Green				0.02	0.00	0.02	0.00	0.68	0.68	0.02	0.79	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1494	1619	3510	0
Grp Volume(v), veh/h				6	0	9	0	1636	12	21	890	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1494	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.2	0.0	16.6	0.1	0.7	4.2	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.2	0.0	16.6	0.1	0.7	4.2	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				58	0	50	0	2328	1017	40	2691	0
V/C Ratio(X)				0.10	0.00	0.18	0.00	0.70	0.01	0.52	0.33	0.00
Avail Cap(c_a), veh/h				278	0	237	0	2328	1017	143	2691	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.3	0.0	27.3	0.0	5.5	2.9	27.2	1.7	0.0
Incr Delay (d2), s/veh				0.8	0.0	1.7	0.0	1.8	0.0	3.9	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				0.0	0.0	0.1	0.0	2.2	0.0	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.1	0.0	29.0	0.0	7.3	2.9	31.1	2.1	0.0
LnGrp LOS				C	A	C	A	A	A	C	A	A
Approach Vol, veh/h					15			1648			911	
Approach Delay, s/veh					28.6			7.3			2.7	
Approach LOS					C			A			A	

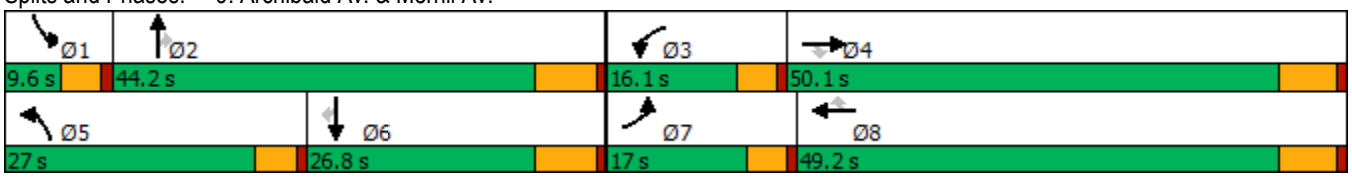
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	6.0	45.0				51.0		5.5				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	2.7	18.6				6.2		2.2				
Green Ext Time (p_c), s	0.0	9.8				6.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		5.8
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	21	160	78	48	128	382	1302	38	39	800	103
Future Volume (vph)	56	21	160	78	48	128	382	1302	38	39	800	103
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	7.7	15.3	15.3	8.4	15.9	15.9	23.1	43.4	43.4	5.2	21.0	21.0
Actuated g/C Ratio	0.09	0.17	0.17	0.10	0.18	0.18	0.26	0.49	0.49	0.06	0.24	0.24
v/c Ratio	0.41	0.07	0.41	0.52	0.15	0.33	0.93	0.80	0.05	0.23	1.01	0.22
Control Delay	50.6	29.8	7.9	54.3	30.8	5.1	64.3	27.4	0.1	48.5	70.4	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	29.8	7.9	54.3	30.8	5.1	64.3	27.4	0.1	48.5	70.4	3.0
LOS	D	C	A	D	C	A	E	C	A	D	E	A
Approach Delay		20.0			25.0			35.0			62.2	
Approach LOS		B			C			C			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 87.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 41.2	Intersection LOS: D
Intersection Capacity Utilization 72.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Merrill Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	21	160	78	48	128	382	1302	38	39	800	103
Future Volume (veh/h)	56	21	160	78	48	128	382	1302	38	39	800	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	58	22	110	80	49	37	394	1342	20	40	825	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	75	232	197	100	260	221	428	1672	746	110	895	399
Arrive On Green	0.05	0.13	0.13	0.06	0.14	0.14	0.26	0.49	0.49	0.04	0.26	0.26
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	58	22	110	80	49	37	394	1342	20	40	825	40
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1525	1478	1710	1525
Q Serve(g_s), s	2.7	0.8	5.2	3.8	1.9	1.6	18.3	25.5	0.5	1.0	18.1	1.5
Cycle Q Clear(g_c), s	2.7	0.8	5.2	3.8	1.9	1.6	18.3	25.5	0.5	1.0	18.1	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	75	232	197	100	260	221	428	1672	746	110	895	399
V/C Ratio(X)	0.78	0.09	0.56	0.80	0.19	0.17	0.92	0.80	0.03	0.36	0.92	0.10
Avail Cap(c_a), veh/h	260	1022	866	241	1001	849	469	1672	746	191	898	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5	29.7	31.6	35.8	29.1	29.0	27.6	16.6	10.2	36.3	27.8	21.6
Incr Delay (d2), s/veh	6.4	0.2	2.5	5.5	0.3	0.4	21.5	2.9	0.0	0.7	14.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.3	2.0	1.6	0.8	0.6	8.7	8.4	0.2	0.3	8.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	29.9	34.1	41.3	29.4	29.3	49.1	19.6	10.2	37.1	42.4	21.7
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	D	C
Approach Vol, veh/h		190			166			1756			905	
Approach Delay, s/veh		36.3			35.1			26.1			41.2	
Approach LOS		D			D			C			D	

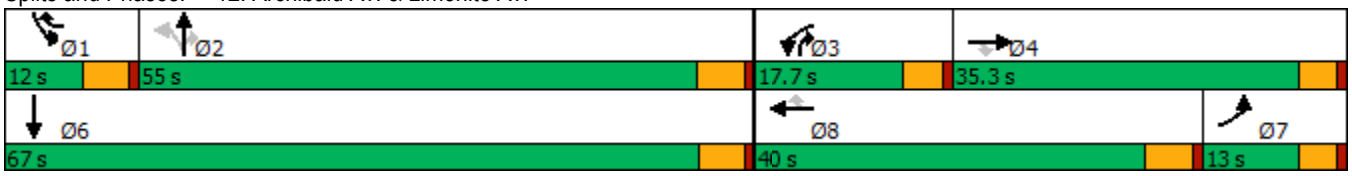
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	44.3	9.4	16.2	25.0	26.7	8.2	17.4
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.0	27.5	5.8	7.2	20.3	20.1	4.7	3.9
Green Ext Time (p_c), s	0.0	5.8	0.0	0.4	0.2	0.1	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	223	615	86	293	589	590	104	909	331	158	665
Future Volume (vph)	223	615	86	293	589	590	104	909	331	158	665
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Perm	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1		2	3	1	6
Permitted Phases			4			8	2		2		
Detector Phase	7	4	4	3	8	1	2	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	11.0	46.3	46.3	9.5	11.0	11.0
Total Split (s)	13.0	35.3	35.3	17.7	40.0	12.0	55.0	55.0	17.7	12.0	67.0
Total Split (%)	10.8%	29.4%	29.4%	14.8%	33.3%	10.0%	45.8%	45.8%	14.8%	10.0%	55.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	4.0	4.3	4.3	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	5.0	5.3	5.3	4.5	5.0	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	Min	None	None	Min
Act Effct Green (s)	14.5	25.8	25.8	13.2	23.7	31.0	49.8	49.8	63.8	7.0	62.1
Actuated g/C Ratio	0.13	0.22	0.22	0.11	0.21	0.27	0.43	0.43	0.55	0.06	0.54
v/c Ratio	0.53	0.79	0.20	1.47	0.83	1.28	1.66	1.15	0.37	1.51	0.92
Control Delay	52.9	49.9	5.6	274.6	53.7	167.1	382.9	114.5	9.9	307.4	39.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	49.9	5.6	274.6	53.7	167.1	382.9	114.5	9.9	307.4	39.9
LOS	D	D	A	F	D	F	F	F	A	F	D
Approach Delay		46.5			143.1			109.4			80.7
Approach LOS		D			F			F			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.66	
Intersection Signal Delay: 101.4	Intersection LOS: F
Intersection Capacity Utilization 105.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	615	86	293	589	590	104	909	331	158	665	213
Future Volume (veh/h)	223	615	86	293	589	590	104	909	331	158	665	213
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	232	641	90	305	614	496	108	947	246	165	693	222
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	263	773	345	210	897	500	114	832	876	112	749	240
Arrive On Green	0.07	0.21	0.21	0.12	0.25	0.25	0.44	0.44	0.44	0.06	0.54	0.54
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	620	1900	1573	1810	1379	442
Grp Volume(v), veh/h	232	641	90	305	614	496	108	947	246	165	0	915
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	620	1900	1573	1810	0	1820
Q Serve(g_s), s	7.4	19.3	5.3	13.2	17.5	24.5	9.3	49.7	9.4	7.0	0.0	52.4
Cycle Q Clear(g_c), s	7.4	19.3	5.3	13.2	17.5	24.5	49.7	49.7	9.4	7.0	0.0	52.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	263	773	345	210	897	500	114	832	876	112	0	989
V/C Ratio(X)	0.88	0.83	0.26	1.45	0.68	0.99	0.94	1.14	0.28	1.48	0.00	0.92
Avail Cap(c_a), veh/h	263	979	437	210	1104	591	114	832	876	112	0	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.0	42.6	37.1	50.2	38.6	20.3	54.6	31.9	13.4	53.3	0.0	23.8
Incr Delay (d2), s/veh	27.6	4.9	0.4	226.9	0.8	32.1	66.7	76.7	0.2	257.2	0.0	13.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	8.8	2.1	19.0	7.4	12.7	5.1	38.4	0.1	11.0	0.0	22.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.6	47.5	37.5	277.0	39.4	52.4	121.2	108.6	13.6	310.4	0.0	37.4
LnGrp LOS	E	D	D	F	D	D	F	F	B	F	A	D
Approach Vol, veh/h		963			1415			1301			1080	
Approach Delay, s/veh		54.3			95.2			91.7			79.1	
Approach LOS		D			F			F			E	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	12.0	55.0	17.7	28.8		67.0	13.0	33.5
Change Period (Y+Rc), s	5.0	5.3	4.5	4.5		* 5.3	4.5	5.3
Max Green Setting (Gmax), s	7.0	49.7	13.2	30.8		* 62	8.5	34.7
Max Q Clear Time (g_c+I1), s	9.0	51.7	15.2	21.3		54.4	9.4	26.5
Green Ext Time (p_c), s	0.0	0.0	0.0	2.9		2.5	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	82.3
HCM 6th LOS	F

Notes

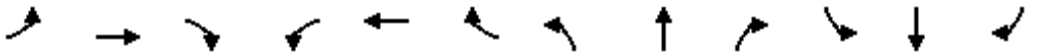
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	42	0	62	0	25	1239	75	906
Future Volume (vph)	42	0	62	0	25	1239	75	906
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	13.4	41.6	9.6	37.8	9.7	59.2	9.6	59.1
Total Split (%)	11.2%	34.7%	8.0%	31.5%	8.1%	49.3%	8.0%	49.3%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.9	14.8	11.9	13.7	5.3	46.7	5.2	53.4
Actuated g/C Ratio	0.08	0.17	0.13	0.15	0.06	0.52	0.06	0.60
v/c Ratio	0.33	0.03	0.28	0.19	0.25	0.77	0.79	0.49
Control Delay	51.5	0.1	46.7	1.1	53.9	22.5	92.0	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	0.1	46.7	1.1	53.9	22.5	92.0	14.6
LOS	D	A	D	A	D	C	F	B
Approach Delay		42.4		23.8		23.1		20.2
Approach LOS		D		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 89.4	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 65.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	0	9	62	0	63	25	1239	82	75	906	64
Future Volume (veh/h)	42	0	9	62	0	63	25	1239	82	75	906	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	0	9	67	0	68	27	1347	89	82	985	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	108	0	214	89	0	198	51	1675	110	106	1768	126
Arrive On Green	0.06	0.00	0.13	0.05	0.00	0.12	0.03	0.49	0.49	0.06	0.52	0.52
Sat Flow, veh/h	1810	0	1610	1810	0	1610	1810	3438	227	1810	3418	243
Grp Volume(v), veh/h	46	0	9	67	0	68	27	706	730	82	520	535
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1610	1810	1805	1859	1810	1805	1856
Q Serve(g_s), s	1.9	0.0	0.4	2.8	0.0	3.0	1.1	25.6	25.8	3.5	15.2	15.2
Cycle Q Clear(g_c), s	1.9	0.0	0.4	2.8	0.0	3.0	1.1	25.6	25.8	3.5	15.2	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.13
Lane Grp Cap(c), veh/h	108	0	214	89	0	198	51	879	906	106	934	960
V/C Ratio(X)	0.43	0.00	0.04	0.75	0.00	0.34	0.53	0.80	0.81	0.78	0.56	0.56
Avail Cap(c_a), veh/h	204	0	740	116	0	661	118	1228	1265	116	1226	1260
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	0.0	29.4	36.6	0.0	31.3	37.3	16.8	16.9	36.2	12.8	12.8
Incr Delay (d2), s/veh	1.0	0.0	0.1	12.4	0.0	1.0	3.1	2.7	2.7	22.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.1	1.5	0.0	1.2	0.5	9.1	9.5	2.1	5.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	29.5	48.9	0.0	32.3	40.4	19.5	19.6	58.3	13.3	13.3
LnGrp LOS	D	A	C	D	A	C	D	B	B	E	B	B
Approach Vol, veh/h		55			135			1463			1137	
Approach Delay, s/veh		35.2			40.6			19.9			16.5	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	44.2	8.4	16.2	6.8	46.5	9.2	15.4
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	53.0	5.0	35.8	5.1	52.9	8.8	32.0
Max Q Clear Time (g_c+I1), s	5.5	27.8	4.8	2.4	3.1	17.2	3.9	5.0
Green Ext Time (p_c), s	0.0	10.1	0.0	0.0	0.0	7.0	0.0	0.3

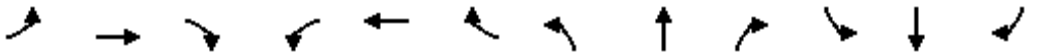
Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	100	0	82	0	19	779	79	1386
Future Volume (vph)	100	0	82	0	19	779	79	1386
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	13.4	41.6	9.6	37.8	9.7	59.2	9.6	59.1
Total Split (%)	11.2%	34.7%	8.0%	31.5%	8.1%	49.3%	8.0%	49.3%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.0	15.3	14.6	14.1	5.6	38.6	5.5	46.1
Actuated g/C Ratio	0.11	0.18	0.17	0.17	0.07	0.45	0.06	0.54
v/c Ratio	0.56	0.07	0.29	0.22	0.17	0.57	0.74	0.78
Control Delay	56.3	0.4	45.2	1.2	51.5	19.3	82.3	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.3	0.4	45.2	1.2	51.5	19.3	82.3	22.2
LOS	E	A	D	A	D	B	F	C
Approach Delay		45.1		22.8		19.9		25.4
Approach LOS		D		C		B		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.9	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	0	25	82	0	85	19	779	87	79	1386	36
Future Volume (veh/h)	100	0	25	82	0	85	19	779	87	79	1386	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	108	0	18	89	0	92	20	838	95	86	1490	39
Peak Hour Factor	0.93	0.92	0.93	0.92	0.92	0.92	0.93	0.93	0.92	0.92	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	150	0	228	113	0	199	41	1530	173	111	1821	48
Arrive On Green	0.08	0.00	0.14	0.06	0.00	0.12	0.02	0.47	0.47	0.06	0.51	0.51
Sat Flow, veh/h	1810	0	1588	1810	0	1610	1810	3268	370	1810	3592	94
Grp Volume(v), veh/h	108	0	18	89	0	92	20	463	470	86	748	781
Grp Sat Flow(s),veh/h/ln	1810	0	1588	1810	0	1610	1810	1805	1833	1810	1805	1881
Q Serve(g_s), s	4.7	0.0	0.8	3.9	0.0	4.3	0.9	14.7	14.7	3.8	27.9	28.1
Cycle Q Clear(g_c), s	4.7	0.0	0.8	3.9	0.0	4.3	0.9	14.7	14.7	3.8	27.9	28.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		0.05
Lane Grp Cap(c), veh/h	150	0	228	113	0	199	41	845	858	111	915	954
V/C Ratio(X)	0.72	0.00	0.08	0.79	0.00	0.46	0.49	0.55	0.55	0.78	0.82	0.82
Avail Cap(c_a), veh/h	199	0	710	113	0	643	115	1194	1212	113	1191	1241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	29.7	37.0	0.0	32.7	38.7	15.2	15.2	37.1	16.6	16.7
Incr Delay (d2), s/veh	4.8	0.0	0.1	28.0	0.0	1.7	3.4	0.6	0.5	25.3	3.5	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.3	2.5	0.0	1.6	0.4	5.1	5.2	2.3	10.1	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	0.0	29.9	65.1	0.0	34.3	42.1	15.8	15.8	62.4	20.1	20.1
LnGrp LOS	D	A	C	E	A	C	D	B	B	E	C	C
Approach Vol, veh/h		126			181			953			1615	
Approach Delay, s/veh		39.1			49.5			16.3			22.4	
Approach LOS		D			D			B			C	

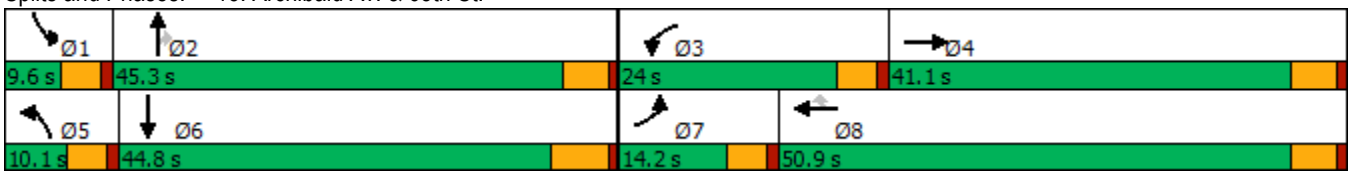
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	43.7	9.6	17.3	6.4	46.8	11.2	15.7
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	53.0	5.0	35.8	5.1	52.9	8.8	32.0
Max Q Clear Time (g_c+I1), s	5.8	16.7	5.9	2.8	2.9	30.1	6.7	6.3
Green Ext Time (p_c), s	0.0	5.9	0.0	0.1	0.0	10.5	0.0	0.4

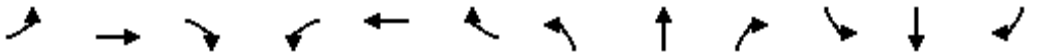
Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	59	48	240	28	63	18	1223	143	37	917
Future Volume (vph)	59	48	240	28	63	18	1223	143	37	917
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	7.5	14.3	18.1	27.2	27.2	5.4	41.1	41.1	5.1	41.7
Actuated g/C Ratio	0.08	0.15	0.19	0.29	0.29	0.06	0.44	0.44	0.05	0.44
v/c Ratio	0.45	0.21	0.76	0.06	0.13	0.19	0.85	0.20	0.42	0.45
Control Delay	55.5	18.4	53.2	26.5	1.5	52.6	32.5	5.7	61.4	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	18.4	53.2	26.5	1.5	52.6	32.5	5.7	61.4	21.2
LOS	E	B	D	C	A	D	C	A	E	C
Approach Delay		31.6		41.1			30.0			22.8
Approach LOS		C		D			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 28.9	Intersection LOS: C
Intersection Capacity Utilization 62.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	48	58	240	28	63	18	1223	143	37	917	23
Future Volume (veh/h)	59	48	58	240	28	63	18	1223	143	37	917	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	65	53	29	264	31	28	20	1344	121	41	1008	16
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	84	274	139	301	453	379	40	1624	715	65	2439	39
Arrive On Green	0.05	0.12	0.12	0.17	0.24	0.24	0.02	0.45	0.45	0.04	0.46	0.46
Sat Flow, veh/h	1810	2315	1172	1810	1900	1589	1810	3610	1589	1810	5260	83
Grp Volume(v), veh/h	65	40	42	264	31	28	20	1344	121	41	663	361
Grp Sat Flow(s),veh/h/ln	1810	1805	1682	1810	1900	1589	1810	1805	1589	1810	1729	1885
Q Serve(g_s), s	3.2	1.8	2.0	12.7	1.1	1.2	1.0	29.2	4.1	2.0	11.4	11.4
Cycle Q Clear(g_c), s	3.2	1.8	2.0	12.7	1.1	1.2	1.0	29.2	4.1	2.0	11.4	11.4
Prop In Lane	1.00		0.70	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	84	214	199	301	453	379	40	1624	715	65	1604	874
V/C Ratio(X)	0.77	0.19	0.21	0.88	0.07	0.07	0.50	0.83	0.17	0.63	0.41	0.41
Avail Cap(c_a), veh/h	194	727	678	393	974	815	111	1624	715	101	1604	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	35.5	35.6	36.3	26.3	26.4	43.2	21.5	14.6	42.5	15.9	15.9
Incr Delay (d2), s/veh	5.5	0.4	0.5	13.5	0.1	0.1	3.7	5.0	0.5	3.8	0.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.8	0.8	6.5	0.5	0.5	0.5	12.2	1.4	0.9	4.1	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	35.9	36.1	49.9	26.4	26.5	46.9	26.5	15.1	46.3	16.7	17.3
LnGrp LOS	D	D	D	D	C	C	D	C	B	D	B	B
Approach Vol, veh/h		147			323			1485			1065	
Approach Delay, s/veh		41.2			45.6			25.9			18.0	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	46.4	19.5	15.7	6.6	47.6	8.8	26.4
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	4.0	31.2	14.7	4.0	3.0	13.4	5.2	3.2
Green Ext Time (p_c), s	0.0	5.9	0.2	0.4	0.0	6.4	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

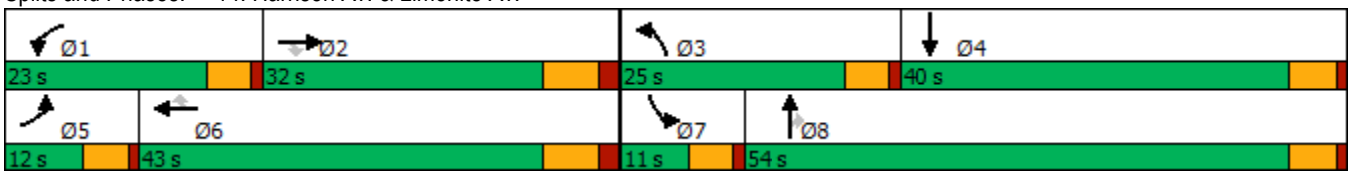
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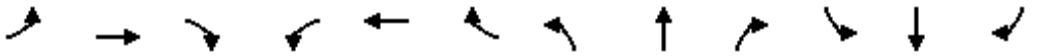
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	42	439	12	168	747	5	115	110	227	22	124
Future Volume (vph)	42	439	12	168	747	5	115	110	227	22	124
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.4	13.6	13.6	11.7	24.9	24.9	9.7	23.0	23.0	5.8	14.8
Actuated g/C Ratio	0.09	0.19	0.19	0.16	0.35	0.35	0.14	0.32	0.32	0.08	0.21
v/c Ratio	0.28	0.47	0.03	0.60	0.44	0.01	0.50	0.19	0.36	0.16	0.47
Control Delay	43.6	30.2	0.1	41.8	22.7	0.0	41.6	19.9	4.8	43.3	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	30.2	0.1	41.8	22.7	0.0	41.6	19.9	4.8	43.3	29.0
LOS	D	C	A	D	C	A	D	B	A	D	C
Approach Delay		30.6			26.1			17.8			30.6
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 71.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 25.8	Intersection LOS: C
Intersection Capacity Utilization 53.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	439	12	168	747	5	115	110	227	22	124	50
Future Volume (veh/h)	42	439	12	168	747	5	115	110	227	22	124	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	45	467	10	179	795	3	122	117	148	23	132	36
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	84	1013	315	229	1428	443	159	393	328	49	211	57
Arrive On Green	0.05	0.20	0.20	0.13	0.28	0.28	0.09	0.21	0.21	0.03	0.15	0.15
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	1900	1587	1810	1437	392
Grp Volume(v), veh/h	45	467	10	179	795	3	122	117	148	23	0	168
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	1900	1587	1810	0	1829
Q Serve(g_s), s	1.2	4.0	0.3	4.8	6.6	0.1	3.3	2.6	4.1	0.6	0.0	4.3
Cycle Q Clear(g_c), s	1.2	4.0	0.3	4.8	6.6	0.1	3.3	2.6	4.1	0.6	0.0	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	84	1013	315	229	1428	443	159	393	328	49	0	268
V/C Ratio(X)	0.54	0.46	0.03	0.78	0.56	0.01	0.77	0.30	0.45	0.47	0.00	0.63
Avail Cap(c_a), veh/h	252	2583	802	649	3720	1155	721	1843	1539	216	0	1265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.4	17.9	16.4	21.3	15.6	13.2	22.4	16.8	17.4	24.1	0.0	20.1
Incr Delay (d2), s/veh	2.0	0.3	0.0	2.2	0.3	0.0	3.0	0.4	1.0	2.5	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.3	0.1	1.8	2.0	0.0	1.3	1.0	1.3	0.3	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	18.2	16.4	23.5	15.9	13.2	25.4	17.2	18.4	26.6	0.0	22.5
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	A	C
Approach Vol, veh/h		522			977			387			191	
Approach Delay, s/veh		18.8			17.3			20.2			23.0	
Approach LOS		B			B			C			C	

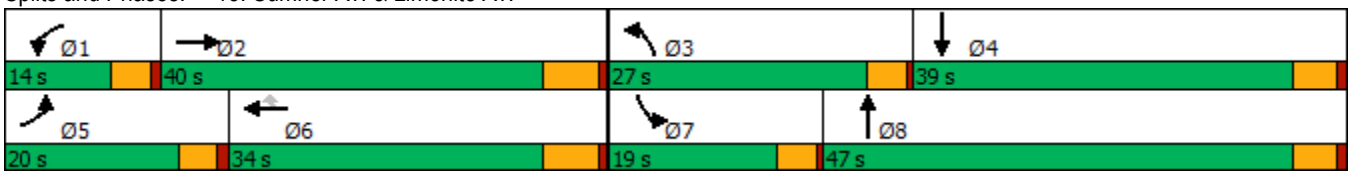
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	16.8	9.4	12.7	7.3	20.8	6.4	15.7
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	6.8	6.0	5.3	6.3	3.2	8.6	2.6	6.1
Green Ext Time (p_c), s	0.1	2.6	0.1	0.8	0.0	5.2	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	246	489	94	634	39	129	446	89	279
Future Volume (vph)	246	489	94	634	39	129	446	89	279
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	10.4	23.7	6.6	17.2	17.2	10.5	22.7	8.6	18.1
Actuated g/C Ratio	0.14	0.31	0.09	0.22	0.22	0.14	0.29	0.11	0.24
v/c Ratio	0.56	0.34	0.33	0.58	0.08	0.56	0.60	0.47	0.52
Control Delay	39.1	23.9	41.8	30.6	0.3	44.2	26.1	45.2	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	23.9	41.8	30.6	0.3	44.2	26.1	45.2	24.2
LOS	D	C	D	C	A	D	C	D	C
Approach Delay		28.8		30.5			29.3		27.8
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 77	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 29.2	Intersection LOS: C
Intersection Capacity Utilization 57.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	489	23	94	634	39	129	446	150	89	279	142
Future Volume (veh/h)	246	489	23	94	634	39	129	446	150	89	279	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	262	520	15	100	674	23	137	474	99	95	297	72
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	387	1455	42	202	1183	367	177	696	145	123	590	141
Arrive On Green	0.11	0.28	0.28	0.06	0.23	0.23	0.10	0.23	0.23	0.07	0.20	0.20
Sat Flow, veh/h	3510	5180	149	3510	5187	1610	1810	2975	618	1810	2891	690
Grp Volume(v), veh/h	262	346	189	100	674	23	137	286	287	95	184	185
Grp Sat Flow(s),veh/h/ln	1755	1729	1871	1755	1729	1610	1810	1805	1788	1810	1805	1776
Q Serve(g_s), s	3.9	4.3	4.4	1.5	6.3	0.6	4.0	7.8	7.9	2.8	4.9	5.0
Cycle Q Clear(g_c), s	3.9	4.3	4.4	1.5	6.3	0.6	4.0	7.8	7.9	2.8	4.9	5.0
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.35	1.00		0.39
Lane Grp Cap(c), veh/h	387	971	525	202	1183	367	177	423	419	123	368	362
V/C Ratio(X)	0.68	0.36	0.36	0.50	0.57	0.06	0.77	0.68	0.68	0.77	0.50	0.51
Avail Cap(c_a), veh/h	1004	2169	1173	615	2679	832	768	1398	1385	501	1132	1114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	15.6	15.6	24.8	18.6	16.4	23.9	18.9	18.9	24.9	19.1	19.2
Incr Delay (d2), s/veh	0.8	0.2	0.4	0.7	0.4	0.1	2.7	1.4	1.5	3.8	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.4	1.5	0.6	2.1	0.2	1.6	2.9	2.9	1.2	1.8	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	15.8	16.0	25.5	19.0	16.5	26.5	20.3	20.4	28.7	19.9	20.0
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	B	C
Approach Vol, veh/h		797			797			710			464	
Approach Delay, s/veh		18.5			19.7			21.6			21.7	
Approach LOS		B			B			C			C	

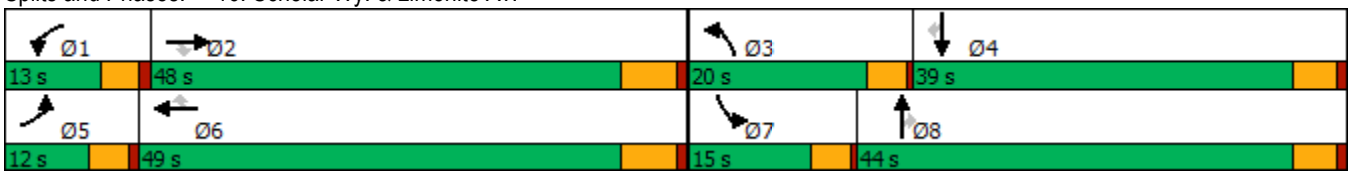
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	21.2	9.3	16.1	10.5	18.4	7.7	17.7
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	3.5	6.4	6.0	7.0	5.9	8.3	4.8	9.9
Green Ext Time (p_c), s	0.0	3.0	0.1	1.6	0.2	4.0	0.0	2.6

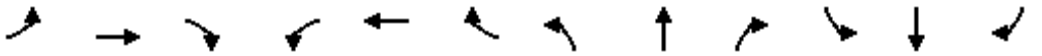
Intersection Summary	
HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	717	66	67	611	37	92	180	127	55	208	32
Future Volume (vph)	40	717	66	67	611	37	92	180	127	55	208	32
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	6.3	23.1	23.1	7.3	26.2	26.2	8.8	17.2	17.2	7.2	13.6	13.6
Actuated g/C Ratio	0.09	0.34	0.34	0.11	0.38	0.38	0.13	0.25	0.25	0.11	0.20	0.20
v/c Ratio	0.26	0.63	0.11	0.37	0.47	0.06	0.42	0.40	0.27	0.31	0.31	0.11
Control Delay	42.6	24.5	0.4	43.0	20.5	0.2	40.6	27.7	6.7	41.3	27.6	27.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	24.5	0.4	43.0	20.5	0.2	40.6	27.7	6.7	41.3	27.6	27.7
LOS	D	C	A	D	C	A	D	C	A	D	C	C
Approach Delay		23.5			21.5			24.0			30.2	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 68.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 55.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	717	66	67	611	37	92	180	127	55	208	32
Future Volume (veh/h)	40	717	66	67	611	37	92	180	127	55	208	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	763	50	71	650	28	98	191	90	59	221	34
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	65	1195	531	91	1246	555	127	345	288	81	564	242
Arrive On Green	0.04	0.33	0.33	0.05	0.35	0.35	0.07	0.18	0.18	0.04	0.16	0.16
Sat Flow, veh/h	1810	3610	1606	1810	3610	1608	1810	1900	1589	1810	3610	1549
Grp Volume(v), veh/h	43	763	50	71	650	28	98	191	90	59	221	34
Grp Sat Flow(s),veh/h/ln	1810	1805	1606	1810	1805	1608	1810	1900	1589	1810	1805	1549
Q Serve(g_s), s	1.2	8.9	1.1	1.9	7.1	0.6	2.6	4.5	2.4	1.6	2.7	0.9
Cycle Q Clear(g_c), s	1.2	8.9	1.1	1.9	7.1	0.6	2.6	4.5	2.4	1.6	2.7	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	65	1195	531	91	1246	555	127	345	288	81	564	242
V/C Ratio(X)	0.66	0.64	0.09	0.78	0.52	0.05	0.77	0.55	0.31	0.73	0.39	0.14
Avail Cap(c_a), veh/h	273	3053	1358	310	3126	1392	583	1492	1248	401	2471	1060
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	14.1	11.5	23.3	13.0	10.8	22.7	18.5	17.6	23.4	18.8	18.1
Incr Delay (d2), s/veh	4.2	0.6	0.1	5.3	0.3	0.0	3.7	1.0	0.5	4.6	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.7	0.3	0.8	2.1	0.2	1.1	1.8	0.8	0.7	1.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	14.7	11.6	28.6	13.3	10.9	26.4	19.5	18.1	28.0	19.2	18.3
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		856			749			379			314	
Approach Delay, s/veh		15.1			14.7			21.0			20.7	
Approach LOS		B			B			C			C	

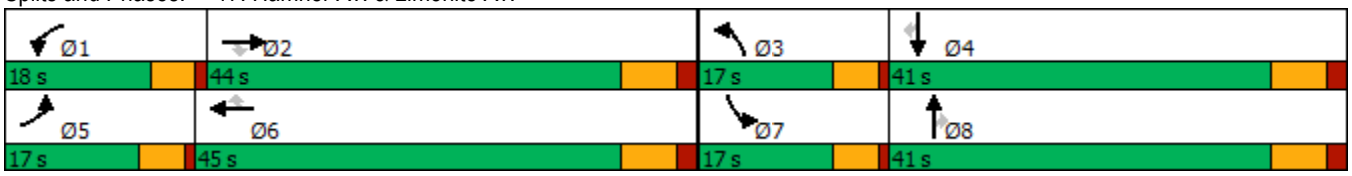
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	22.4	7.5	12.8	6.3	23.1	6.2	14.0
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	3.9	10.9	4.6	4.7	3.2	9.1	3.6	6.5
Green Ext Time (p_c), s	0.0	5.3	0.0	1.2	0.0	4.3	0.0	1.1

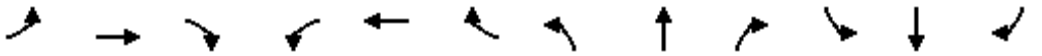
Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	614	37	225	479	103	145	611	315	204	347	99
Future Volume (vph)	166	614	37	225	479	103	145	611	315	204	347	99
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	8.8	22.2	22.2	10.3	23.7	23.7	8.3	25.5	25.5	9.7	26.9	26.9
Actuated g/C Ratio	0.10	0.24	0.24	0.11	0.26	0.26	0.09	0.28	0.28	0.10	0.29	0.29
v/c Ratio	0.54	0.54	0.08	0.63	0.56	0.22	0.50	0.46	0.54	0.60	0.25	0.20
Control Delay	49.1	33.2	0.4	49.4	33.6	5.5	48.9	29.6	11.5	49.7	26.5	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	33.2	0.4	49.4	33.6	5.5	48.9	29.6	11.5	49.7	26.5	4.6
LOS	D	C	A	D	C	A	D	C	B	D	C	A
Approach Delay		35.0			34.4			26.9			30.4	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.5	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 31.4	Intersection LOS: C
Intersection Capacity Utilization 57.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	614	37	225	479	103	145	611	315	204	347	99
Future Volume (veh/h)	166	614	37	225	479	103	145	611	315	204	347	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	180	667	30	245	521	75	158	664	178	222	377	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	266	1278	391	335	961	423	241	1336	408	310	1438	441
Arrive On Green	0.08	0.25	0.25	0.10	0.27	0.27	0.07	0.26	0.26	0.09	0.28	0.28
Sat Flow, veh/h	3510	5187	1586	3510	3610	1590	3510	5187	1584	3510	5187	1590
Grp Volume(v), veh/h	180	667	30	245	521	75	158	664	178	222	377	44
Grp Sat Flow(s),veh/h/ln	1755	1729	1586	1755	1805	1590	1755	1729	1584	1755	1729	1590
Q Serve(g_s), s	3.8	8.5	1.1	5.2	9.5	2.8	3.4	8.4	7.2	4.7	4.4	1.6
Cycle Q Clear(g_c), s	3.8	8.5	1.1	5.2	9.5	2.8	3.4	8.4	7.2	4.7	4.4	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	1278	391	335	961	423	241	1336	408	310	1438	441
V/C Ratio(X)	0.68	0.52	0.08	0.73	0.54	0.18	0.66	0.50	0.44	0.72	0.26	0.10
Avail Cap(c_a), veh/h	548	2497	764	594	1785	786	548	2295	701	548	2295	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	25.0	22.2	33.8	24.2	21.7	34.9	24.3	23.9	34.1	21.6	20.6
Incr Delay (d2), s/veh	1.1	0.7	0.2	1.2	1.0	0.4	1.1	0.6	1.6	1.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.3	0.4	2.1	3.8	1.0	1.4	3.2	2.6	1.9	1.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	25.7	22.4	35.0	25.2	22.1	36.0	24.9	25.4	35.2	21.8	20.8
LnGrp LOS	D	C	C	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		877			841			1000			643	
Approach Delay, s/veh		27.7			27.8			26.8			26.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	25.9	10.3	28.3	10.8	27.5	11.8	26.8
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	7.2	10.5	5.4	6.4	5.8	11.5	6.7	10.4
Green Ext Time (p_c), s	0.1	8.4	0.1	4.8	0.1	6.8	0.1	9.2

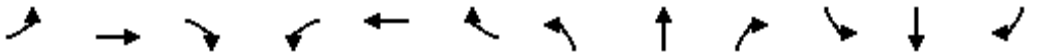
Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	781	485	539	643	91	0	353
Future Volume (vph)	781	485	539	643	91	0	353
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	36.5	36.5	23.5	23.5	23.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.6	73.6	73.6	73.6	7.0	7.0	7.0
Actuated g/C Ratio	0.80	0.80	0.80	0.80	0.08	0.08	0.08
v/c Ratio	0.19	0.36	0.13	0.46	0.36	0.36	0.66
Control Delay	2.3	1.0	2.2	1.3	47.7	47.7	10.8
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	2.3	1.0	2.2	1.4	47.7	47.7	10.8
LOS	A	A	A	A	D	D	B
Approach Delay	1.8		1.7			18.4	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.6	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 4.3	Intersection LOS: A
Intersection Capacity Utilization 44.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 18: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↲	↱↱
Traffic Volume (veh/h)	0	781	485	0	539	643	0	0	0	91	0	353
Future Volume (veh/h)	0	781	485	0	539	643	0	0	0	91	0	353
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	805	463	0	556	663				94	0	156
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4177	1280	0	4177	1297				269	0	238
Arrive On Green	0.00	0.81	0.81	0.00	0.81	0.81				0.07	0.00	0.07
Sat Flow, veh/h	0	5358	1590	0	5358	1610				3619	0	3207
Grp Volume(v), veh/h	0	805	463	0	556	663				94	0	156
Grp Sat Flow(s),veh/h/ln	0	1729	1590	0	1729	1610				1810	0	1604
Q Serve(g_s), s	0.0	3.3	7.3	0.0	2.1	12.4				2.3	0.0	4.3
Cycle Q Clear(g_c), s	0.0	3.3	7.3	0.0	2.1	12.4				2.3	0.0	4.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4177	1280	0	4177	1297				269	0	238
V/C Ratio(X)	0.00	0.19	0.36	0.00	0.13	0.51				0.35	0.00	0.66
Avail Cap(c_a), veh/h	0	4177	1280	0	4177	1297				1408	0	1247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.0	2.4	0.0	1.9	2.9				40.2	0.0	41.1
Incr Delay (d2), s/veh	0.0	0.1	0.8	0.0	0.1	1.4				0.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	1.5	0.0	0.4	2.6				1.0	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.2	3.2	0.0	2.0	4.4				40.4	0.0	42.3
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1268			1219						250	
Approach Delay, s/veh		2.5			3.3						41.6	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		12.3		79.0						
Change Period (Y+Rc), s		5.5		5.5		5.5						
Max Green Setting (Gmax), s		73.5		35.5		73.5						
Max Q Clear Time (g_c+I1), s		9.3		6.3		14.4						
Green Ext Time (p_c), s		5.1		0.5		4.1						

Intersection Summary												
HCM 6th Ctrl Delay			6.4									
HCM 6th LOS			A									

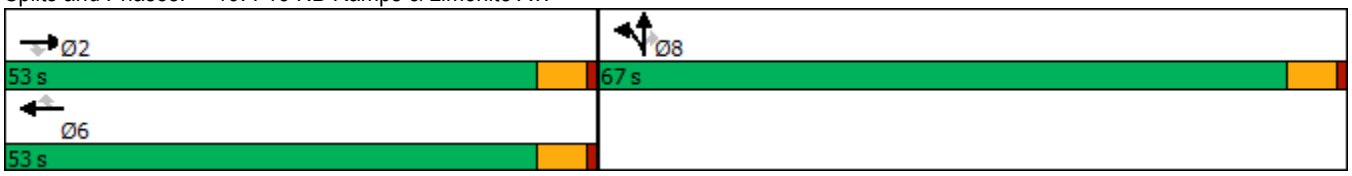
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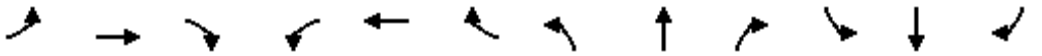
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	319	553	930	253	252	0	305
Future Volume (vph)	319	553	930	253	252	0	305
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.6	47.6	47.6	47.6	11.2	11.2	11.2
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.16	0.16	0.16
v/c Ratio	0.09	0.45	0.27	0.22	0.47	0.47	0.43
Control Delay	4.2	1.8	4.9	1.2	32.2	32.3	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.2	1.8	4.9	1.2	32.2	32.3	5.5
LOS	A	A	A	A	C	C	A
Approach Delay	2.7		4.1			17.6	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 69.8	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 6.5	Intersection LOS: A
Intersection Capacity Utilization 38.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↰	↱↱			
Traffic Volume (veh/h)	0	319	553	0	930	253	252	0	305	0	0	0
Future Volume (veh/h)	0	319	553	0	930	253	252	0	305	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	326	564	0	949	225	257	0	113			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3717	1153	0	3717	1154	425	0	378			
Arrive On Green	0.00	0.72	0.72	0.00	0.72	0.72	0.12	0.00	0.12			
Sat Flow, veh/h	0	5358	1609	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	326	564	0	949	225	257	0	113			
Grp Sat Flow(s),veh/h/ln	0	1729	1609	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	1.3	10.1	0.0	4.2	3.1	4.5	0.0	2.1			
Cycle Q Clear(g_c), s	0.0	1.3	10.1	0.0	4.2	3.1	4.5	0.0	2.1			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3717	1153	0	3717	1154	425	0	378			
V/C Ratio(X)	0.00	0.09	0.49	0.00	0.26	0.20	0.60	0.00	0.30			
Avail Cap(c_a), veh/h	0	3717	1153	0	3717	1154	3358	0	2988			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	2.8	4.1	0.0	3.3	3.1	27.8	0.0	26.8			
Incr Delay (d2), s/veh	0.0	0.0	1.5	0.0	0.2	0.4	1.4	0.0	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.3	2.3	0.0	0.9	0.7	1.8	0.0	0.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.9	5.6	0.0	3.4	3.5	29.2	0.0	27.2			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		890			1174			370				
Approach Delay, s/veh		4.6			3.4			28.6				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		13.3				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		12.1				6.2		6.5				
Green Ext Time (p_c), s		2.5				5.4		1.3				

Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

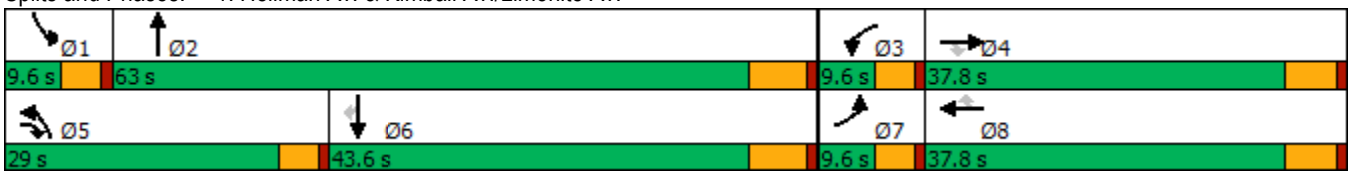
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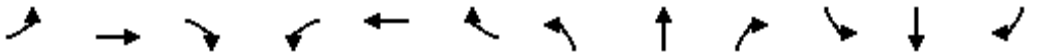
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	22	769	205	384	643	27	153	38	40	70	115
Future Volume (vph)	22	769	205	384	643	27	153	38	40	70	115
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	9.6	37.8	29.0	9.6	37.8	37.8	29.0	63.0	9.6	43.6	43.6
Total Split (%)	8.0%	31.5%	24.2%	8.0%	31.5%	31.5%	24.2%	52.5%	8.0%	36.3%	36.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	5.0	32.0	62.3	5.0	36.0	36.0	24.4	56.9	5.0	35.4	35.4
Actuated g/C Ratio	0.04	0.27	0.53	0.04	0.30	0.30	0.21	0.48	0.04	0.30	0.30
v/c Ratio	0.34	1.66	0.25	2.89	0.65	0.05	0.48	0.26	0.58	0.07	0.21
Control Delay	69.4	334.7	5.5	884.5	40.5	0.1	47.5	10.5	87.1	29.5	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.4	334.7	5.5	884.5	40.5	0.1	47.5	10.5	87.1	29.5	3.3
LOS	E	F	A	F	D	A	D	B	F	C	A
Approach Delay		261.0			347.0			21.1		26.3	
Approach LOS		F			F			C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.89	
Intersection Signal Delay: 228.9	Intersection LOS: F
Intersection Capacity Utilization 89.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	769	205	384	643	27	153	38	342	40	70	115
Future Volume (veh/h)	22	769	205	384	643	27	153	38	342	40	70	115
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	1700	1800	1800	1800	1800	1800	1700	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	23	809	216	404	677	28	161	40	360	42	74	121
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	485	725	140	989	441	333	818	730	54	1041	464
Arrive On Green	0.02	0.27	0.27	0.04	0.29	0.29	0.21	0.48	0.48	0.03	0.30	0.30
Sat Flow, veh/h	1619	1800	1525	3326	3420	1525	1619	1710	1525	1714	3420	1525
Grp Volume(v), veh/h	23	809	216	404	677	28	161	40	360	42	74	121
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1663	1710	1525	1619	1710	1525	1714	1710	1525
Q Serve(g_s), s	1.7	32.0	10.3	5.0	20.8	1.6	10.4	1.5	19.1	2.9	1.8	7.1
Cycle Q Clear(g_c), s	1.7	32.0	10.3	5.0	20.8	1.6	10.4	1.5	19.1	2.9	1.8	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	485	725	140	989	441	333	818	730	54	1041	464
V/C Ratio(X)	0.63	1.67	0.30	2.89	0.68	0.06	0.48	0.05	0.49	0.78	0.07	0.26
Avail Cap(c_a), veh/h	68	485	725	140	989	441	333	818	730	72	1077	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	43.4	19.1	56.9	37.4	30.6	41.6	16.5	21.2	57.1	29.4	31.2
Incr Delay (d2), s/veh	6.6	309.5	0.2	867.5	2.0	0.1	5.0	0.1	2.4	21.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	55.3	3.5	18.9	8.7	0.6	4.5	0.6	6.8	1.5	0.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	352.9	19.3	924.4	39.4	30.6	46.6	16.7	23.5	78.9	29.4	31.5
LnGrp LOS	E	F	B	F	D	C	D	B	C	E	C	C
Approach Vol, veh/h		1048			1109			561			237	
Approach Delay, s/veh		277.8			361.6			29.7			39.2	
Approach LOS		F			F			C			D	

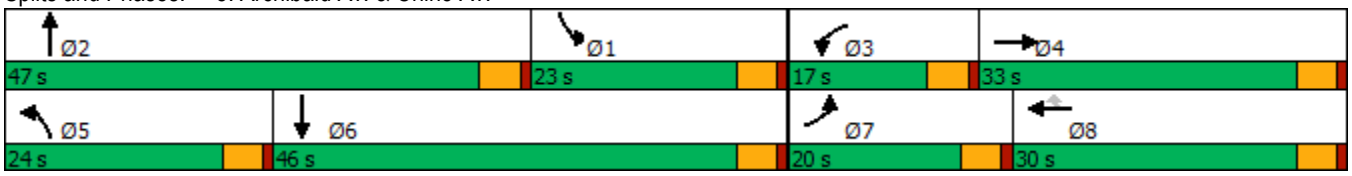
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	63.0	9.6	37.8	29.0	42.3	7.3	40.1
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	56.8	5.0	32.0	24.4	37.4	5.0	32.0
Max Q Clear Time (g_c+I1), s	4.9	21.1	7.0	34.0	12.4	9.1	3.7	22.8
Green Ext Time (p_c), s	0.0	2.5	0.0	0.0	0.1	0.7	0.0	2.9

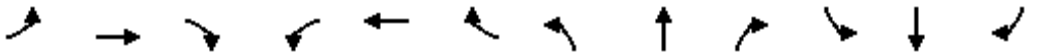
Intersection Summary	
HCM 6th Ctrl Delay	243.0
HCM 6th LOS	F

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	129	166	20	45	113	58	764	145	1102
Future Volume (vph)	129	166	20	45	113	58	764	145	1102
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.3	23.5	6.9	10.9	10.9	8.9	22.1	26.4	42.3
Actuated g/C Ratio	0.14	0.26	0.08	0.12	0.12	0.10	0.24	0.29	0.47
v/c Ratio	0.61	0.61	0.17	0.22	0.38	0.38	0.70	0.32	0.76
Control Delay	52.7	35.5	47.8	39.8	8.2	49.1	34.9	31.8	27.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.7	35.5	47.8	39.8	8.2	49.1	34.9	31.8	27.2
LOS	D	D	D	D	A	D	C	C	C
Approach Delay		41.1		20.6			35.9		27.7
Approach LOS		D		C			D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 31.7	Intersection LOS: C
Intersection Capacity Utilization 68.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	166	102	20	45	113	58	764	38	145	1102	60
Future Volume (veh/h)	129	166	102	20	45	113	58	764	38	145	1102	60
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	134	173	106	21	47	79	60	796	37	151	1148	57
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	169	217	133	39	231	195	82	1225	57	378	1450	72
Arrive On Green	0.10	0.21	0.21	0.02	0.13	0.13	0.05	0.25	0.25	0.23	0.44	0.44
Sat Flow, veh/h	1619	1045	640	1619	1800	1525	1619	4813	223	1619	3316	165
Grp Volume(v), veh/h	134	0	279	21	47	79	60	541	292	151	592	613
Grp Sat Flow(s),veh/h/ln	1619	0	1685	1619	1800	1525	1619	1638	1760	1619	1710	1770
Q Serve(g_s), s	5.3	0.0	10.3	0.8	1.5	1.8	2.4	9.7	9.7	5.2	19.6	19.6
Cycle Q Clear(g_c), s	5.3	0.0	10.3	0.8	1.5	1.8	2.4	9.7	9.7	5.2	19.6	19.6
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.13	1.00		0.09
Lane Grp Cap(c), veh/h	169	0	351	39	231	195	82	834	448	378	748	774
V/C Ratio(X)	0.79	0.00	0.80	0.54	0.20	0.40	0.73	0.65	0.65	0.40	0.79	0.79
Avail Cap(c_a), veh/h	379	0	728	305	695	589	478	2112	1135	453	1076	1114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	24.7	31.7	25.7	8.6	30.8	21.9	21.9	21.3	15.9	15.9
Incr Delay (d2), s/veh	8.2	0.0	4.1	10.9	0.4	1.3	11.8	0.9	1.6	0.7	2.6	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	4.1	0.4	0.6	1.1	1.1	3.2	3.6	1.8	6.4	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	0.0	28.9	42.6	26.1	10.0	42.6	22.7	23.5	22.0	18.5	18.5
LnGrp LOS	D	A	C	D	C	A	D	C	C	C	B	B
Approach Vol, veh/h		413			147			893			1356	
Approach Delay, s/veh		31.5			19.8			24.3			18.9	
Approach LOS		C			B			C			B	

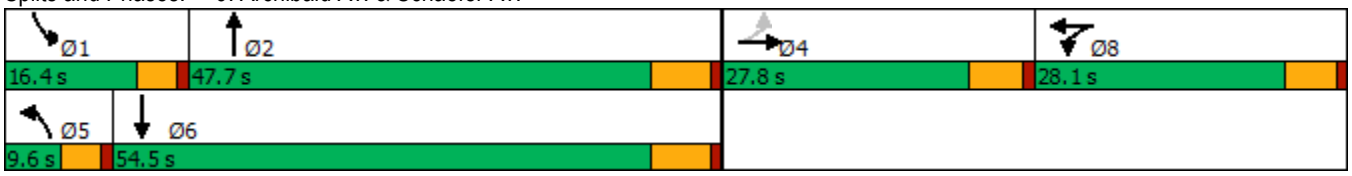
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.9	21.3	6.2	18.3	7.9	33.4	11.4	13.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	7.2	11.7	2.8	12.3	4.4	21.6	7.3	3.8
Green Ext Time (p_c), s	0.3	5.0	0.0	1.3	0.1	7.1	0.2	0.4

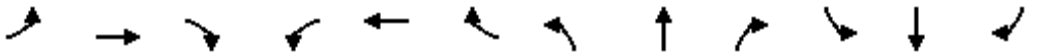
Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	11	0	752	37	1142		
Future Volume (vph)	11	0	752	37	1142		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	47.7	16.4	54.5	27.8	9.6
Total Split (%)	23.4%	23.4%	39.8%	13.7%	45.4%	23%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	15.3	15.3	31.7	8.3	35.4		
Actuated g/C Ratio	0.30	0.30	0.63	0.16	0.70		
v/c Ratio	0.02	0.06	0.27	0.15	0.50		
Control Delay	25.6	0.1	13.7	32.0	12.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	25.6	0.1	13.7	32.0	12.0		
LOS	C	A	B	C	B		
Approach Delay		5.6	13.7		12.6		
Approach LOS		A	B		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 50.5	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	11	0	42	0	752	23	37	1142	0
Future Volume (veh/h)	0	0	0	11	0	42	0	752	23	37	1142	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	12	0	28	0	792	23	39	1202	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	5	0	149	0	140	5	1888	55	73	1915	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.38	0.38	0.05	0.56	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4905	142	1619	3510	0
Grp Volume(v), veh/h	0	0	0	12	0	28	0	528	287	39	1202	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1771	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.6	0.0	4.2	4.2	0.8	8.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.2	0.0	0.6	0.0	4.2	4.2	0.8	8.4	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.08	1.00		0.00
Lane Grp Cap(c), veh/h	0	5	0	149	0	140	5	1261	682	73	1915	0
V/C Ratio(X)	0.00	0.00	0.00	0.08	0.00	0.20	0.00	0.42	0.42	0.54	0.63	0.00
Avail Cap(c_a), veh/h	0	1121	0	1022	0	963	229	3819	2065	541	4645	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.7	0.0	14.8	0.0	8.0	8.0	16.5	5.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.7	0.0	0.2	0.4	2.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.7	0.8	0.3	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	14.9	0.0	15.5	0.0	8.2	8.4	18.8	5.6	0.0
LnGrp LOS	A	A	A	B	A	B	A	A	A	B	A	A
Approach Vol, veh/h		0			40			815			1241	
Approach Delay, s/veh		0.0			15.3			8.3			6.0	
Approach LOS					B			A			A	

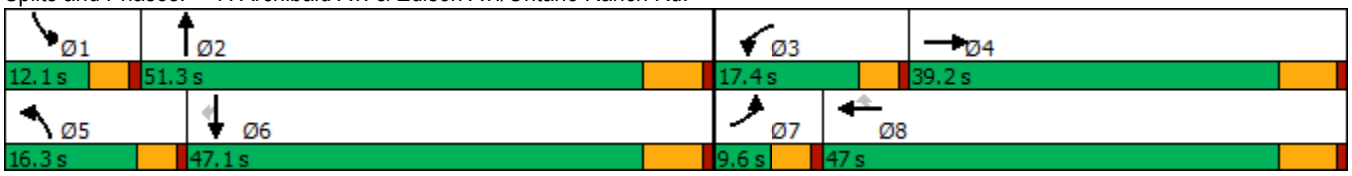
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	20.1		0.0	0.0	26.3		9.0				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	2.8	6.2		0.0	0.0	10.4		2.6				
Green Ext Time (p_c), s	0.0	4.9		0.0	0.0	9.4		0.1				

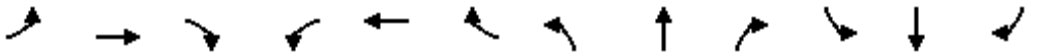
Intersection Summary		
HCM 6th Ctrl Delay		7.1
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	631	113	305	222	90	55	517	320	135	1000	90
Future Volume (vph)	95	631	113	305	222	90	55	517	320	135	1000	90
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.2	25.6	103.6	13.2	33.7	33.7	8.2	34.3	103.6	7.8	36.6	36.6
Actuated g/C Ratio	0.05	0.25	1.00	0.13	0.33	0.33	0.08	0.33	1.00	0.08	0.35	0.35
v/c Ratio	0.67	0.77	0.08	0.83	0.39	0.16	0.45	0.47	0.22	1.16	0.85	0.15
Control Delay	75.5	44.0	0.1	67.0	31.1	3.8	61.3	28.4	0.3	175.8	40.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	44.0	0.1	67.0	31.1	3.8	61.3	28.4	0.3	175.8	40.4	0.9
LOS	E	D	A	E	C	A	E	C	A	F	D	A
Approach Delay		41.7			44.8			20.4			52.4	
Approach LOS		D			D			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 40.6	Intersection LOS: D
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	631	113	305	222	90	55	517	320	135	1000	90
Future Volume (veh/h)	95	631	113	305	222	90	55	517	320	135	1000	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	98	651	0	314	229	59	57	533	0	139	1031	77
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	147	810		373	564	478	71	1097		131	1224	533
Arrive On Green	0.05	0.24	0.00	0.13	0.31	0.31	0.04	0.32	0.00	0.08	0.36	0.36
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1490
Grp Volume(v), veh/h	98	651	0	314	229	59	57	533	0	139	1031	77
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1490
Q Serve(g_s), s	3.0	16.7	0.0	9.7	9.3	2.6	3.2	11.7	0.0	7.5	25.8	3.3
Cycle Q Clear(g_c), s	3.0	16.7	0.0	9.7	9.3	2.6	3.2	11.7	0.0	7.5	25.8	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	810		373	564	478	71	1097		131	1224	533
V/C Ratio(X)	0.67	0.80		0.84	0.41	0.12	0.81	0.49		1.06	0.84	0.14
Avail Cap(c_a), veh/h	159	1214		407	790	669	204	1648		131	1494	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	33.4	0.0	39.7	25.1	22.8	44.1	25.4	0.0	42.7	27.4	20.2
Incr Delay (d2), s/veh	6.9	2.4	0.0	12.6	0.5	0.1	7.8	0.3	0.0	97.0	3.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.7	0.0	4.0	3.7	0.9	1.4	4.3	0.0	6.3	9.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.3	35.9	0.0	52.3	25.6	22.9	51.9	25.7	0.0	139.7	31.3	20.3
LnGrp LOS	D	D		D	C	C	D	C		F	C	C
Approach Vol, veh/h		749	A		602			590	A		1247	
Approach Delay, s/veh		37.8			39.3			28.3			42.7	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	36.3	16.3	28.2	8.7	39.8	9.2	35.3
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	9.5	13.7	11.7	18.7	5.2	27.8	5.0	11.3
Green Ext Time (p_c), s	0.0	3.2	0.1	3.3	0.0	5.3	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	38.2
HCM 6th LOS	D

Notes

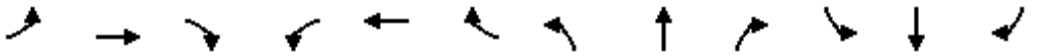
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	19	872	7	53	1364
Future Volume (vph)	3	19	872	7	53	1364
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	13.6%	13.6%	59.1%	59.1%	13.7%	72.9%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.1	5.1	47.0	47.0	5.1	56.4
Actuated g/C Ratio	0.08	0.08	0.77	0.77	0.08	0.93
v/c Ratio	0.01	0.05	0.34	0.01	0.41	0.44
Control Delay	26.3	0.2	5.4	6.0	36.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	0.2	5.4	6.0	36.5	2.8
LOS	C	A	A	A	D	A
Approach Delay			5.4			4.1
Approach LOS			A			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 60.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 4.6	Intersection LOS: A
Intersection Capacity Utilization 51.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	3	0	19	0	872	7	53	1364	0
Future Volume (veh/h)	0	0	0	3	0	19	0	872	7	53	1364	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				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				3	0	1	0	899	6	55	1406	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				17	0	14	0	2270	1012	83	2727	0
Arrive On Green				0.01	0.00	0.01	0.00	0.66	0.66	0.05	0.80	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1525	1619	3510	0
Grp Volume(v), veh/h				3	0	1	0	899	6	55	1406	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1525	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.0	0.0	6.7	0.1	1.9	7.9	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.0	0.0	6.7	0.1	1.9	7.9	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				17	0	14	0	2270	1012	83	2727	0
V/C Ratio(X)				0.18	0.00	0.07	0.00	0.40	0.01	0.66	0.52	0.00
Avail Cap(c_a), veh/h				281	0	241	0	2270	1012	145	2727	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.6	0.0	27.6	0.0	4.3	3.2	26.0	1.9	0.0
Incr Delay (d2), s/veh				4.9	0.0	2.0	0.0	0.5	0.0	3.3	0.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.0	0.0	0.0	0.0	0.9	0.0	0.7	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.5	0.0	29.6	0.0	4.8	3.2	29.3	2.6	0.0
LnGrp LOS				C	A	C	A	A	A	C	A	A
Approach Vol, veh/h					4			905			1461	
Approach Delay, s/veh					31.8			4.8			3.6	
Approach LOS					C			A			A	

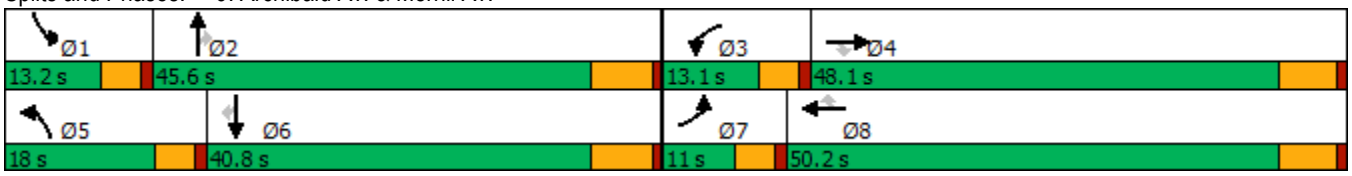
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	7.5	43.5				51.0		4.8				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	3.9	8.7				9.9		2.1				
Green Ext Time (p_c), s	0.0	5.8				11.7		0.0				

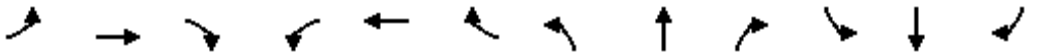
Intersection Summary		
HCM 6th Ctrl Delay		4.1
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	75	516	47	25	54	203	692	50	72	1130	56
Future Volume (vph)	79	75	516	47	25	54	203	692	50	72	1130	56
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	11.0	48.1	48.1	13.1	50.2	50.2	18.0	45.6	45.6	13.2	40.8	40.8
Total Split (%)	9.2%	40.1%	40.1%	10.9%	41.8%	41.8%	15.0%	38.0%	38.0%	11.0%	34.0%	34.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	8.5	26.9	26.9	7.1	27.3	27.3	13.7	44.5	44.5	6.9	35.2	35.2
Actuated g/C Ratio	0.08	0.26	0.26	0.07	0.27	0.27	0.13	0.43	0.43	0.07	0.34	0.34
v/c Ratio	0.61	0.16	0.90	0.43	0.05	0.11	0.97	0.48	0.07	0.37	1.00	0.09
Control Delay	72.2	29.3	38.4	63.0	26.3	0.4	102.7	27.0	0.2	55.7	62.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.2	29.3	38.4	63.0	26.3	0.4	102.7	27.0	0.2	55.7	62.0	0.3
LOS	E	C	D	E	C	A	F	C	A	E	E	A
Approach Delay		41.4			28.7			41.8			58.9	
Approach LOS		D			C			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 48.3	Intersection LOS: D
Intersection Capacity Utilization 85.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	75	516	47	25	54	203	692	50	72	1130	56
Future Volume (veh/h)	79	75	516	47	25	54	203	692	50	72	1130	56
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	81	77	347	48	26	17	209	713	38	74	1165	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	101	458	388	60	413	350	221	1510	673	130	1194	533
Arrive On Green	0.06	0.25	0.25	0.04	0.23	0.23	0.14	0.44	0.44	0.04	0.35	0.00
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	81	77	347	48	26	17	209	713	38	74	1165	0
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1525	1478	1710	1525
Q Serve(g_s), s	4.9	3.3	21.6	2.9	1.1	0.9	12.6	14.5	1.4	2.4	33.0	0.0
Cycle Q Clear(g_c), s	4.9	3.3	21.6	2.9	1.1	0.9	12.6	14.5	1.4	2.4	33.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	458	388	60	413	350	221	1510	673	130	1194	533
V/C Ratio(X)	0.81	0.17	0.89	0.80	0.06	0.05	0.95	0.47	0.06	0.57	0.98	0.00
Avail Cap(c_a), veh/h	105	768	651	140	806	683	221	1510	673	259	1194	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.5	28.5	35.4	46.9	29.6	29.5	42.1	19.4	15.7	46.0	31.6	0.0
Incr Delay (d2), s/veh	31.3	0.2	8.9	8.6	0.1	0.1	45.1	0.2	0.0	1.4	20.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	1.4	8.7	1.3	0.5	0.3	7.5	5.1	0.5	0.9	15.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.8	28.7	44.2	55.6	29.7	29.6	87.2	19.6	15.7	47.5	51.9	0.0
LnGrp LOS	E	C	D	E	C	C	F	B	B	D	D	A
Approach Vol, veh/h		505			91			960			1239	
Approach Delay, s/veh		47.1			43.3			34.2			51.6	
Approach LOS		D			D			C			D	

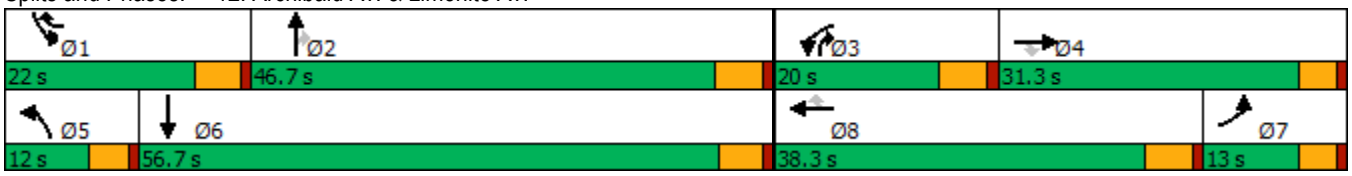
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	49.9	8.3	31.2	18.0	40.8	10.7	28.7
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	8.6	39.1	8.5	41.9	13.4	34.3	6.4	44.0
Max Q Clear Time (g_c+I1), s	4.4	16.5	4.9	23.6	14.6	35.0	6.9	3.1
Green Ext Time (p_c), s	0.0	4.3	0.0	1.4	0.0	0.0	0.0	0.2

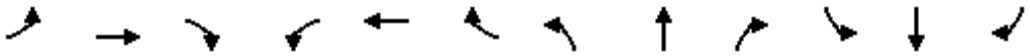
Intersection Summary	
HCM 6th Ctrl Delay	44.5
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	251	574	99	360	616	248	95	547	323	391	1042
Future Volume (vph)	251	574	99	360	616	248	95	547	323	391	1042
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	10.3	36.3	11.0	9.5	46.3	10.3	11.0	11.0
Total Split (s)	13.0	31.3	31.3	20.0	38.3	22.0	12.0	46.7	20.0	22.0	56.7
Total Split (%)	10.8%	26.1%	26.1%	16.7%	31.9%	18.3%	10.0%	38.9%	16.7%	18.3%	47.3%
Yellow Time (s)	3.5	3.5	3.5	4.3	4.3	4.0	3.5	4.3	4.3	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	5.3	5.3	5.0	4.5	5.3	5.3	5.0	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	13.9	24.0	24.0	14.7	24.8	42.1	7.5	41.4	56.1	17.0	51.7
Actuated g/C Ratio	0.12	0.20	0.20	0.13	0.21	0.36	0.06	0.35	0.48	0.15	0.44
v/c Ratio	0.63	0.81	0.23	1.66	0.84	0.40	0.86	0.85	0.40	1.56	1.65
Control Delay	57.6	54.0	2.5	348.5	55.1	11.1	108.3	49.1	10.8	303.0	325.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.6	54.0	2.5	348.5	55.1	11.1	108.3	49.1	10.8	303.0	325.0
LOS	E	D	A	F	E	B	F	D	B	F	F
Approach Delay		49.4			132.5			42.1			319.9
Approach LOS		D			F			D			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.66	
Intersection Signal Delay: 164.4	Intersection LOS: F
Intersection Capacity Utilization 127.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	574	99	360	616	248	95	547	323	391	1042	259
Future Volume (veh/h)	251	574	99	360	616	248	95	547	323	391	1042	259
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	261	598	103	375	642	139	99	570	255	407	1085	270
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	415	704	314	229	735	563	117	682	770	265	654	163
Arrive On Green	0.12	0.20	0.20	0.13	0.20	0.20	0.06	0.36	0.36	0.15	0.45	0.45
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	1900	1576	1810	1469	365
Grp Volume(v), veh/h	261	598	103	375	642	139	99	570	255	407	0	1355
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	1900	1576	1810	0	1834
Q Serve(g_s), s	8.2	18.6	6.4	14.7	20.0	4.4	6.3	31.9	11.5	17.0	0.0	51.7
Cycle Q Clear(g_c), s	8.2	18.6	6.4	14.7	20.0	4.4	6.3	31.9	11.5	17.0	0.0	51.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	415	704	314	229	735	563	117	682	770	265	0	816
V/C Ratio(X)	0.63	0.85	0.33	1.64	0.87	0.25	0.85	0.84	0.33	1.54	0.00	1.66
Avail Cap(c_a), veh/h	415	833	371	229	1026	693	117	682	770	265	0	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.8	45.1	40.2	50.7	44.8	12.0	53.8	34.1	18.3	49.6	0.0	32.2
Incr Delay (d2), s/veh	3.0	7.3	0.6	305.8	4.9	0.1	40.8	9.1	0.3	259.7	0.0	302.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	8.7	2.5	25.8	9.0	1.8	4.1	15.5	4.0	26.4	0.0	89.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.8	52.4	40.8	356.6	49.7	12.1	94.6	43.1	18.6	309.3	0.0	334.6
LnGrp LOS	D	D	D	F	D	B	F	D	B	F	A	F
Approach Vol, veh/h		962			1156			924			1762	
Approach Delay, s/veh		51.0			144.7			41.9			328.7	
Approach LOS		D			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	47.0	20.0	27.2	12.0	57.0	18.2	28.9
Change Period (Y+Rc), s	5.0	5.3	5.3	4.5	4.5	* 5.3	4.5	5.3
Max Green Setting (Gmax), s	17.0	41.4	14.7	26.8	7.5	* 52	8.5	33.0
Max Q Clear Time (g_c+I1), s	19.0	33.9	16.7	20.6	8.3	53.7	10.2	22.0
Green Ext Time (p_c), s	0.0	3.0	0.0	2.1	0.0	0.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	173.7
HCM 6th LOS	F

Notes

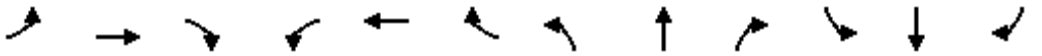
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	42	0	62	0	25	1239	75	906
Future Volume (vph)	42	0	62	0	25	1239	75	906
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	13.4	41.6	9.6	37.8	9.7	59.2	9.6	59.1
Total Split (%)	11.2%	34.7%	8.0%	31.5%	8.1%	49.3%	8.0%	49.3%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.9	14.8	11.9	13.7	5.3	46.7	5.2	53.4
Actuated g/C Ratio	0.08	0.17	0.13	0.15	0.06	0.52	0.06	0.60
v/c Ratio	0.33	0.03	0.28	0.19	0.25	0.77	0.79	0.49
Control Delay	51.5	0.1	46.7	1.1	53.9	22.5	92.0	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	0.1	46.7	1.1	53.9	22.5	92.0	14.6
LOS	D	A	D	A	D	C	F	B
Approach Delay		42.4		23.8		23.1		20.2
Approach LOS		D		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 89.4	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 65.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	0	9	62	0	63	25	1239	82	75	906	64
Future Volume (veh/h)	42	0	9	62	0	63	25	1239	82	75	906	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	0	9	67	0	68	27	1347	89	82	985	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	108	0	214	89	0	198	51	1675	110	106	1768	126
Arrive On Green	0.06	0.00	0.13	0.05	0.00	0.12	0.03	0.49	0.49	0.06	0.52	0.52
Sat Flow, veh/h	1810	0	1610	1810	0	1610	1810	3438	227	1810	3418	243
Grp Volume(v), veh/h	46	0	9	67	0	68	27	706	730	82	520	535
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1610	1810	1805	1859	1810	1805	1856
Q Serve(g_s), s	1.9	0.0	0.4	2.8	0.0	3.0	1.1	25.6	25.8	3.5	15.2	15.2
Cycle Q Clear(g_c), s	1.9	0.0	0.4	2.8	0.0	3.0	1.1	25.6	25.8	3.5	15.2	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.13
Lane Grp Cap(c), veh/h	108	0	214	89	0	198	51	879	906	106	934	960
V/C Ratio(X)	0.43	0.00	0.04	0.75	0.00	0.34	0.53	0.80	0.81	0.78	0.56	0.56
Avail Cap(c_a), veh/h	204	0	740	116	0	661	118	1228	1265	116	1226	1260
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	0.0	29.4	36.6	0.0	31.3	37.3	16.8	16.9	36.2	12.8	12.8
Incr Delay (d2), s/veh	1.0	0.0	0.1	12.4	0.0	1.0	3.1	2.7	2.7	22.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.1	1.5	0.0	1.2	0.5	9.1	9.5	2.1	5.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	29.5	48.9	0.0	32.3	40.4	19.5	19.6	58.3	13.3	13.3
LnGrp LOS	D	A	C	D	A	C	D	B	B	E	B	B
Approach Vol, veh/h		55			135			1463			1137	
Approach Delay, s/veh		35.2			40.6			19.9			16.5	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	44.2	8.4	16.2	6.8	46.5	9.2	15.4
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	53.0	5.0	35.8	5.1	52.9	8.8	32.0
Max Q Clear Time (g_c+I1), s	5.5	27.8	4.8	2.4	3.1	17.2	3.9	5.0
Green Ext Time (p_c), s	0.0	10.1	0.0	0.0	0.0	7.0	0.0	0.3

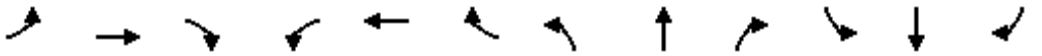
Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	100	0	82	0	19	779	79	1386
Future Volume (vph)	100	0	82	0	19	779	79	1386
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	13.4	41.6	9.6	37.8	9.7	59.2	9.6	59.1
Total Split (%)	11.2%	34.7%	8.0%	31.5%	8.1%	49.3%	8.0%	49.3%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.0	15.3	14.6	14.1	5.6	38.6	5.5	46.1
Actuated g/C Ratio	0.11	0.18	0.17	0.17	0.07	0.45	0.06	0.54
v/c Ratio	0.56	0.07	0.29	0.22	0.17	0.57	0.74	0.78
Control Delay	56.3	0.4	45.2	1.2	51.5	19.3	82.3	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.3	0.4	45.2	1.2	51.5	19.3	82.3	22.2
LOS	E	A	D	A	D	B	F	C
Approach Delay		45.1		22.8		19.9		25.4
Approach LOS		D		C		B		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.9	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	0	25	82	0	85	19	779	87	79	1386	36
Future Volume (veh/h)	100	0	25	82	0	85	19	779	87	79	1386	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	108	0	18	89	0	92	20	838	95	86	1490	39
Peak Hour Factor	0.93	0.92	0.93	0.92	0.92	0.92	0.93	0.93	0.92	0.92	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	150	0	228	113	0	199	41	1530	173	111	1821	48
Arrive On Green	0.08	0.00	0.14	0.06	0.00	0.12	0.02	0.47	0.47	0.06	0.51	0.51
Sat Flow, veh/h	1810	0	1588	1810	0	1610	1810	3268	370	1810	3592	94
Grp Volume(v), veh/h	108	0	18	89	0	92	20	463	470	86	748	781
Grp Sat Flow(s),veh/h/ln	1810	0	1588	1810	0	1610	1810	1805	1833	1810	1805	1881
Q Serve(g_s), s	4.7	0.0	0.8	3.9	0.0	4.3	0.9	14.7	14.7	3.8	27.9	28.1
Cycle Q Clear(g_c), s	4.7	0.0	0.8	3.9	0.0	4.3	0.9	14.7	14.7	3.8	27.9	28.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		0.05
Lane Grp Cap(c), veh/h	150	0	228	113	0	199	41	845	858	111	915	954
V/C Ratio(X)	0.72	0.00	0.08	0.79	0.00	0.46	0.49	0.55	0.55	0.78	0.82	0.82
Avail Cap(c_a), veh/h	199	0	710	113	0	643	115	1194	1212	113	1191	1241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	29.7	37.0	0.0	32.7	38.7	15.2	15.2	37.1	16.6	16.7
Incr Delay (d2), s/veh	4.8	0.0	0.1	28.0	0.0	1.7	3.4	0.6	0.5	25.3	3.5	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.3	2.5	0.0	1.6	0.4	5.1	5.2	2.3	10.1	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	0.0	29.9	65.1	0.0	34.3	42.1	15.8	15.8	62.4	20.1	20.1
LnGrp LOS	D	A	C	E	A	C	D	B	B	E	C	C
Approach Vol, veh/h		126			181			953			1615	
Approach Delay, s/veh		39.1			49.5			16.3			22.4	
Approach LOS		D			D			B			C	

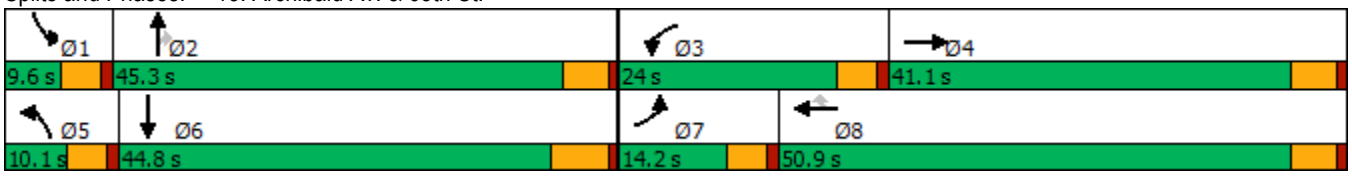
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	43.7	9.6	17.3	6.4	46.8	11.2	15.7
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	53.0	5.0	35.8	5.1	52.9	8.8	32.0
Max Q Clear Time (g_c+I1), s	5.8	16.7	5.9	2.8	2.9	30.1	6.7	6.3
Green Ext Time (p_c), s	0.0	5.9	0.0	0.1	0.0	10.5	0.0	0.4

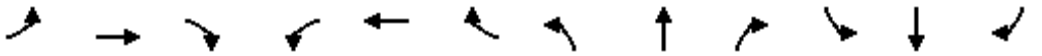
Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	37	30	135	40	35	48	813	235	119	1277
Future Volume (vph)	37	30	135	40	35	48	813	235	119	1277
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	6.6	14.2	12.4	20.8	20.8	5.5	42.1	42.1	5.1	42.9
Actuated g/C Ratio	0.07	0.16	0.14	0.23	0.23	0.06	0.47	0.47	0.06	0.48
v/c Ratio	0.29	0.13	0.57	0.10	0.08	0.46	0.51	0.28	1.21	0.59
Control Delay	49.7	17.8	48.3	27.4	0.3	59.8	21.2	4.0	198.9	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	17.8	48.3	27.4	0.3	59.8	21.2	4.0	198.9	22.3
LOS	D	B	D	C	A	E	C	A	F	C
Approach Delay		28.9		36.3			19.2			36.4
Approach LOS		C		D			B			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 29.6	Intersection LOS: C
Intersection Capacity Utilization 58.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	30	39	135	40	35	48	813	235	119	1277	96
Future Volume (veh/h)	37	30	39	135	40	35	48	813	235	119	1277	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	32	18	142	42	18	51	856	193	125	1344	85
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	64	273	140	178	346	293	75	1729	761	108	2478	157
Arrive On Green	0.04	0.12	0.12	0.10	0.18	0.18	0.04	0.48	0.48	0.06	0.50	0.50
Sat Flow, veh/h	1810	2293	1177	1810	1900	1610	1810	3610	1590	1810	4986	315
Grp Volume(v), veh/h	39	25	25	142	42	18	51	856	193	125	932	497
Grp Sat Flow(s),veh/h/ln	1810	1805	1665	1810	1900	1610	1810	1805	1590	1810	1729	1843
Q Serve(g_s), s	1.8	1.0	1.1	6.4	1.6	0.8	2.3	13.6	6.0	5.0	15.6	15.6
Cycle Q Clear(g_c), s	1.8	1.0	1.1	6.4	1.6	0.8	2.3	13.6	6.0	5.0	15.6	15.6
Prop In Lane	1.00		0.71	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	64	215	198	178	346	293	75	1729	761	108	1718	916
V/C Ratio(X)	0.61	0.11	0.13	0.80	0.12	0.06	0.68	0.50	0.25	1.16	0.54	0.54
Avail Cap(c_a), veh/h	207	774	714	418	1036	878	119	1729	761	108	1718	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	33.0	33.1	37.0	28.7	28.4	39.7	14.9	13.0	39.5	14.5	14.5
Incr Delay (d2), s/veh	3.4	0.2	0.3	3.1	0.2	0.1	4.0	1.0	0.8	136.1	1.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.4	0.5	2.9	0.7	0.3	1.1	5.2	2.1	6.2	5.4	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	33.3	33.4	40.1	28.9	28.5	43.7	16.0	13.8	175.5	15.8	16.8
LnGrp LOS	D	C	C	D	C	C	D	B	B	F	B	B
Approach Vol, veh/h		89			202			1100			1554	
Approach Delay, s/veh		37.7			36.8			16.9			29.0	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	46.4	12.9	15.1	8.1	47.9	7.6	20.4
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	7.0	15.6	8.4	3.1	4.3	17.6	3.8	3.6
Green Ext Time (p_c), s	0.0	6.8	0.1	0.2	0.0	9.1	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

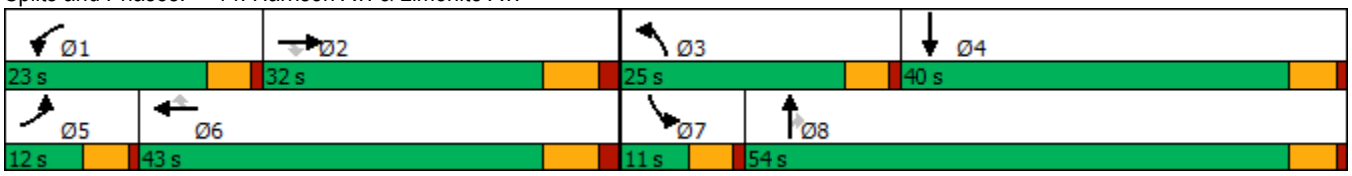
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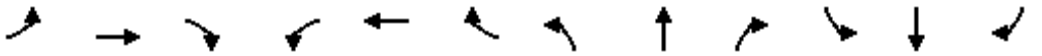
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	62	722	40	246	599	16	43	55	194	17	77
Future Volume (vph)	62	722	40	246	599	16	43	55	194	17	77
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.0	18.4	18.4	18.8	36.6	36.6	6.6	15.7	15.7	5.5	12.7
Actuated g/C Ratio	0.08	0.25	0.25	0.25	0.49	0.49	0.09	0.21	0.21	0.07	0.17
v/c Ratio	0.24	0.62	0.08	0.60	0.26	0.02	0.30	0.15	0.42	0.14	0.36
Control Delay	44.1	29.4	0.3	36.6	16.0	0.1	43.5	25.5	6.7	43.9	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	29.4	0.3	36.6	16.0	0.1	43.5	25.5	6.7	43.9	28.7
LOS	D	C	A	D	B	A	D	C	A	D	C
Approach Delay		28.5			21.6			15.6			30.9
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 74.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 23.9	Intersection LOS: C
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	722	40	246	599	16	43	55	194	17	77	28
Future Volume (veh/h)	62	722	40	246	599	16	43	55	194	17	77	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	793	34	270	658	15	47	60	139	19	85	12
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	67	1318	400	325	2060	638	84	260	220	41	184	26
Arrive On Green	0.04	0.25	0.25	0.18	0.40	0.40	0.05	0.14	0.14	0.02	0.11	0.11
Sat Flow, veh/h	1810	5187	1576	1810	5187	1606	1810	1900	1610	1810	1625	229
Grp Volume(v), veh/h	34	793	34	270	658	15	47	60	139	19	0	97
Grp Sat Flow(s),veh/h/ln	1810	1729	1576	1810	1729	1606	1810	1900	1610	1810	0	1854
Q Serve(g_s), s	1.0	7.4	0.9	7.9	4.8	0.3	1.4	1.5	4.5	0.6	0.0	2.7
Cycle Q Clear(g_c), s	1.0	7.4	0.9	7.9	4.8	0.3	1.4	1.5	4.5	0.6	0.0	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	67	1318	400	325	2060	638	84	260	220	41	0	210
V/C Ratio(X)	0.51	0.60	0.08	0.83	0.32	0.02	0.56	0.23	0.63	0.46	0.00	0.46
Avail Cap(c_a), veh/h	231	2362	718	593	3402	1053	659	1686	1428	198	0	1172
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.9	18.0	15.6	21.7	11.4	10.1	25.6	21.1	22.4	26.5	0.0	22.8
Incr Delay (d2), s/veh	2.2	0.4	0.1	2.1	0.1	0.0	2.1	0.4	3.0	2.9	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.4	0.3	3.0	1.4	0.1	0.6	0.6	1.6	0.3	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	18.5	15.7	23.8	11.5	10.1	27.7	21.6	25.3	29.4	0.0	24.4
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	A	C
Approach Vol, veh/h		861			943			246			116	
Approach Delay, s/veh		18.7			15.0			24.9			25.2	
Approach LOS		B			B			C			C	

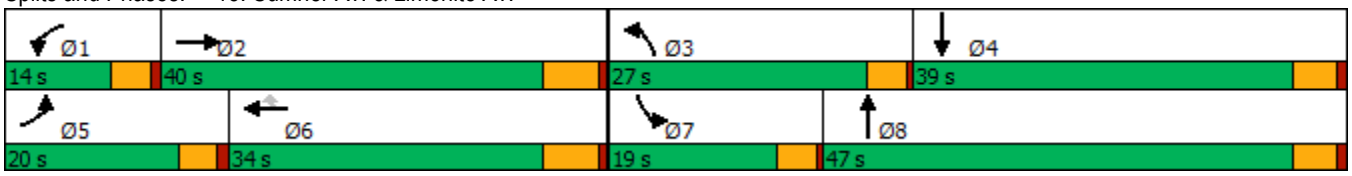
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	20.9	7.6	11.5	7.0	28.8	6.3	12.8
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	9.9	9.4	3.4	4.7	3.0	6.8	2.6	6.5
Green Ext Time (p_c), s	0.1	4.4	0.0	0.4	0.0	4.3	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	217	715	207	604	71	33	239	147	506
Future Volume (vph)	217	715	207	604	71	33	239	147	506
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.5	19.6	8.7	18.8	18.8	5.9	15.7	11.0	25.3
Actuated g/C Ratio	0.13	0.26	0.11	0.25	0.25	0.08	0.21	0.15	0.33
v/c Ratio	0.52	0.61	0.54	0.49	0.14	0.25	0.52	0.59	0.63
Control Delay	38.6	27.7	41.2	27.7	0.6	44.0	20.0	44.1	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	27.7	41.2	27.7	0.6	44.0	20.0	44.1	23.8
LOS	D	C	D	C	A	D	B	D	C
Approach Delay		30.1		28.7			21.9		27.3
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 75.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 27.8	Intersection LOS: C
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	715	59	207	604	71	33	239	156	147	506	204
Future Volume (veh/h)	217	715	59	207	604	71	33	239	156	147	506	204
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	228	753	35	218	636	29	35	252	70	155	533	136
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	348	1285	60	332	1290	395	54	528	143	199	764	194
Arrive On Green	0.10	0.25	0.25	0.09	0.25	0.25	0.03	0.19	0.19	0.11	0.27	0.27
Sat Flow, veh/h	3510	5077	235	3510	5187	1588	1810	2802	762	1810	2850	724
Grp Volume(v), veh/h	228	512	276	218	636	29	35	160	162	155	337	332
Grp Sat Flow(s),veh/h/ln	1755	1729	1854	1755	1729	1588	1810	1805	1759	1810	1805	1770
Q Serve(g_s), s	3.4	7.1	7.2	3.3	5.8	0.8	1.1	4.4	4.5	4.6	9.2	9.3
Cycle Q Clear(g_c), s	3.4	7.1	7.2	3.3	5.8	0.8	1.1	4.4	4.5	4.6	9.2	9.3
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.43	1.00		0.41
Lane Grp Cap(c), veh/h	348	875	469	332	1290	395	54	340	331	199	484	474
V/C Ratio(X)	0.66	0.58	0.59	0.66	0.49	0.07	0.64	0.47	0.49	0.78	0.70	0.70
Avail Cap(c_a), veh/h	988	2136	1145	606	2638	807	756	1377	1342	493	1115	1093
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	18.0	18.0	24.1	17.7	15.8	26.4	19.9	20.0	23.9	18.1	18.2
Incr Delay (d2), s/veh	0.8	0.6	1.2	0.8	0.3	0.1	4.6	0.8	0.8	2.5	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.4	2.6	1.2	1.9	0.2	0.5	1.6	1.6	1.8	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	18.6	19.2	24.9	18.0	15.9	31.0	20.7	20.8	26.4	19.5	19.6
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	B	B
Approach Vol, veh/h		1016			883			357			824	
Approach Delay, s/veh		20.2			19.6			21.7			20.8	
Approach LOS		C			B			C			C	

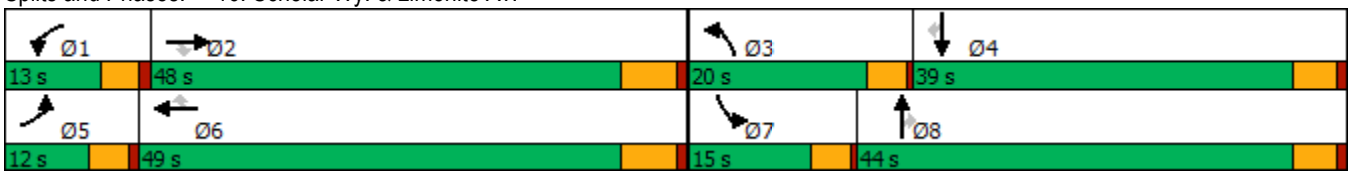
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	19.9	5.7	19.8	10.0	19.7	10.0	15.4
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	5.3	9.2	3.1	11.3	5.4	7.8	6.6	6.5
Green Ext Time (p_c), s	0.1	4.7	0.0	3.0	0.2	3.8	0.1	1.4

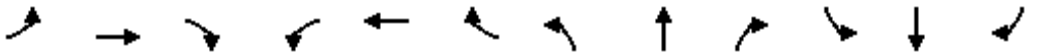
Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	954	52	167	820	72	46	75	123	55	153	36
Future Volume (vph)	36	954	52	167	820	72	46	75	123	55	153	36
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	5.9	27.9	27.9	9.2	36.1	36.1	6.4	11.5	11.5	6.9	14.0	14.0
Actuated g/C Ratio	0.08	0.38	0.38	0.12	0.49	0.49	0.09	0.16	0.16	0.09	0.19	0.19
v/c Ratio	0.27	0.74	0.08	0.79	0.49	0.09	0.31	0.27	0.36	0.35	0.24	0.13
Control Delay	44.6	25.2	0.2	62.8	17.9	0.6	43.7	32.0	9.0	43.7	28.4	29.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	25.2	0.2	62.8	17.9	0.6	43.7	32.0	9.0	43.7	28.4	29.2
LOS	D	C	A	E	B	A	D	C	A	D	C	C
Approach Delay		24.6			23.8			22.6			32.0	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 74.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 64.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	954	52	167	820	72	46	75	123	55	153	36
Future Volume (veh/h)	36	954	52	167	820	72	46	75	123	55	153	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	1004	38	176	863	65	48	79	71	58	161	38
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	1416	621	220	1741	775	67	213	181	75	422	182
Arrive On Green	0.03	0.39	0.39	0.12	0.48	0.48	0.04	0.11	0.11	0.04	0.12	0.12
Sat Flow, veh/h	1810	3610	1584	1810	3610	1607	1810	1900	1610	1810	3610	1557
Grp Volume(v), veh/h	38	1004	38	176	863	65	48	79	71	58	161	38
Grp Sat Flow(s),veh/h/ln	1810	1805	1584	1810	1805	1607	1810	1900	1610	1810	1805	1557
Q Serve(g_s), s	1.2	13.7	0.9	5.6	9.5	1.3	1.5	2.3	2.4	1.9	2.4	1.3
Cycle Q Clear(g_c), s	1.2	13.7	0.9	5.6	9.5	1.3	1.5	2.3	2.4	1.9	2.4	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	1416	621	220	1741	775	67	213	181	75	422	182
V/C Ratio(X)	0.67	0.71	0.06	0.80	0.50	0.08	0.72	0.37	0.39	0.77	0.38	0.21
Avail Cap(c_a), veh/h	231	2584	1134	262	2645	1177	493	1263	1070	339	2092	902
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	15.0	11.1	25.1	10.3	8.2	28.0	24.1	24.2	27.8	23.9	23.5
Incr Delay (d2), s/veh	4.9	0.7	0.0	11.5	0.2	0.0	5.2	0.8	1.0	6.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.4	0.3	2.8	2.7	0.4	0.7	1.0	0.9	0.9	1.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	15.7	11.1	36.5	10.6	8.2	33.2	24.9	25.2	33.8	24.4	23.9
LnGrp LOS	C	B	B	D	B	A	C	C	C	C	C	C
Approach Vol, veh/h		1080			1104			198			257	
Approach Delay, s/veh		16.1			14.6			27.0			26.4	
Approach LOS		B			B			C			C	

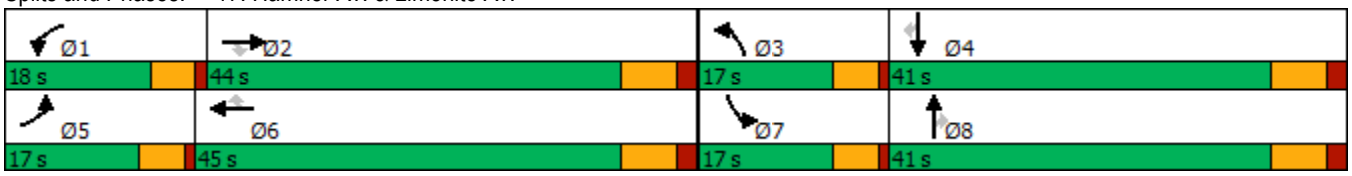
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	29.0	6.2	11.9	6.3	34.3	6.4	11.6
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	7.6	15.7	3.5	4.4	3.2	11.5	3.9	4.4
Green Ext Time (p_c), s	0.0	7.1	0.0	0.9	0.0	6.2	0.0	0.5

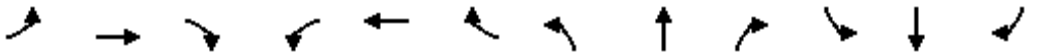
Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	736	87	411	586	193	204	598	232	247	743	206
Future Volume (vph)	309	736	87	411	586	193	204	598	232	247	743	206
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	11.7	26.9	26.9	13.3	28.5	28.5	9.7	26.3	26.3	10.5	27.1	27.1
Actuated g/C Ratio	0.12	0.26	0.26	0.13	0.28	0.28	0.10	0.26	0.26	0.10	0.27	0.27
v/c Ratio	0.79	0.55	0.18	0.93	0.60	0.34	0.63	0.46	0.41	0.70	0.55	0.37
Control Delay	61.0	34.0	2.8	73.7	34.9	5.9	55.3	33.3	6.5	57.3	34.2	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.0	34.0	2.8	73.7	34.9	5.9	55.3	33.3	6.5	57.3	34.2	6.3
LOS	E	C	A	E	C	A	E	C	A	E	C	A
Approach Delay		39.0			43.6			31.6			34.2	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.6	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 37.3	Intersection LOS: D
Intersection Capacity Utilization 73.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 17: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	736	87	411	586	193	204	598	232	247	743	206
Future Volume (veh/h)	309	736	87	411	586	193	204	598	232	247	743	206
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	319	759	60	424	604	131	210	616	153	255	766	97
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	390	1348	407	490	1041	464	283	1292	388	328	1358	415
Arrive On Green	0.11	0.26	0.26	0.14	0.29	0.29	0.08	0.25	0.25	0.09	0.26	0.26
Sat Flow, veh/h	3510	5187	1565	3510	3610	1608	3510	5187	1559	3510	5187	1586
Grp Volume(v), veh/h	319	759	60	424	604	131	210	616	153	255	766	97
Grp Sat Flow(s),veh/h/ln	1755	1729	1565	1755	1805	1608	1755	1729	1559	1755	1729	1586
Q Serve(g_s), s	8.3	11.8	2.7	11.0	13.3	5.9	5.4	9.4	7.6	6.6	11.9	4.5
Cycle Q Clear(g_c), s	8.3	11.8	2.7	11.0	13.3	5.9	5.4	9.4	7.6	6.6	11.9	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	390	1348	407	490	1041	464	283	1292	388	328	1358	415
V/C Ratio(X)	0.82	0.56	0.15	0.86	0.58	0.28	0.74	0.48	0.39	0.78	0.56	0.23
Avail Cap(c_a), veh/h	453	2062	622	490	1474	657	453	1895	570	453	1895	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	29.9	26.5	39.2	28.3	25.7	41.8	29.8	29.1	41.2	29.8	27.0
Incr Delay (d2), s/veh	8.5	0.8	0.4	14.3	1.1	0.7	1.4	0.6	1.4	3.6	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	4.7	1.0	5.5	5.5	2.2	2.3	3.8	2.8	2.9	4.8	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.0	30.6	26.9	53.5	29.4	26.4	43.3	30.4	30.5	44.9	30.5	27.6
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1138			1159			979			1118	
Approach Delay, s/veh		35.6			37.9			33.2			33.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	31.2	12.5	31.4	15.4	33.8	13.7	30.2
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	13.0	13.8	7.4	13.9	10.3	15.3	8.6	11.4
Green Ext Time (p_c), s	0.0	9.3	0.1	9.0	0.1	7.9	0.1	8.2

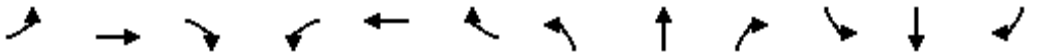
Intersection Summary	
HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	837	464	884	399	172	1	431
Future Volume (vph)	837	464	884	399	172	1	431
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	22.5	22.5	22.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	4.5	4.5	4.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.6	73.6	73.6	73.6	12.4	12.4	12.4
Actuated g/C Ratio	0.77	0.77	0.77	0.77	0.13	0.13	0.13
v/c Ratio	0.22	0.36	0.23	0.31	0.40	0.41	0.74
Control Delay	3.7	1.2	3.7	1.1	43.1	43.3	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.7	1.2	3.7	1.1	43.1	43.3	22.7
LOS	A	A	A	A	D	D	C
Approach Delay	2.8		2.9			28.6	
Approach LOS	A		A			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.1	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 42.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 18: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰	↱↱
Traffic Volume (veh/h)	0	837	464	0	884	399	0	0	0	172	1	431
Future Volume (veh/h)	0	837	464	0	884	399	0	0	0	172	1	431
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	863	448	0	911	411				178	0	180
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4157	1273	0	4157	1290				324	0	288
Arrive On Green	0.00	0.80	0.80	0.00	0.80	0.80				0.09	0.00	0.09
Sat Flow, veh/h	0	5358	1588	0	5358	1610				3619	0	3220
Grp Volume(v), veh/h	0	863	448	0	911	411				178	0	180
Grp Sat Flow(s),veh/h/ln	0	1729	1588	0	1729	1610				1810	0	1610
Q Serve(g_s), s	0.0	3.6	7.2	0.0	3.9	6.2				4.3	0.0	4.9
Cycle Q Clear(g_c), s	0.0	3.6	7.2	0.0	3.9	6.2				4.3	0.0	4.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4157	1273	0	4157	1290				324	0	288
V/C Ratio(X)	0.00	0.21	0.35	0.00	0.22	0.32				0.55	0.00	0.62
Avail Cap(c_a), veh/h	0	4157	1273	0	4157	1290				1440	0	1282
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.2	2.5	0.0	2.2	2.4				40.0	0.0	40.3
Incr Delay (d2), s/veh	0.0	0.1	0.8	0.0	0.1	0.7				1.5	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	1.5	0.0	0.8	1.3				1.9	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.3	3.3	0.0	2.3	3.1				41.4	0.0	42.5
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1311			1322						358	
Approach Delay, s/veh		2.6			2.6						42.0	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		12.7		79.0						
Change Period (Y+Rc), s		5.5		4.5		5.5						
Max Green Setting (Gmax), s		73.5		36.5		73.5						
Max Q Clear Time (g_c+I1), s		9.2		6.9		8.2						
Green Ext Time (p_c), s		5.4		1.3		5.6						

Intersection Summary			
HCM 6th Ctrl Delay		7.3	
HCM 6th LOS		A	

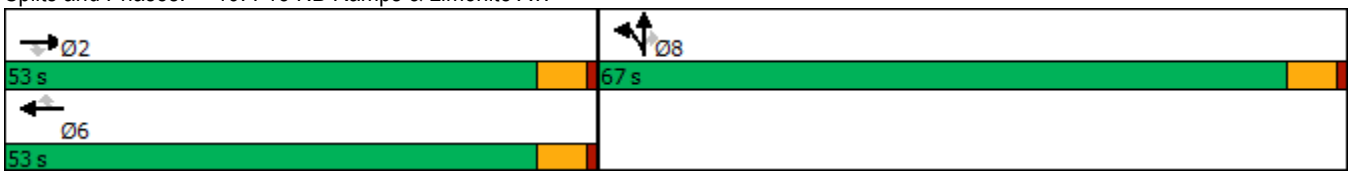
Notes

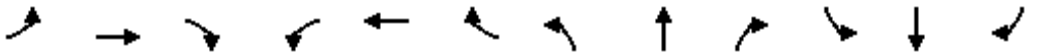
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	722	287	838	112	444	2	727
Future Volume (vph)	722	287	838	112	444	2	727
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.8	47.8	47.8	47.8	27.2	27.2	27.2
Actuated g/C Ratio	0.56	0.56	0.56	0.56	0.32	0.32	0.32
v/c Ratio	0.26	0.29	0.30	0.12	0.42	0.42	0.74
Control Delay	11.2	2.5	11.5	2.9	25.1	25.1	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	2.5	11.5	2.9	25.1	25.1	24.6
LOS	B	A	B	A	C	C	C
Approach Delay	8.7		10.5			24.8	
Approach LOS	A		B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.1	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 48.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↲	↱↱			
Traffic Volume (veh/h)	0	722	287	0	838	112	444	2	727	0	0	0
Future Volume (veh/h)	0	722	287	0	838	112	444	2	727	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	737	293	0	855	109	454	0	439			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3360	1019	0	3360	1043	731	0	651			
Arrive On Green	0.00	0.65	0.65	0.00	0.65	0.65	0.20	0.00	0.20			
Sat Flow, veh/h	0	5358	1573	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	737	293	0	855	109	454	0	439			
Grp Sat Flow(s),veh/h/ln	0	1729	1573	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	4.3	5.9	0.0	5.1	1.9	8.4	0.0	9.2			
Cycle Q Clear(g_c), s	0.0	4.3	5.9	0.0	5.1	1.9	8.4	0.0	9.2			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3360	1019	0	3360	1043	731	0	651			
V/C Ratio(X)	0.00	0.22	0.29	0.00	0.25	0.10	0.62	0.00	0.67			
Avail Cap(c_a), veh/h	0	3360	1019	0	3360	1043	3036	0	2701			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.3	5.6	0.0	5.4	4.9	26.7	0.0	27.0			
Incr Delay (d2), s/veh	0.0	0.2	0.7	0.0	0.2	0.2	0.9	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	1.2	1.7	0.0	1.5	0.5	3.4	0.0	3.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.4	6.3	0.0	5.6	5.1	27.6	0.0	28.2			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		1030			964			893				
Approach Delay, s/veh		5.7			5.6			27.9				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		20.3				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		7.9				7.1		11.2				
Green Ext Time (p_c), s		4.2				4.5		3.6				
Intersection Summary												
HCM 6th Ctrl Delay			12.5									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 7.2:

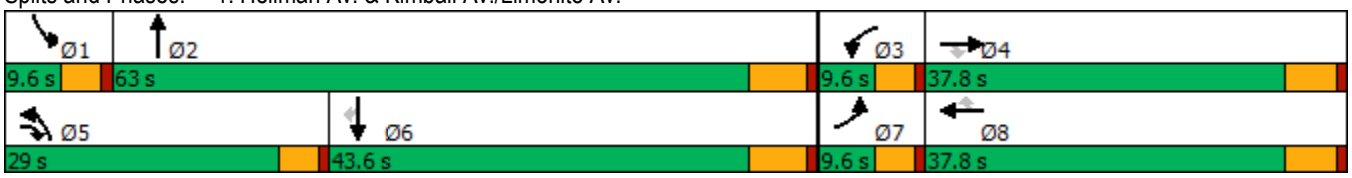
INTERIM YEAR (2023) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	37	489	105	265	659	46	130	72	35	35	19
Future Volume (vph)	37	489	105	265	659	46	130	72	35	35	19
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	9.6	37.8	29.0	9.6	37.8	37.8	29.0	63.0	9.6	43.6	43.6
Total Split (%)	8.0%	31.5%	24.2%	8.0%	31.5%	31.5%	24.2%	52.5%	8.0%	36.3%	36.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	5.0	32.0	69.6	5.0	34.1	34.1	31.7	56.9	5.0	31.6	31.6
Actuated g/C Ratio	0.04	0.27	0.59	0.04	0.29	0.29	0.27	0.48	0.04	0.27	0.27
v/c Ratio	0.57	1.06	0.12	1.99	0.70	0.09	0.32	0.21	0.51	0.04	0.04
Control Delay	87.6	98.2	3.0	498.0	43.2	0.3	42.2	5.8	80.7	29.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.6	98.2	3.0	498.0	43.2	0.3	42.2	5.8	80.7	29.0	0.2
LOS	F	F	A	F	D	A	D	A	F	C	A
Approach Delay		81.7			165.5			16.5		43.2	
Approach LOS		F			F			B		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.99	
Intersection Signal Delay: 104.6	Intersection LOS: F
Intersection Capacity Utilization 69.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	489	105	265	659	46	130	72	242	35	35	19
Future Volume (veh/h)	37	489	105	265	659	46	130	72	242	35	35	19
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	1700	1800	1800	1800	1800	1800	1700	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	39	515	111	279	694	48	137	76	255	37	37	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	49	486	726	140	963	430	333	819	731	51	1037	462
Arrive On Green	0.03	0.27	0.27	0.04	0.28	0.28	0.21	0.48	0.48	0.03	0.30	0.30
Sat Flow, veh/h	1619	1800	1525	3326	3420	1525	1619	1710	1525	1714	3420	1525
Grp Volume(v), veh/h	39	515	111	279	694	48	137	76	255	37	37	20
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1663	1710	1525	1619	1710	1525	1714	1710	1525
Q Serve(g_s), s	2.8	32.0	4.9	5.0	21.7	2.8	8.7	2.9	12.4	2.5	0.9	1.1
Cycle Q Clear(g_c), s	2.8	32.0	4.9	5.0	21.7	2.8	8.7	2.9	12.4	2.5	0.9	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	486	726	140	963	430	333	819	731	51	1037	462
V/C Ratio(X)	0.79	1.06	0.15	1.99	0.72	0.11	0.41	0.09	0.35	0.73	0.04	0.04
Avail Cap(c_a), veh/h	68	486	726	140	963	430	333	819	731	72	1079	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.1	43.3	17.6	56.8	38.4	31.6	40.8	16.8	19.3	57.0	29.1	29.2
Incr Delay (d2), s/veh	23.2	57.6	0.1	469.3	2.6	0.1	3.7	0.2	1.3	8.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	21.4	1.7	11.2	9.1	1.0	3.7	1.1	4.4	1.2	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	100.8	17.7	526.1	41.0	31.7	44.5	17.0	20.6	65.9	29.1	29.2
LnGrp LOS	F	F	B	F	D	C	D	B	C	E	C	C
Approach Vol, veh/h		665			1021			468			94	
Approach Delay, s/veh		85.7			173.1			27.0			43.6	
Approach LOS		F			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	63.0	9.6	37.8	29.0	42.1	8.2	39.2
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	56.8	5.0	32.0	24.4	37.4	5.0	32.0
Max Q Clear Time (g_c+I1), s	4.5	14.4	7.0	34.0	10.7	3.1	4.8	23.7
Green Ext Time (p_c), s	0.0	2.0	0.0	0.0	0.1	0.2	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	111.4
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↳			↑↑↳				↱			↱
Traffic Vol, veh/h	0	953	6	0	914	8	0	0	2	0	0	3
Future Vol, veh/h	0	953	6	0	914	8	0	0	2	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1036	7	0	993	9	0	0	2	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	522	-	-	501
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	505	0	0	521
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	505	-	-	521
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.2	12
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	505	-	-	-	-	521
HCM Lane V/C Ratio	0.004	-	-	-	-	0.006
HCM Control Delay (s)	12.2	-	-	-	-	12
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0

Intersection	
Intersection Delay, s/veh	6.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1040	1067	12	8
Demand Flow Rate, veh/h	1040	1067	12	8
Vehicles Circulating, veh/h	54	11	1036	1047
Vehicles Exiting, veh/h	1001	1037	58	31
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.5	6.2	6.3	6.3
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	LT	TR	LTR	LTR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
Entry Flow, veh/h	489	551	501	566	12	8
Cap Entry Lane, veh/h	1284	1356	1336	1407	589	583
Entry HV Adj Factor	1.000	1.000	1.001	0.999	1.000	1.000
Flow Entry, veh/h	489	551	501	566	12	8
Cap Entry, veh/h	1284	1357	1338	1406	589	583
V/C Ratio	0.381	0.406	0.375	0.402	0.020	0.014
Control Delay, s/veh	6.4	6.5	6.2	6.3	6.3	6.3
LOS	A	A	A	A	A	A
95th %tile Queue, veh	2	2	2	2	0	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	947	34	0	972	27	0	0	11	0	0	9
Future Vol, veh/h	0	947	34	0	972	27	0	0	11	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1029	37	0	1057	29	0	0	12	0	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	533	-	-	543
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	496	0	0	489
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	496	-	-	489
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.4	12.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	496	-	-	-	-	489
HCM Lane V/C Ratio	0.024	-	-	-	-	0.02
HCM Control Delay (s)	12.4	-	-	-	-	12.5
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	50	89	20	4	0
Future Vol, veh/h	0	50	89	20	4	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, %	0	0	0	0	0	0
Mvmt Flow	0	54	97	22	4	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	119	0	-	0	162	108
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	54	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1482	-	-	-	834	951
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	974	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1482	-	-	-	834	951
Mov Cap-2 Maneuver	-	-	-	-	834	-
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	974	-

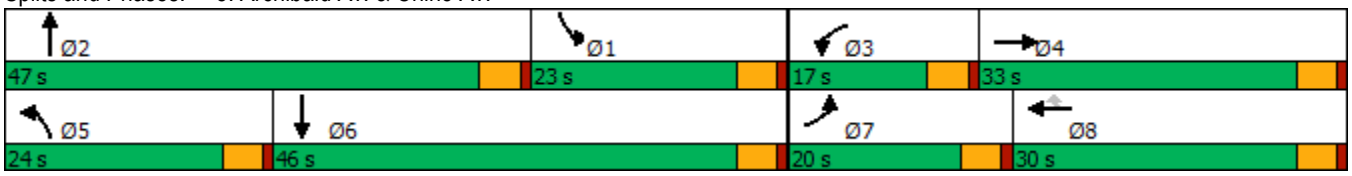
Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

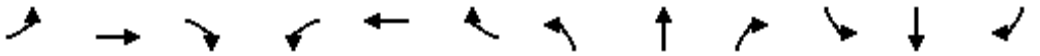
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1482	-	-	-	834
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	9.3
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	97	28	80	76	254	137	1151	118	903
Future Volume (vph)	97	28	80	76	254	137	1151	118	903
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.2	11.4	10.0	10.4	10.4	13.5	30.7	14.9	32.1
Actuated g/C Ratio	0.13	0.14	0.12	0.12	0.12	0.16	0.37	0.18	0.39
v/c Ratio	0.46	0.29	0.42	0.35	0.63	0.54	0.68	0.42	0.75
Control Delay	46.8	21.6	47.9	43.4	12.7	45.4	25.9	40.8	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	21.6	47.9	43.4	12.7	45.4	25.9	40.8	28.3
LOS	D	C	D	D	B	D	C	D	C
Approach Delay		35.9		25.2			27.9		29.7
Approach LOS		D		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.3	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 28.6	Intersection LOS: C
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	28	46	80	76	254	137	1151	38	118	903	53
Future Volume (veh/h)	97	28	46	80	76	254	137	1151	38	118	903	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	100	29	47	82	78	221	141	1187	36	122	931	49
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	127	101	163	102	267	226	179	1774	54	192	1226	65
Arrive On Green	0.08	0.16	0.16	0.06	0.15	0.15	0.11	0.36	0.36	0.12	0.37	0.37
Sat Flow, veh/h	1619	617	1000	1619	1800	1525	1619	4897	148	1619	3305	174
Grp Volume(v), veh/h	100	0	76	82	78	221	141	794	429	122	482	498
Grp Sat Flow(s),veh/h/ln	1619	0	1618	1619	1800	1525	1619	1638	1769	1619	1710	1769
Q Serve(g_s), s	3.8	0.0	2.6	3.1	2.4	6.3	5.3	12.8	12.8	4.5	15.5	15.5
Cycle Q Clear(g_c), s	3.8	0.0	2.6	3.1	2.4	6.3	5.3	12.8	12.8	4.5	15.5	15.5
Prop In Lane	1.00		0.62	1.00		1.00	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	127	0	264	102	267	226	179	1187	641	192	634	656
V/C Ratio(X)	0.79	0.00	0.29	0.80	0.29	0.98	0.79	0.67	0.67	0.63	0.76	0.76
Avail Cap(c_a), veh/h	397	0	731	319	727	616	500	2209	1193	474	1126	1165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	0.0	23.1	29.1	23.8	12.7	27.3	16.9	16.9	26.4	17.3	17.3
Incr Delay (d2), s/veh	10.4	0.0	0.6	13.3	0.6	23.1	7.6	0.7	1.2	3.4	1.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.9	1.5	1.0	4.3	2.2	3.8	4.2	1.7	5.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	0.0	23.7	42.4	24.5	35.7	34.8	17.5	18.1	29.8	19.2	19.2
LnGrp LOS	D	A	C	D	C	D	C	B	B	C	B	B
Approach Vol, veh/h		176			381			1364			1102	
Approach Delay, s/veh		32.4			34.8			19.5			20.4	
Approach LOS		C			C			B			C	

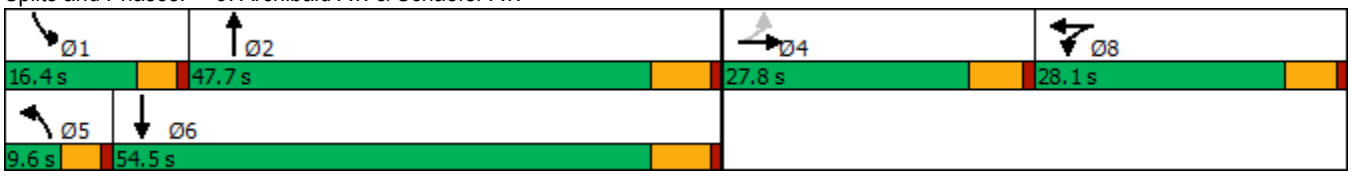
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	27.4	8.6	14.8	11.5	27.9	9.5	13.9
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	6.5	14.8	5.1	4.6	7.3	17.5	5.8	8.3
Green Ext Time (p_c), s	0.2	7.9	0.1	0.3	0.2	5.8	0.1	1.0

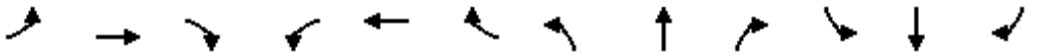
Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	95	0	1311	73	872		
Future Volume (vph)	95	0	1311	73	872		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	47.7	16.4	54.5	27.8	9.6
Total Split (%)	23.4%	23.4%	39.8%	13.7%	45.4%	23%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	13.2	13.2	28.2	8.5	38.5		
Actuated g/C Ratio	0.19	0.19	0.41	0.12	0.56		
v/c Ratio	0.32	0.16	0.69	0.38	0.48		
Control Delay	34.1	0.5	21.3	41.7	11.5		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	34.1	0.5	21.3	41.7	11.5		
LOS	C	A	C	D	B		
Approach Delay		16.6	21.3		13.8		
Approach LOS		B	C		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 69	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	95	0	104	0	1311	19	73	872	0
Future Volume (veh/h)	0	0	0	95	0	104	0	1311	19	73	872	0
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	99	0	91	0	1366	20	76	908	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	3	0	291	0	274	3	2159	32	104	2000	0
Arrive On Green	0.00	0.00	0.00	0.18	0.00	0.18	0.00	0.43	0.43	0.06	0.58	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4990	73	1619	3510	0
Grp Volume(v), veh/h	0	0	0	99	0	91	0	897	489	76	908	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1787	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	2.7	0.0	11.2	11.2	2.4	7.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.8	0.0	2.7	0.0	11.2	11.2	2.4	7.8	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	291	0	274	3	1417	773	104	2000	0
V/C Ratio(X)	0.00	0.00	0.00	0.34	0.00	0.33	0.00	0.63	0.63	0.73	0.45	0.00
Avail Cap(c_a), veh/h	0	759	0	692	0	652	155	2587	1411	366	3146	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	18.7	0.0	18.7	0.0	11.6	11.6	24.0	6.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	0.7	0.0	0.5	0.9	3.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.9	0.0	0.9	0.0	2.7	3.0	0.9	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	19.4	0.0	19.4	0.0	12.0	12.4	27.7	6.3	0.0
LnGrp LOS	A	A	A	B	A	B	A	B	B	C	A	A
Approach Vol, veh/h		0			190			1386			984	
Approach Delay, s/veh		0.0			19.4			12.2			7.9	
Approach LOS					B			B			A	

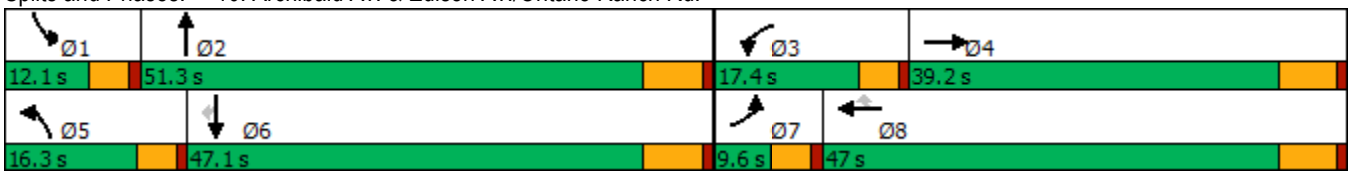
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	29.1		0.0	0.0	37.0		15.2				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	4.4	13.2		0.0	0.0	9.8		4.8				
Green Ext Time (p_c), s	0.0	9.4		0.0	0.0	6.3		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		11.1	
HCM 6th LOS		B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	204	46	383	498	173	160	1070	384	66	468	118
Future Volume (vph)	27	204	46	383	498	173	160	1070	384	66	468	118
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.3	22.8	103.2	13.5	36.2	36.2	12.3	39.6	103.2	7.2	31.5	31.5
Actuated g/C Ratio	0.05	0.22	1.00	0.13	0.35	0.35	0.12	0.38	1.00	0.07	0.31	0.31
v/c Ratio	0.19	0.28	0.03	1.02	0.81	0.27	0.85	0.83	0.26	0.60	0.46	0.21
Control Delay	57.6	34.5	0.0	98.2	44.3	5.6	85.3	37.2	0.4	75.1	30.4	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.6	34.5	0.0	98.2	44.3	5.6	85.3	37.2	0.4	75.1	30.4	2.8
LOS	E	C	A	F	D	A	F	D	A	E	C	A
Approach Delay		31.1			57.5			33.2			29.9	
Approach LOS		C			E			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 39.6	Intersection LOS: D
Intersection Capacity Utilization 85.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	204	46	383	498	173	160	1070	384	66	468	118
Future Volume (veh/h)	27	204	46	383	498	173	160	1070	384	66	468	118
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	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	28	208	0	391	508	135	163	1092	0	67	478	87
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	81	723		395	571	484	191	1283		83	1056	471
Arrive On Green	0.03	0.21	0.00	0.13	0.32	0.32	0.12	0.38	0.00	0.05	0.31	0.31
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	28	208	0	391	508	135	163	1092	0	67	478	87
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1525
Q Serve(g_s), s	0.9	4.9	0.0	12.7	25.7	6.4	9.5	28.1	0.0	3.9	10.8	4.0
Cycle Q Clear(g_c), s	0.9	4.9	0.0	12.7	25.7	6.4	9.5	28.1	0.0	3.9	10.8	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	723		395	571	484	191	1283		83	1056	471
V/C Ratio(X)	0.35	0.29		0.99	0.89	0.28	0.85	0.85		0.80	0.45	0.18
Avail Cap(c_a), veh/h	154	1177		395	766	649	198	1598		127	1448	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	31.8	0.0	41.5	31.1	24.5	41.5	27.5	0.0	45.0	26.6	24.3
Incr Delay (d2), s/veh	0.9	0.2	0.0	42.6	9.9	0.3	26.4	3.8	0.0	10.5	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.9	0.0	6.7	11.8	2.2	4.9	10.8	0.0	1.7	4.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	32.0	0.0	84.1	41.1	24.8	67.9	31.3	0.0	55.5	26.9	24.5
LnGrp LOS	D	C		F	D	C	E	C		E	C	C
Approach Vol, veh/h		236	A		1034			1255	A		632	
Approach Delay, s/veh		33.7			55.2			36.0			29.6	
Approach LOS		C			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	42.5	17.4	26.5	15.9	36.1	7.2	36.6
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	5.9	30.1	14.7	6.9	11.5	12.8	2.9	27.7
Green Ext Time (p_c), s	0.0	5.9	0.0	1.1	0.0	3.0	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	40.9
HCM 6th LOS	D

Notes

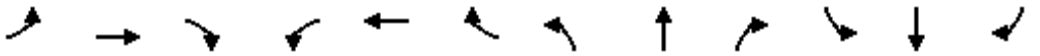
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	62	1551	11	20	877
Future Volume (vph)	7	62	1551	11	20	877
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	13.6%	13.6%	59.1%	59.1%	13.7%	72.9%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.0	5.0	51.3	51.3	5.0	53.1
Actuated g/C Ratio	0.08	0.08	0.79	0.79	0.08	0.82
v/c Ratio	0.03	0.17	0.61	0.01	0.17	0.33
Control Delay	28.6	0.9	8.8	5.9	31.6	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.6	0.9	8.8	5.9	31.6	3.5
LOS	C	A	A	A	C	A
Approach Delay			8.7			4.1
Approach LOS			A			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 64.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 58.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	7	0	62	0	1551	11	20	877	0
Future Volume (veh/h)	0	0	0	7	0	62	0	1551	11	20	877	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				7	0	9	0	1650	12	21	933	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, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				62	0	53	0	2325	1016	40	2688	0
Arrive On Green				0.02	0.00	0.02	0.00	0.68	0.68	0.02	0.79	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1494	1619	3510	0
Grp Volume(v), veh/h				7	0	9	0	1650	12	21	933	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1494	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.2	0.0	16.9	0.1	0.7	4.5	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.2	0.0	16.9	0.1	0.7	4.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				62	0	53	0	2325	1016	40	2688	0
V/C Ratio(X)				0.11	0.00	0.17	0.00	0.71	0.01	0.52	0.35	0.00
Avail Cap(c_a), veh/h				277	0	237	0	2325	1016	143	2688	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.3	0.0	27.3	0.0	5.6	2.9	27.3	1.8	0.0
Incr Delay (d2), s/veh				0.8	0.0	1.5	0.0	1.9	0.0	3.9	0.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.0	0.0	0.1	0.0	2.3	0.0	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.1	0.0	28.8	0.0	7.5	2.9	31.1	2.1	0.0
LnGrp LOS				C	A	C	A	A	A	C	A	A
Approach Vol, veh/h					16			1662			954	
Approach Delay, s/veh					28.5			7.4			2.8	
Approach LOS					C			A			A	

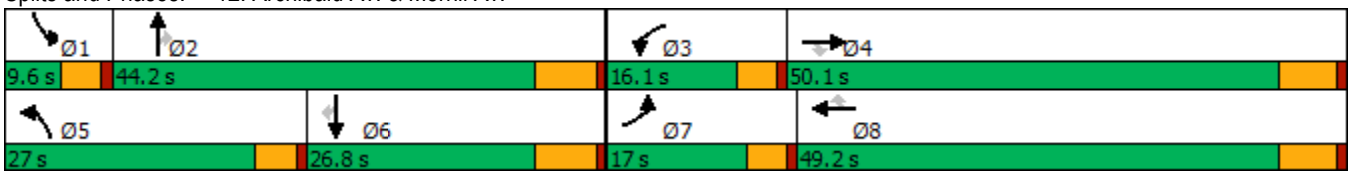
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	6.0	45.0				51.0		5.6				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	2.7	18.9				6.5		2.2				
Green Ext Time (p_c), s	0.0	9.8				6.5		0.0				

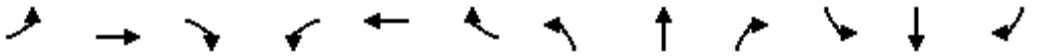
Intersection Summary		
HCM 6th Ctrl Delay		5.9
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	21	166	82	48	128	384	1315	39	39	841	103
Future Volume (vph)	56	21	166	82	48	128	384	1315	39	39	841	103
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	7.7	15.3	15.3	8.5	16.0	16.0	23.1	43.4	43.4	5.2	20.9	20.9
Actuated g/C Ratio	0.09	0.17	0.17	0.10	0.18	0.18	0.26	0.49	0.49	0.06	0.24	0.24
v/c Ratio	0.41	0.07	0.42	0.54	0.15	0.32	0.93	0.80	0.05	0.23	1.07	0.22
Control Delay	50.7	29.8	7.9	55.2	30.8	5.1	65.6	27.8	0.1	48.6	85.3	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	29.8	7.9	55.2	30.8	5.1	65.6	27.8	0.1	48.6	85.3	3.0
LOS	D	C	A	E	C	A	E	C	A	D	F	A
Approach Delay		19.7			25.8			35.6			75.2	
Approach LOS		B			C			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 45.7	Intersection LOS: D
Intersection Capacity Utilization 74.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	21	166	82	48	128	384	1315	39	39	841	103
Future Volume (veh/h)	56	21	166	82	48	128	384	1315	39	39	841	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	58	22	116	85	49	37	396	1356	21	40	867	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	74	230	195	106	266	225	429	1671	745	110	890	397
Arrive On Green	0.05	0.13	0.13	0.07	0.15	0.15	0.27	0.49	0.49	0.04	0.26	0.26
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	58	22	116	85	49	37	396	1356	21	40	867	40
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1525	1478	1710	1525
Q Serve(g_s), s	2.8	0.8	5.6	4.0	1.9	1.7	18.5	26.2	0.6	1.0	19.6	1.6
Cycle Q Clear(g_c), s	2.8	0.8	5.6	4.0	1.9	1.7	18.5	26.2	0.6	1.0	19.6	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	74	230	195	106	266	225	429	1671	745	110	890	397
V/C Ratio(X)	0.78	0.10	0.59	0.80	0.18	0.16	0.92	0.81	0.03	0.36	0.97	0.10
Avail Cap(c_a), veh/h	257	1013	859	239	993	841	465	1671	745	190	890	397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	30.0	32.1	35.9	29.1	29.0	27.9	16.9	10.3	36.6	28.6	21.9
Incr Delay (d2), s/veh	6.5	0.2	2.9	5.2	0.3	0.3	22.1	3.2	0.0	0.8	23.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.3	2.1	1.7	0.8	0.6	8.9	8.7	0.2	0.4	9.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	30.2	35.0	41.1	29.4	29.4	50.0	20.1	10.4	37.4	52.4	22.0
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	D	C
Approach Vol, veh/h		196			171			1773			947	
Approach Delay, s/veh		36.9			35.2			26.6			50.5	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	44.6	9.7	16.2	25.3	26.8	8.2	17.7
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.0	28.2	6.0	7.6	20.5	21.6	4.8	3.9
Green Ext Time (p_c), s	0.0	5.6	0.0	0.4	0.1	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1739	1080	8
Future Vol, veh/h	0	3	0	1739	1080	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	1890	1174	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	592	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	454	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	454	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

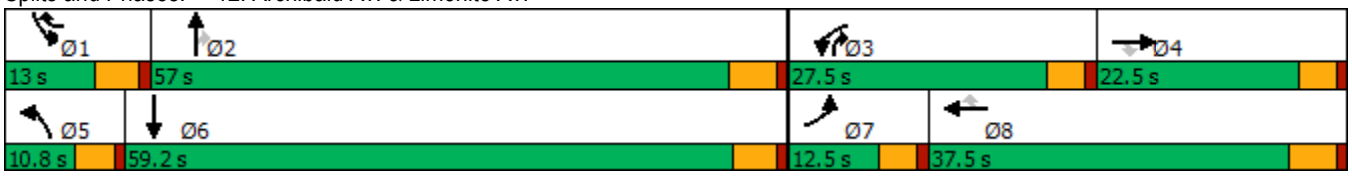
Approach	EB	NB	SB
HCM Control Delay, s	13	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	454	-	-
HCM Lane V/C Ratio	-	0.007	-	-
HCM Control Delay (s)	-	13	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	238	631	88	293	642	590	114	910	331	159	679
Future Volume (vph)	238	631	88	293	642	590	114	910	331	159	679
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	11.0	9.5	46.3	9.5	11.0	11.0
Total Split (s)	12.5	22.5	22.5	27.5	37.5	13.0	10.8	57.0	27.5	13.0	59.2
Total Split (%)	10.4%	18.8%	18.8%	22.9%	31.3%	10.8%	9.0%	47.5%	22.9%	10.8%	49.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	4.0	3.5	4.3	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	5.0	4.5	5.3	4.5	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	8.0	18.0	18.0	22.2	31.4	44.7	6.3	51.7	74.7	8.0	54.2
Actuated g/C Ratio	0.07	0.15	0.15	0.19	0.26	0.38	0.05	0.43	0.63	0.07	0.45
v/c Ratio	1.06	1.21	0.25	0.91	0.70	0.96	1.25	1.15	0.34	1.37	0.60
Control Delay	127.7	152.4	3.1	79.0	44.4	59.4	221.7	114.1	7.9	253.3	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	127.7	152.4	3.1	79.0	44.4	59.4	221.7	114.1	7.9	253.3	24.8
LOS	F	F	A	E	D	E	F	F	A	F	C
Approach Delay		132.5			56.9			97.2			58.5
Approach LOS		F			E			F			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay: 83.1	Intersection LOS: F
Intersection Capacity Utilization 106.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	631	88	293	642	590	114	910	331	159	679	243
Future Volume (veh/h)	238	631	88	293	642	590	114	910	331	159	679	243
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	248	657	92	305	669	496	119	948	246	166	707	253
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	234	548	244	331	969	539	95	819	972	121	1170	419
Arrive On Green	0.07	0.15	0.15	0.18	0.27	0.27	0.05	0.43	0.43	0.07	0.45	0.45
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	1900	1572	1810	2605	932
Grp Volume(v), veh/h	248	657	92	305	669	496	119	948	246	166	490	470
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	1900	1572	1810	1805	1732
Q Serve(g_s), s	8.0	18.2	6.2	19.9	20.0	32.2	6.3	51.7	8.6	8.0	24.6	24.6
Cycle Q Clear(g_c), s	8.0	18.2	6.2	19.9	20.0	32.2	6.3	51.7	8.6	8.0	24.6	24.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	234	548	244	331	969	539	95	819	972	121	811	778
V/C Ratio(X)	1.06	1.20	0.38	0.92	0.69	0.92	1.25	1.16	0.25	1.38	0.60	0.60
Avail Cap(c_a), veh/h	234	548	244	347	969	539	95	819	972	121	815	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	50.9	45.8	48.1	39.4	38.3	56.8	34.2	10.6	56.0	25.0	25.0
Incr Delay (d2), s/veh	75.5	106.1	1.0	28.4	1.8	20.7	174.8	84.7	0.2	212.7	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	16.1	2.5	11.2	8.7	16.3	7.4	41.1	2.7	10.6	9.8	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	131.5	157.0	46.7	76.5	41.2	59.0	231.6	118.8	10.8	268.7	25.9	25.9
LnGrp LOS	F	F	D	E	D	E	F	F	B	F	C	C
Approach Vol, veh/h		997			1470			1313			1126	
Approach Delay, s/veh		140.5			54.5			108.8			61.7	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	57.0	26.5	23.5	10.8	59.2	12.5	37.5
Change Period (Y+Rc), s	5.0	5.3	4.5	* 5.3	4.5	* 5.3	4.5	5.3
Max Green Setting (Gmax), s	8.0	51.7	23.0	* 18	6.3	* 54	8.0	32.2
Max Q Clear Time (g_c+I1), s	10.0	53.7	21.9	20.2	8.3	26.6	10.0	34.2
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.0	3.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	88.2
HCM 6th LOS	F

Notes

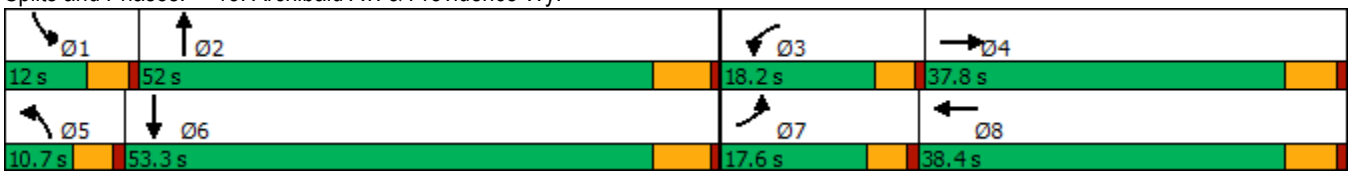
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

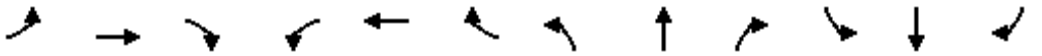
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	43	0	62	0	33	1249	75	909
Future Volume (vph)	43	0	62	0	33	1249	75	909
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	17.6	37.8	18.2	38.4	10.7	52.0	12.0	53.3
Total Split (%)	14.7%	31.5%	15.2%	32.0%	8.9%	43.3%	10.0%	44.4%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	7.1	13.6	12.1	14.2	5.8	50.4	7.2	57.9
Actuated g/C Ratio	0.08	0.15	0.13	0.15	0.06	0.55	0.08	0.63
v/c Ratio	0.34	0.03	0.28	0.15	0.32	0.74	0.58	0.48
Control Delay	51.1	0.2	43.5	0.7	54.2	23.4	62.5	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	0.2	43.5	0.7	54.2	23.4	62.5	16.6
LOS	D	A	D	A	D	C	E	B
Approach Delay		40.1		21.9		24.1		19.9
Approach LOS		D		C		C		B

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 92.2
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 22.6 — Intersection LOS: C
Intersection Capacity Utilization 65.2% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 13: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	0	12	62	0	63	33	1249	82	75	909	77
Future Volume (veh/h)	43	0	12	62	0	63	33	1249	82	75	909	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	47	0	12	67	0	68	36	1358	89	82	988	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	110	0	219	90	0	201	63	1649	108	106	1694	144
Arrive On Green	0.06	0.00	0.14	0.05	0.00	0.12	0.03	0.48	0.48	0.06	0.50	0.50
Sat Flow, veh/h	1810	0	1610	1810	0	1610	1810	3440	225	1810	3367	286
Grp Volume(v), veh/h	47	0	12	67	0	68	36	711	736	82	530	542
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1610	1810	1805	1860	1810	1805	1848
Q Serve(g_s), s	1.9	0.0	0.5	2.8	0.0	3.0	1.5	25.9	26.2	3.4	15.8	15.8
Cycle Q Clear(g_c), s	1.9	0.0	0.5	2.8	0.0	3.0	1.5	25.9	26.2	3.4	15.8	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.15
Lane Grp Cap(c), veh/h	110	0	219	90	0	201	63	865	891	106	908	930
V/C Ratio(X)	0.43	0.00	0.05	0.75	0.00	0.34	0.57	0.82	0.83	0.77	0.58	0.58
Avail Cap(c_a), veh/h	307	0	672	321	0	685	144	1078	1111	175	1109	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	0.0	28.8	36.0	0.0	30.7	36.4	17.1	17.2	35.6	13.4	13.4
Incr Delay (d2), s/veh	1.0	0.0	0.1	4.6	0.0	1.0	3.0	4.2	4.3	4.5	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.2	1.3	0.0	1.1	0.7	9.6	10.0	1.5	5.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	0.0	28.9	40.5	0.0	31.6	39.4	21.4	21.5	40.0	14.0	14.0
LnGrp LOS	D	A	C	D	A	C	D	C	C	D	B	B
Approach Vol, veh/h		59			135			1483			1154	
Approach Delay, s/veh		34.3			36.0			21.9			15.8	
Approach LOS		C			D			C			B	

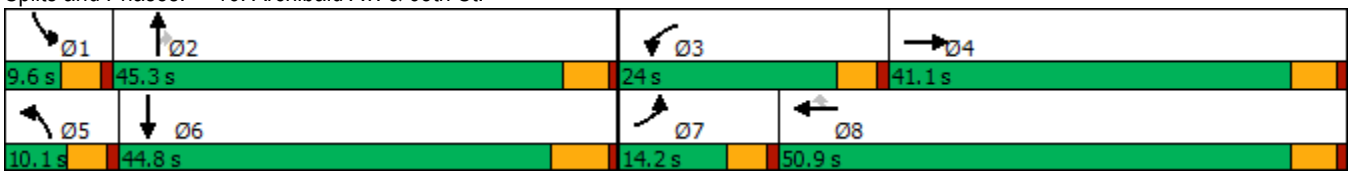
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	42.9	8.4	16.2	7.3	44.8	9.3	15.4
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	7.4	45.8	13.6	32.0	6.1	47.1	13.0	32.6
Max Q Clear Time (g_c+I1), s	5.4	28.2	4.8	2.5	3.5	17.8	3.9	5.0
Green Ext Time (p_c), s	0.0	8.6	0.0	0.0	0.0	6.9	0.0	0.3

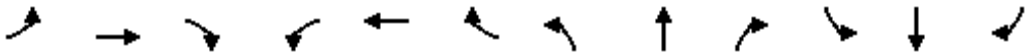
Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	59	48	240	28	67	18	1237	143	38	921
Future Volume (vph)	59	48	240	28	67	18	1237	143	38	921
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	7.5	14.3	18.1	27.2	27.2	5.4	41.1	41.1	5.1	41.7
Actuated g/C Ratio	0.08	0.15	0.19	0.29	0.29	0.06	0.44	0.44	0.05	0.44
v/c Ratio	0.45	0.21	0.76	0.06	0.14	0.19	0.86	0.20	0.43	0.45
Control Delay	55.5	18.4	53.2	26.5	1.9	52.6	33.0	5.7	62.0	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	18.4	53.2	26.5	1.9	52.6	33.0	5.7	62.0	21.3
LOS	E	B	D	C	A	D	C	A	E	C
Approach Delay		31.6		40.7			30.5			22.8
Approach LOS		C		D			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 29.1	Intersection LOS: C
Intersection Capacity Utilization 62.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	48	58	240	28	67	18	1237	143	38	921	23
Future Volume (veh/h)	59	48	58	240	28	67	18	1237	143	38	921	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	65	53	29	264	31	33	20	1359	121	42	1012	16
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	84	274	139	301	453	379	40	1623	714	66	2440	39
Arrive On Green	0.05	0.12	0.12	0.17	0.24	0.24	0.02	0.45	0.45	0.04	0.46	0.46
Sat Flow, veh/h	1810	2315	1172	1810	1900	1589	1810	3610	1589	1810	5260	83
Grp Volume(v), veh/h	65	40	42	264	31	33	20	1359	121	42	665	363
Grp Sat Flow(s),veh/h/ln	1810	1805	1682	1810	1900	1589	1810	1805	1589	1810	1729	1885
Q Serve(g_s), s	3.2	1.8	2.0	12.7	1.1	1.4	1.0	29.7	4.1	2.0	11.4	11.4
Cycle Q Clear(g_c), s	3.2	1.8	2.0	12.7	1.1	1.4	1.0	29.7	4.1	2.0	11.4	11.4
Prop In Lane	1.00		0.70	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	84	214	199	301	453	379	40	1623	714	66	1604	874
V/C Ratio(X)	0.77	0.19	0.21	0.88	0.07	0.09	0.50	0.84	0.17	0.64	0.41	0.41
Avail Cap(c_a), veh/h	194	727	677	393	973	814	111	1623	714	101	1604	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	35.5	35.6	36.4	26.4	26.5	43.3	21.7	14.7	42.5	15.9	15.9
Incr Delay (d2), s/veh	5.5	0.4	0.5	13.6	0.1	0.1	3.7	5.3	0.5	3.8	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.8	0.8	6.5	0.5	0.5	0.5	12.5	1.5	0.9	4.1	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.7	36.0	36.1	49.9	26.4	26.6	46.9	27.0	15.2	46.4	16.7	17.4
LnGrp LOS	D	D	D	D	C	C	D	C	B	D	B	B
Approach Vol, veh/h		147			328			1500			1070	
Approach Delay, s/veh		41.2			45.4			26.4			18.1	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	46.4	19.5	15.7	6.6	47.7	8.8	26.4
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	4.0	31.7	14.7	4.0	3.0	13.4	5.2	3.4
Green Ext Time (p_c), s	0.0	5.6	0.2	0.4	0.0	6.4	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

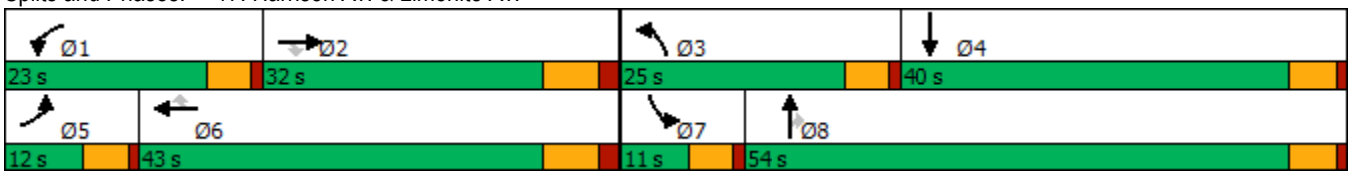
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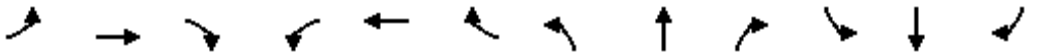
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	42	455	12	168	799	5	116	110	227	22	124
Future Volume (vph)	42	455	12	168	799	5	116	110	227	22	124
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.4	14.1	14.1	11.8	25.4	25.4	9.8	23.2	23.2	5.8	14.9
Actuated g/C Ratio	0.09	0.20	0.20	0.16	0.35	0.35	0.14	0.32	0.32	0.08	0.21
v/c Ratio	0.28	0.48	0.03	0.60	0.46	0.01	0.50	0.19	0.36	0.16	0.48
Control Delay	44.1	30.2	0.1	42.4	23.0	0.0	42.1	20.2	4.8	43.8	29.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	30.2	0.1	42.4	23.0	0.0	42.1	20.2	4.8	43.8	29.4
LOS	D	C	A	D	C	A	D	C	A	D	C
Approach Delay		30.6			26.2			18.1			31.0
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 71.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 26.0	Intersection LOS: C
Intersection Capacity Utilization 54.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	455	12	168	799	5	116	110	227	22	124	51
Future Volume (veh/h)	42	455	12	168	799	5	116	110	227	22	124	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	45	484	10	179	850	3	123	117	148	23	132	37
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	83	1077	334	228	1492	463	160	393	328	49	208	58
Arrive On Green	0.05	0.21	0.21	0.13	0.29	0.29	0.09	0.21	0.21	0.03	0.15	0.15
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	1900	1587	1810	1428	400
Grp Volume(v), veh/h	45	484	10	179	850	3	123	117	148	23	0	169
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	1900	1587	1810	0	1828
Q Serve(g_s), s	1.3	4.2	0.3	4.9	7.2	0.1	3.4	2.7	4.2	0.6	0.0	4.5
Cycle Q Clear(g_c), s	1.3	4.2	0.3	4.9	7.2	0.1	3.4	2.7	4.2	0.6	0.0	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	83	1077	334	228	1492	463	160	393	328	49	0	267
V/C Ratio(X)	0.54	0.45	0.03	0.78	0.57	0.01	0.77	0.30	0.45	0.47	0.00	0.63
Avail Cap(c_a), veh/h	246	2514	780	631	3620	1124	701	1794	1498	210	0	1229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.1	17.9	16.3	21.9	15.7	13.1	23.0	17.3	17.9	24.7	0.0	20.7
Incr Delay (d2), s/veh	2.0	0.3	0.0	2.2	0.3	0.0	2.9	0.4	1.0	2.5	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.4	0.1	1.9	2.2	0.0	1.4	1.0	1.4	0.3	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	18.2	16.3	24.1	16.0	13.1	25.9	17.7	18.9	27.3	0.0	23.2
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	A	C
Approach Vol, veh/h		539			1032			388			192	
Approach Delay, s/veh		18.8			17.4			20.8			23.7	
Approach LOS		B			B			C			C	

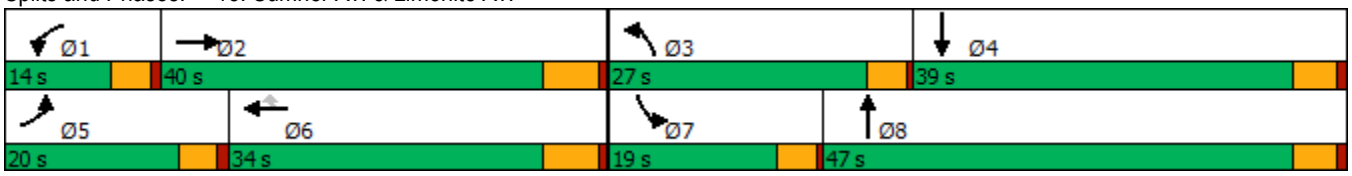
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	17.7	9.6	12.8	7.4	21.8	6.4	16.0
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	6.9	6.2	5.4	6.5	3.3	9.2	2.6	6.2
Green Ext Time (p_c), s	0.1	2.7	0.1	0.8	0.0	5.6	0.0	1.1

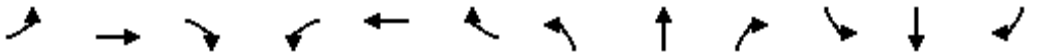
Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	246	505	94	684	39	130	446	89	279
Future Volume (vph)	246	505	94	684	39	130	446	89	279
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	10.5	24.8	6.7	18.3	18.3	10.7	22.9	8.6	18.2
Actuated g/C Ratio	0.13	0.32	0.09	0.23	0.23	0.14	0.29	0.11	0.23
v/c Ratio	0.56	0.34	0.34	0.60	0.08	0.56	0.61	0.48	0.53
Control Delay	40.2	23.7	42.8	30.7	0.3	45.3	26.9	46.4	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	23.7	42.8	30.7	0.3	45.3	26.9	46.4	24.8
LOS	D	C	D	C	A	D	C	D	C
Approach Delay		28.9		30.7			30.2		28.6
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 78.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 29.7	Intersection LOS: C
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Sumner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	505	23	94	684	39	130	446	150	89	279	143
Future Volume (veh/h)	246	505	23	94	684	39	130	446	150	89	279	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	262	537	15	100	728	23	138	474	99	95	297	73
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	385	1517	42	199	1242	386	178	691	143	123	581	141
Arrive On Green	0.11	0.29	0.29	0.06	0.24	0.24	0.10	0.23	0.23	0.07	0.20	0.20
Sat Flow, veh/h	3510	5185	144	3510	5187	1610	1810	2975	618	1810	2882	697
Grp Volume(v), veh/h	262	357	195	100	728	23	138	286	287	95	184	186
Grp Sat Flow(s),veh/h/ln	1755	1729	1872	1755	1729	1610	1810	1805	1788	1810	1805	1775
Q Serve(g_s), s	4.0	4.5	4.6	1.5	6.9	0.6	4.1	8.1	8.1	2.9	5.0	5.2
Cycle Q Clear(g_c), s	4.0	4.5	4.6	1.5	6.9	0.6	4.1	8.1	8.1	2.9	5.0	5.2
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.35	1.00		0.39
Lane Grp Cap(c), veh/h	385	1011	547	199	1242	386	178	419	415	123	364	358
V/C Ratio(X)	0.68	0.35	0.36	0.50	0.59	0.06	0.77	0.68	0.69	0.77	0.51	0.52
Avail Cap(c_a), veh/h	979	2115	1145	600	2612	811	749	1364	1351	488	1104	1085
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	15.5	15.5	25.5	18.7	16.3	24.5	19.5	19.5	25.5	19.7	19.8
Incr Delay (d2), s/veh	0.8	0.2	0.4	0.7	0.4	0.1	2.7	1.5	1.5	3.8	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.5	1.6	0.6	2.3	0.2	1.7	3.0	3.0	1.2	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	15.7	15.9	26.2	19.1	16.4	27.1	20.9	21.0	29.3	20.5	20.7
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		814			851			711			465	
Approach Delay, s/veh		18.6			19.9			22.2			22.4	
Approach LOS		B			B			C			C	

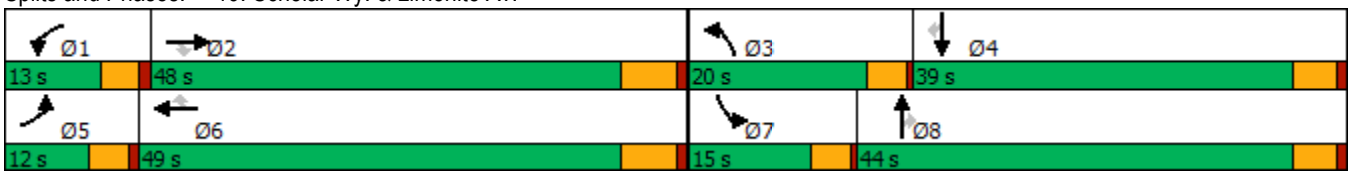
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	22.3	9.5	16.2	10.6	19.3	7.8	17.9
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	3.5	6.6	6.1	7.2	6.0	8.9	4.9	10.1
Green Ext Time (p_c), s	0.0	3.1	0.1	1.6	0.2	4.3	0.0	2.6

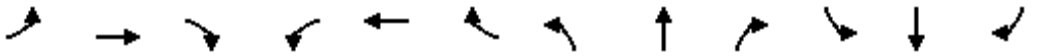
Intersection Summary	
HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	732	66	67	658	37	93	180	127	55	208	34
Future Volume (vph)	41	732	66	67	658	37	93	180	127	55	208	34
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	6.4	23.8	23.8	7.4	27.0	27.0	9.0	17.4	17.4	7.2	13.7	13.7
Actuated g/C Ratio	0.09	0.34	0.34	0.11	0.39	0.39	0.13	0.25	0.25	0.10	0.20	0.20
v/c Ratio	0.27	0.63	0.11	0.37	0.50	0.06	0.42	0.40	0.27	0.31	0.31	0.12
Control Delay	43.5	24.4	0.3	43.9	20.7	0.2	41.3	28.4	6.9	42.1	28.3	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	24.4	0.3	43.9	20.7	0.2	41.3	28.4	6.9	42.1	28.3	28.5
LOS	D	C	A	D	C	A	D	C	A	D	C	C
Approach Delay		23.5			21.7			24.6			30.9	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 69.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 24.0	Intersection LOS: C
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 19: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	732	66	67	658	37	93	180	127	55	208	34
Future Volume (veh/h)	41	732	66	67	658	37	93	180	127	55	208	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	44	779	50	71	700	28	99	191	90	59	221	36
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	1211	539	91	1260	561	128	343	287	81	558	239
Arrive On Green	0.04	0.34	0.34	0.05	0.35	0.35	0.07	0.18	0.18	0.04	0.15	0.15
Sat Flow, veh/h	1810	3610	1606	1810	3610	1608	1810	1900	1589	1810	3610	1548
Grp Volume(v), veh/h	44	779	50	71	700	28	99	191	90	59	221	36
Grp Sat Flow(s),veh/h/ln	1810	1805	1606	1810	1805	1608	1810	1900	1589	1810	1805	1548
Q Serve(g_s), s	1.2	9.2	1.1	1.9	7.9	0.6	2.7	4.6	2.5	1.6	2.8	1.0
Cycle Q Clear(g_c), s	1.2	9.2	1.1	1.9	7.9	0.6	2.7	4.6	2.5	1.6	2.8	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1211	539	91	1260	561	128	343	287	81	558	239
V/C Ratio(X)	0.67	0.64	0.09	0.78	0.56	0.05	0.77	0.56	0.31	0.73	0.40	0.15
Avail Cap(c_a), veh/h	271	3025	1346	307	3097	1379	578	1478	1236	397	2449	1050
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	14.1	11.4	23.5	13.2	10.8	22.9	18.7	17.8	23.6	19.1	18.3
Incr Delay (d2), s/veh	4.2	0.6	0.1	5.4	0.4	0.0	3.7	1.0	0.5	4.6	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.8	0.3	0.8	2.4	0.2	1.2	1.9	0.8	0.7	1.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.1	14.7	11.5	29.0	13.6	10.8	26.6	19.7	18.3	28.3	19.4	18.5
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		873			799			380			316	
Approach Delay, s/veh		15.2			14.8			21.2			21.0	
Approach LOS		B			B			C			C	

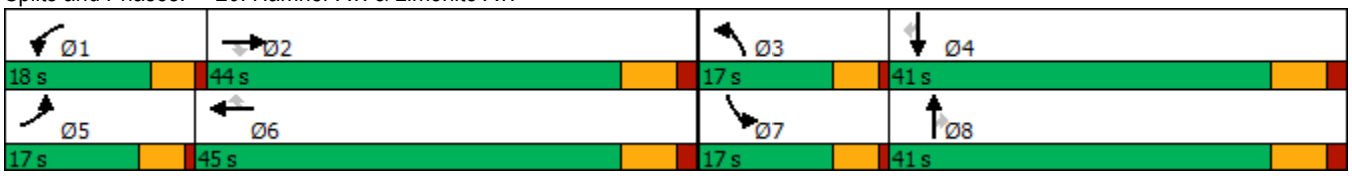
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	22.8	7.5	12.8	6.3	23.5	6.2	14.1
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	3.9	11.2	4.7	4.8	3.2	9.9	3.6	6.6
Green Ext Time (p_c), s	0.0	5.4	0.0	1.2	0.0	4.7	0.0	1.1

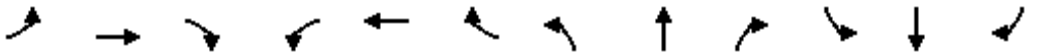
Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	167	627	38	225	520	103	149	611	315	204	347	101
Future Volume (vph)	167	627	38	225	520	103	149	611	315	204	347	101
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	8.9	23.5	23.5	10.4	24.9	24.9	8.5	25.7	25.7	9.7	26.9	26.9
Actuated g/C Ratio	0.09	0.25	0.25	0.11	0.26	0.26	0.09	0.27	0.27	0.10	0.29	0.29
v/c Ratio	0.55	0.53	0.08	0.63	0.59	0.22	0.51	0.47	0.55	0.61	0.25	0.20
Control Delay	50.3	32.8	0.3	50.6	33.8	5.2	50.0	30.5	12.0	51.0	27.4	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.3	32.8	0.3	50.6	33.8	5.2	50.0	30.5	12.0	51.0	27.4	5.0
LOS	D	C	A	D	C	A	D	C	B	D	C	A
Approach Delay		34.9			34.8			27.8			31.3	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.1	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 31.9	Intersection LOS: C
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 20: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	627	38	225	520	103	149	611	315	204	347	101
Future Volume (veh/h)	167	627	38	225	520	103	149	611	315	204	347	101
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	182	682	31	245	565	75	162	664	178	222	377	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	267	1297	397	334	972	428	245	1330	406	310	1426	437
Arrive On Green	0.08	0.25	0.25	0.10	0.27	0.27	0.07	0.26	0.26	0.09	0.27	0.27
Sat Flow, veh/h	3510	5187	1587	3510	3610	1590	3510	5187	1584	3510	5187	1590
Grp Volume(v), veh/h	182	682	31	245	565	75	162	664	178	222	377	46
Grp Sat Flow(s),veh/h/ln	1755	1729	1587	1755	1805	1590	1755	1729	1584	1755	1729	1590
Q Serve(g_s), s	3.9	8.8	1.2	5.3	10.5	2.8	3.5	8.4	7.3	4.8	4.4	1.7
Cycle Q Clear(g_c), s	3.9	8.8	1.2	5.3	10.5	2.8	3.5	8.4	7.3	4.8	4.4	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	267	1297	397	334	972	428	245	1330	406	310	1426	437
V/C Ratio(X)	0.68	0.53	0.08	0.73	0.58	0.18	0.66	0.50	0.44	0.72	0.26	0.11
Avail Cap(c_a), veh/h	544	2480	758	590	1772	780	544	2279	696	544	2279	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	25.1	22.2	34.1	24.5	21.7	35.1	24.5	24.1	34.3	21.9	21.0
Incr Delay (d2), s/veh	1.1	0.7	0.2	1.2	1.2	0.4	1.1	0.6	1.6	1.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.4	0.4	2.1	4.2	1.0	1.4	3.2	2.7	1.9	1.7	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.0	25.8	22.4	35.2	25.7	22.1	36.2	25.2	25.7	35.5	22.2	21.2
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		895			885			1004			645	
Approach Delay, s/veh		27.7			28.0			27.0			26.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	26.4	10.4	28.3	10.9	27.8	11.8	26.9
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	7.3	10.8	5.5	6.4	5.9	12.5	6.8	10.4
Green Ext Time (p_c), s	0.1	8.6	0.1	4.8	0.1	7.3	0.1	9.2

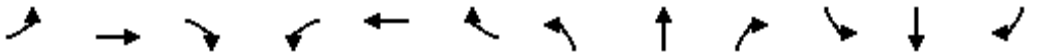
Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	789	490	560	643	91	0	372
Future Volume (vph)	789	490	560	643	91	0	372
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	36.5	36.5	23.5	23.5	23.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.6	73.6	73.6	73.6	7.2	7.2	7.2
Actuated g/C Ratio	0.80	0.80	0.80	0.80	0.08	0.08	0.08
v/c Ratio	0.20	0.37	0.14	0.47	0.35	0.35	0.67
Control Delay	2.4	1.0	2.2	1.3	47.0	47.0	10.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	2.4	1.0	2.2	1.4	47.0	47.0	10.6
LOS	A	A	A	A	D	D	B
Approach Delay	1.9		1.8			17.8	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 4.3	Intersection LOS: A
Intersection Capacity Utilization 44.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 21: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↲	↱↱
Traffic Volume (veh/h)	0	789	490	0	560	643	0	0	0	91	0	372
Future Volume (veh/h)	0	789	490	0	560	643	0	0	0	91	0	372
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	813	468	0	577	663				94	0	176
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4148	1271	0	4148	1288				292	0	259
Arrive On Green	0.00	0.80	0.80	0.00	0.80	0.80				0.08	0.00	0.08
Sat Flow, veh/h	0	5358	1590	0	5358	1610				3619	0	3208
Grp Volume(v), veh/h	0	813	468	0	577	663				94	0	176
Grp Sat Flow(s),veh/h/ln	0	1729	1590	0	1729	1610				1810	0	1604
Q Serve(g_s), s	0.0	3.4	7.7	0.0	2.3	12.9				2.3	0.0	4.9
Cycle Q Clear(g_c), s	0.0	3.4	7.7	0.0	2.3	12.9				2.3	0.0	4.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4148	1271	0	4148	1288				292	0	259
V/C Ratio(X)	0.00	0.20	0.37	0.00	0.14	0.51				0.32	0.00	0.68
Avail Cap(c_a), veh/h	0	4148	1271	0	4148	1288				1398	0	1239
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.2	2.6	0.0	2.1	3.1				39.9	0.0	41.1
Incr Delay (d2), s/veh	0.0	0.1	0.8	0.0	0.1	1.5				0.2	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	1.6	0.0	0.5	2.8				1.0	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.3	3.4	0.0	2.1	4.6				40.1	0.0	42.3
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1281			1240						270	
Approach Delay, s/veh		2.7			3.5						41.5	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		12.9		79.0						
Change Period (Y+Rc), s		5.5		5.5		5.5						
Max Green Setting (Gmax), s		73.5		35.5		73.5						
Max Q Clear Time (g_c+I1), s		9.7		6.9		14.9						
Green Ext Time (p_c), s		5.1		0.5		4.2						

Intersection Summary												
HCM 6th Ctrl Delay			6.8									
HCM 6th LOS			A									

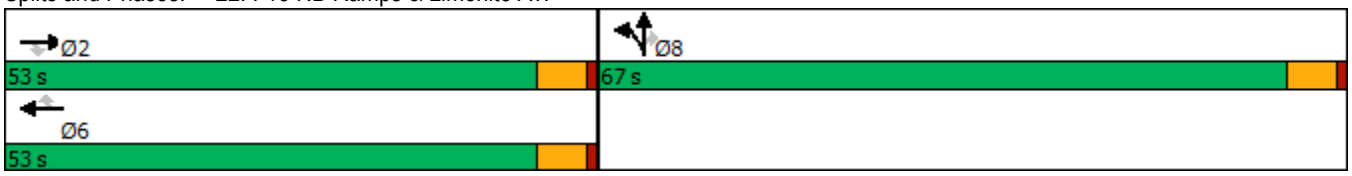
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	321	559	935	253	268	0	305
Future Volume (vph)	321	559	935	253	268	0	305
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.6	47.6	47.6	47.6	11.5	11.5	11.5
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.16	0.16	0.16
v/c Ratio	0.09	0.45	0.27	0.22	0.48	0.49	0.43
Control Delay	4.3	1.8	5.0	1.3	32.4	32.5	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.3	1.8	5.0	1.3	32.4	32.5	5.4
LOS	A	A	A	A	C	C	A
Approach Delay	2.7		4.2			18.0	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 70.1	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 39.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 22: I-15 NB Ramps & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↰	↱↱			
Traffic Volume (veh/h)	0	321	559	0	935	253	268	0	305	0	0	0
Future Volume (veh/h)	0	321	559	0	935	253	268	0	305	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	328	570	0	954	225	273	0	113			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3697	1147	0	3697	1148	442	0	394			
Arrive On Green	0.00	0.71	0.71	0.00	0.71	0.71	0.12	0.00	0.12			
Sat Flow, veh/h	0	5358	1609	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	328	570	0	954	225	273	0	113			
Grp Sat Flow(s),veh/h/ln	0	1729	1609	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	1.3	10.5	0.0	4.3	3.1	4.8	0.0	2.1			
Cycle Q Clear(g_c), s	0.0	1.3	10.5	0.0	4.3	3.1	4.8	0.0	2.1			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3697	1147	0	3697	1148	442	0	394			
V/C Ratio(X)	0.00	0.09	0.50	0.00	0.26	0.20	0.62	0.00	0.29			
Avail Cap(c_a), veh/h	0	3697	1147	0	3697	1148	3340	0	2972			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	2.9	4.3	0.0	3.4	3.2	27.8	0.0	26.6			
Incr Delay (d2), s/veh	0.0	0.0	1.5	0.0	0.2	0.4	1.4	0.0	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.3	2.4	0.0	0.9	0.7	2.0	0.0	0.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.0	5.8	0.0	3.5	3.6	29.2	0.0	27.0			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		898			1179			386				
Approach Delay, s/veh		4.8			3.5			28.5				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		13.6				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		12.5				6.3		6.8				
Green Ext Time (p_c), s		2.6				5.4		1.4				
Intersection Summary												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									

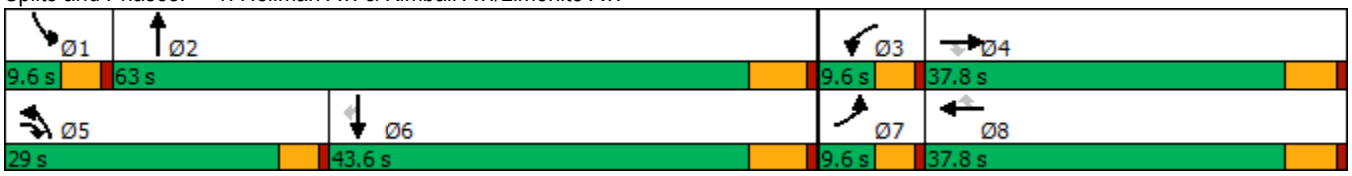
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	22	773	205	390	656	48	153	38	47	70	115
Future Volume (vph)	22	773	205	390	656	48	153	38	47	70	115
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	9.6	37.8	29.0	9.6	37.8	37.8	29.0	63.0	9.6	43.6	43.6
Total Split (%)	8.0%	31.5%	24.2%	8.0%	31.5%	31.5%	24.2%	52.5%	8.0%	36.3%	36.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	5.0	32.0	62.3	5.0	36.0	36.0	24.4	56.9	5.0	35.4	35.4
Actuated g/C Ratio	0.04	0.27	0.53	0.04	0.30	0.30	0.21	0.48	0.04	0.30	0.30
v/c Ratio	0.34	1.67	0.25	2.94	0.66	0.09	0.48	0.27	0.68	0.07	0.21
Control Delay	69.4	339.1	5.6	906.4	40.9	0.3	47.5	10.9	98.4	29.5	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.4	339.1	5.6	906.4	40.9	0.3	47.5	10.9	98.4	29.5	3.3
LOS	E	F	A	F	D	A	D	B	F	C	A
Approach Delay		264.8			347.6			21.3		30.3	
Approach LOS		F			F			C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.94	
Intersection Signal Delay: 232.0	Intersection LOS: F
Intersection Capacity Utilization 90.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	773	205	390	656	48	153	38	344	47	70	115
Future Volume (veh/h)	22	773	205	390	656	48	153	38	344	47	70	115
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	1700	1800	1800	1800	1800	1800	1700	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	23	814	216	411	691	51	161	40	362	49	74	121
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	483	721	139	984	439	331	814	726	62	1053	469
Arrive On Green	0.02	0.27	0.27	0.04	0.29	0.29	0.20	0.48	0.48	0.04	0.31	0.31
Sat Flow, veh/h	1619	1800	1525	3326	3420	1525	1619	1710	1525	1714	3420	1525
Grp Volume(v), veh/h	23	814	216	411	691	51	161	40	362	49	74	121
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1663	1710	1525	1619	1710	1525	1714	1710	1525
Q Serve(g_s), s	1.7	32.0	10.4	5.0	21.5	2.9	10.5	1.5	19.5	3.4	1.8	7.1
Cycle Q Clear(g_c), s	1.7	32.0	10.4	5.0	21.5	2.9	10.5	1.5	19.5	3.4	1.8	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	483	721	139	984	439	331	814	726	62	1053	469
V/C Ratio(X)	0.64	1.69	0.30	2.95	0.70	0.12	0.49	0.05	0.50	0.79	0.07	0.26
Avail Cap(c_a), veh/h	68	483	721	139	984	439	331	814	726	72	1072	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.8	43.7	19.3	57.2	37.9	31.3	41.9	16.8	21.5	57.0	29.2	31.1
Incr Delay (d2), s/veh	6.7	317.7	0.2	896.3	2.3	0.1	5.0	0.1	2.4	33.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	56.3	3.5	19.4	9.0	1.1	4.5	0.6	6.9	2.0	0.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	361.4	19.6	953.4	40.2	31.4	47.0	16.9	23.9	90.4	29.2	31.3
LnGrp LOS	E	F	B	F	D	C	D	B	C	F	C	C
Approach Vol, veh/h		1053			1153			563			244	
Approach Delay, s/veh		284.8			365.3			30.0			42.6	
Approach LOS		F			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	63.0	9.6	37.8	29.0	42.9	7.3	40.1
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	56.8	5.0	32.0	24.4	37.4	5.0	32.0
Max Q Clear Time (g_c+I1), s	5.4	21.5	7.0	34.0	12.5	9.1	3.7	23.5
Green Ext Time (p_c), s	0.0	2.5	0.0	0.0	0.1	0.7	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	248.4
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	936	2	0	997	3	0	0	6	0	0	12
Future Vol, veh/h	0	936	2	0	997	3	0	0	6	0	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1017	2	0	1084	3	0	0	7	0	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	510	-	-	544
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	514	0	0	488
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	514	-	-	488
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.1	12.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	514	-	-	-	-	488
HCM Lane V/C Ratio	0.013	-	-	-	-	0.027
HCM Control Delay (s)	12.1	-	-	-	-	12.6
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1

Intersection	
Intersection Delay, s/veh	6.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1023	1118	44	30
Demand Flow Rate, veh/h	1023	1118	44	30
Vehicles Circulating, veh/h	59	11	1038	1117
Vehicles Exiting, veh/h	1088	1071	44	12
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.4	6.5	7.0	7.2
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	LT	TR	LTR	LTR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
Entry Flow, veh/h	481	542	525	593	44	30
Cap Entry Lane, veh/h	1279	1351	1336	1407	588	549
Entry HV Adj Factor	1.000	1.000	1.001	0.999	1.000	1.000
Flow Entry, veh/h	481	542	525	593	44	30
Cap Entry, veh/h	1278	1351	1337	1406	588	549
V/C Ratio	0.376	0.401	0.393	0.421	0.075	0.055
Control Delay, s/veh	6.4	6.4	6.4	6.5	7.0	7.2
LOS	A	A	A	A	A	A
95th %tile Queue, veh	2	2	2	2	0	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	1002	15	0	997	11	0	0	40	0	0	31
Future Vol, veh/h	0	1002	15	0	997	11	0	0	40	0	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1089	16	0	1084	12	0	0	43	0	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	553	-	-	548
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	482	0	0	485
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	482	-	-	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.2	13
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	482	-	-	-	-	485
HCM Lane V/C Ratio	0.09	-	-	-	-	0.069
HCM Control Delay (s)	13.2	-	-	-	-	13
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	125	55	8	14	0
Future Vol, veh/h	0	125	55	8	14	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, %	0	0	0	0	0	0
Mvmt Flow	0	136	60	9	15	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	69	0	-	0	201	65
Stage 1	-	-	-	-	65	-
Stage 2	-	-	-	-	136	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1545	-	-	-	792	1005
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	895	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1545	-	-	-	792	1005
Mov Cap-2 Maneuver	-	-	-	-	792	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	895	-

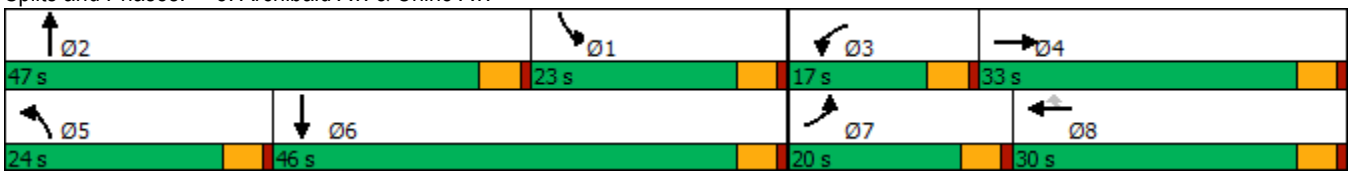
Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

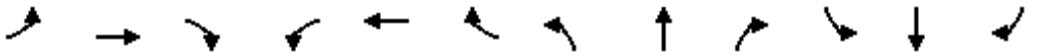
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1545	-	-	-	792
HCM Lane V/C Ratio	-	-	-	-	0.019
HCM Control Delay (s)	0	-	-	-	9.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	129	166	20	45	113	58	799	145	1113
Future Volume (vph)	129	166	20	45	113	58	799	145	1113
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.3	23.5	6.9	10.9	10.9	8.9	22.8	26.0	42.5
Actuated g/C Ratio	0.14	0.26	0.08	0.12	0.12	0.10	0.25	0.29	0.47
v/c Ratio	0.62	0.61	0.17	0.22	0.39	0.38	0.71	0.33	0.77
Control Delay	52.8	35.6	47.8	39.8	8.2	49.1	34.8	32.5	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	35.6	47.8	39.8	8.2	49.1	34.8	32.5	27.3
LOS	D	D	D	D	A	D	C	C	C
Approach Delay		41.2		20.6			35.7		27.9
Approach LOS		D		C			D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 31.8	Intersection LOS: C
Intersection Capacity Utilization 68.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	166	102	20	45	113	58	799	39	145	1113	60
Future Volume (veh/h)	129	166	102	20	45	113	58	799	39	145	1113	60
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	134	173	106	21	47	79	60	832	38	151	1159	57
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	169	217	133	39	230	195	82	1270	58	367	1459	72
Arrive On Green	0.10	0.21	0.21	0.02	0.13	0.13	0.05	0.26	0.26	0.23	0.44	0.44
Sat Flow, veh/h	1619	1045	640	1619	1800	1525	1619	4817	219	1619	3318	163
Grp Volume(v), veh/h	134	0	279	21	47	79	60	565	305	151	597	619
Grp Sat Flow(s),veh/h/ln	1619	0	1685	1619	1800	1525	1619	1638	1760	1619	1710	1771
Q Serve(g_s), s	5.4	0.0	10.4	0.8	1.5	1.8	2.4	10.2	10.2	5.3	19.9	19.9
Cycle Q Clear(g_c), s	5.4	0.0	10.4	0.8	1.5	1.8	2.4	10.2	10.2	5.3	19.9	19.9
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.12	1.00		0.09
Lane Grp Cap(c), veh/h	169	0	350	39	230	195	82	864	464	367	752	779
V/C Ratio(X)	0.79	0.00	0.80	0.54	0.20	0.41	0.73	0.65	0.66	0.41	0.79	0.79
Avail Cap(c_a), veh/h	377	0	723	303	690	585	474	2098	1127	450	1069	1107
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	24.9	31.9	25.9	9.0	31.0	21.7	21.7	21.8	16.0	16.0
Incr Delay (d2), s/veh	8.2	0.0	4.2	10.9	0.4	1.4	12.0	0.8	1.6	0.7	2.8	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	4.2	0.4	0.6	1.1	1.1	3.4	3.7	1.8	6.6	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	0.0	29.1	42.8	26.3	10.3	43.0	22.5	23.3	22.6	18.7	18.7
LnGrp LOS	D	A	C	D	C	B	D	C	C	C	B	B
Approach Vol, veh/h		413			147			930			1367	
Approach Delay, s/veh		31.7			20.1			24.1			19.1	
Approach LOS		C			C			C			B	

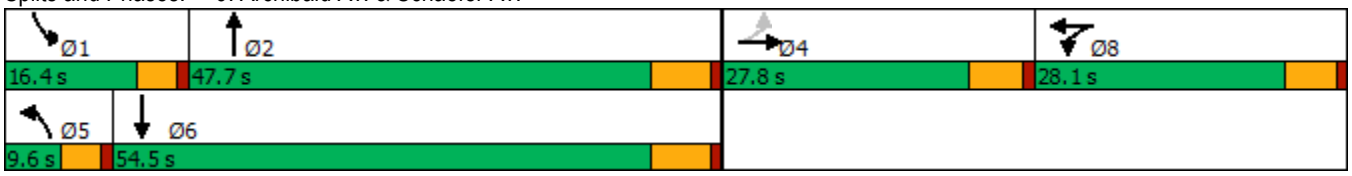
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.6	22.1	6.2	18.4	7.9	33.7	11.5	13.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	7.3	12.2	2.8	12.4	4.4	21.9	7.4	3.8
Green Ext Time (p_c), s	0.3	5.3	0.0	1.3	0.1	7.2	0.2	0.4

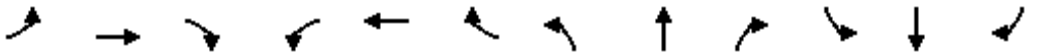
Intersection Summary	
HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

Lane Group	WBL	WBT	NBT	SBL	SBT	Ø4	Ø5
Lane Configurations							
Traffic Volume (vph)	11	0	788	37	1154		
Future Volume (vph)	11	0	788	37	1154		
Turn Type	Split	NA	NA	Prot	NA		
Protected Phases	8	8	2	1	6	4	5
Permitted Phases							
Detector Phase	8	8	2	1	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	27.8	27.8	28.5	9.6	28.5	27.8	9.6
Total Split (s)	28.1	28.1	47.7	16.4	54.5	27.8	9.6
Total Split (%)	23.4%	23.4%	39.8%	13.7%	45.4%	23%	8%
Yellow Time (s)	4.8	4.8	5.5	3.6	5.5	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	6.5	4.6	6.5		
Lead/Lag			Lag	Lead	Lag		Lead
Lead-Lag Optimize?			Yes	Yes	Yes		Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	15.2	15.2	32.0	8.2	35.7		
Actuated g/C Ratio	0.30	0.30	0.63	0.16	0.70		
v/c Ratio	0.02	0.06	0.28	0.15	0.51		
Control Delay	25.7	0.1	13.8	32.2	12.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	25.7	0.1	13.8	32.2	12.1		
LOS	C	A	B	C	B		
Approach Delay		5.6	13.8		12.7		
Approach LOS		A	B		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 50.8	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	11	0	42	0	788	24	37	1154	0
Future Volume (veh/h)	0	0	0	11	0	42	0	788	24	37	1154	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	0	0	12	0	28	0	829	24	39	1215	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	5	0	149	0	140	5	1910	55	73	1927	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.39	0.39	0.04	0.56	0.00
Sat Flow, veh/h	0	1800	0	1619	0	1525	1619	4905	142	1619	3510	0
Grp Volume(v), veh/h	0	0	0	12	0	28	0	553	300	39	1215	0
Grp Sat Flow(s),veh/h/ln	0	1800	0	1619	0	1525	1619	1638	1771	1619	1710	0
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.6	0.0	4.4	4.4	0.8	8.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.2	0.0	0.6	0.0	4.4	4.4	0.8	8.6	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.08	1.00		0.00
Lane Grp Cap(c), veh/h	0	5	0	149	0	140	5	1276	690	73	1927	0
V/C Ratio(X)	0.00	0.00	0.00	0.08	0.00	0.20	0.00	0.43	0.43	0.54	0.63	0.00
Avail Cap(c_a), veh/h	0	1110	0	1012	0	954	227	3785	2046	536	4603	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.8	0.0	15.0	0.0	8.0	8.0	16.7	5.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.7	0.0	0.2	0.4	2.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.7	0.8	0.3	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	15.0	0.0	15.7	0.0	8.2	8.4	18.9	5.6	0.0
LnGrp LOS	A	A	A	B	A	B	A	A	A	B	A	A
Approach Vol, veh/h		0			40			853			1254	
Approach Delay, s/veh		0.0			15.5			8.3			6.0	
Approach LOS					B			A			A	

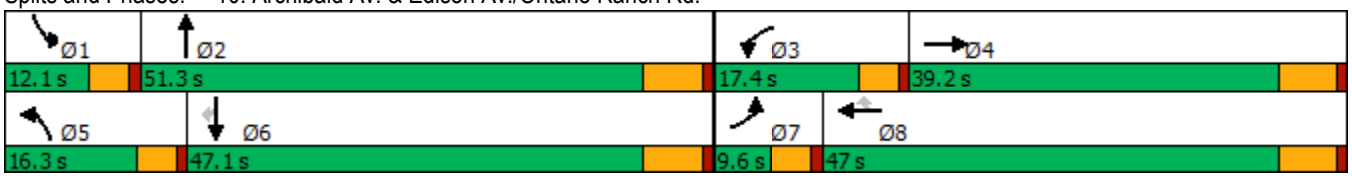
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	20.4		0.0	0.0	26.6		9.1				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	2.8	6.4		0.0	0.0	10.6		2.6				
Green Ext Time (p_c), s	0.0	5.2		0.0	0.0	9.5		0.1				

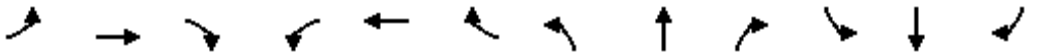
Intersection Summary			
HCM 6th Ctrl Delay		7.1	
HCM 6th LOS		A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	631	114	307	222	90	57	554	326	135	1012	90
Future Volume (vph)	95	631	114	307	222	90	57	554	326	135	1012	90
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.2	25.7	104.1	13.2	33.8	33.8	8.3	34.8	104.1	7.8	37.0	37.0
Actuated g/C Ratio	0.05	0.25	1.00	0.13	0.32	0.32	0.08	0.33	1.00	0.07	0.36	0.36
v/c Ratio	0.67	0.77	0.08	0.84	0.39	0.16	0.46	0.50	0.22	1.16	0.86	0.15
Control Delay	76.0	44.3	0.1	68.3	31.2	3.8	61.8	28.9	0.3	177.9	40.8	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.0	44.3	0.1	68.3	31.2	3.8	61.8	28.9	0.3	177.9	40.8	0.8
LOS	E	D	A	E	C	A	E	C	A	F	D	A
Approach Delay		41.9			45.6			20.9			52.8	
Approach LOS		D			D			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 40.8	Intersection LOS: D
Intersection Capacity Utilization 80.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	631	114	307	222	90	57	554	326	135	1012	90
Future Volume (veh/h)	95	631	114	307	222	90	57	554	326	135	1012	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	98	651	0	316	229	59	59	571	0	139	1043	77
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	147	807		374	563	477	73	1112		129	1230	536
Arrive On Green	0.05	0.24	0.00	0.13	0.31	0.31	0.05	0.33	0.00	0.08	0.36	0.36
Sat Flow, veh/h	2956	3420	1525	2956	1800	1525	1619	3420	1525	1619	3420	1490
Grp Volume(v), veh/h	98	651	0	316	229	59	59	571	0	139	1043	77
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1800	1525	1619	1710	1525	1619	1710	1490
Q Serve(g_s), s	3.1	16.9	0.0	9.8	9.4	2.6	3.4	12.7	0.0	7.5	26.4	3.3
Cycle Q Clear(g_c), s	3.1	16.9	0.0	9.8	9.4	2.6	3.4	12.7	0.0	7.5	26.4	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	807		374	563	477	73	1112		129	1230	536
V/C Ratio(X)	0.67	0.81		0.85	0.41	0.12	0.81	0.51		1.08	0.85	0.14
Avail Cap(c_a), veh/h	157	1199		402	780	661	201	1628		129	1475	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	33.9	0.0	40.2	25.5	23.1	44.5	25.7	0.0	43.3	27.8	20.4
Incr Delay (d2), s/veh	7.2	2.6	0.0	13.4	0.5	0.1	7.5	0.4	0.0	101.4	4.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.8	0.0	4.1	3.8	0.9	1.4	4.7	0.0	6.4	10.3	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	36.5	0.0	53.6	25.9	23.2	52.0	26.1	0.0	144.7	31.9	20.5
LnGrp LOS	D	D		D	C	C	D	C		F	C	C
Approach Vol, veh/h		749	A		604			630	A		1259	
Approach Delay, s/veh		38.4			40.1			28.5			43.7	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	37.1	16.5	28.4	8.9	40.3	9.3	35.6
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	9.5	14.7	11.8	18.9	5.4	28.4	5.1	11.4
Green Ext Time (p_c), s	0.0	3.4	0.1	3.3	0.0	5.2	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D

Notes

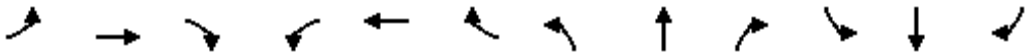
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	19	917	8	53	1379
Future Volume (vph)	3	19	917	8	53	1379
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8		2		
Detector Phase	3	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.5	9.5	32.5	32.5	9.6	16.5
Total Split (s)	9.5	9.5	41.4	41.4	9.6	51.0
Total Split (%)	13.6%	13.6%	59.1%	59.1%	13.7%	72.9%
Yellow Time (s)	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	5.1	5.1	47.0	47.0	5.1	56.4
Actuated g/C Ratio	0.08	0.08	0.77	0.77	0.08	0.93
v/c Ratio	0.01	0.05	0.36	0.01	0.41	0.45
Control Delay	26.3	0.2	5.5	6.1	36.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	0.2	5.5	6.1	36.5	2.8
LOS	C	A	A	A	D	A
Approach Delay			5.5			4.1
Approach LOS			A			A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 60.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 4.6	Intersection LOS: A
Intersection Capacity Utilization 52.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	3	0	19	0	917	8	53	1379	0
Future Volume (veh/h)	0	0	0	3	0	19	0	917	8	53	1379	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				1700	0	1800	0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h				3	0	1	0	945	7	55	1422	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				17	0	14	0	2270	1012	83	2727	0
Arrive On Green				0.01	0.00	0.01	0.00	0.66	0.66	0.05	0.80	0.00
Sat Flow, veh/h				3141	0	2685	0	3510	1525	1619	3510	0
Grp Volume(v), veh/h				3	0	1	0	945	7	55	1422	0
Grp Sat Flow(s),veh/h/ln				1570	0	1342	0	1710	1525	1619	1710	0
Q Serve(g_s), s				0.1	0.0	0.0	0.0	7.2	0.1	1.9	8.0	0.0
Cycle Q Clear(g_c), s				0.1	0.0	0.0	0.0	7.2	0.1	1.9	8.0	0.0
Prop In Lane				1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				17	0	14	0	2270	1012	83	2727	0
V/C Ratio(X)				0.18	0.00	0.07	0.00	0.42	0.01	0.66	0.52	0.00
Avail Cap(c_a), veh/h				281	0	241	0	2270	1012	145	2727	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.6	0.0	27.6	0.0	4.4	3.2	26.0	2.0	0.0
Incr Delay (d2), s/veh				4.9	0.0	2.0	0.0	0.6	0.0	3.3	0.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.0	0.0	0.0	0.0	1.0	0.0	0.7	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.5	0.0	29.6	0.0	4.9	3.2	29.3	2.7	0.0
LnGrp LOS				C	A	C	A	A	A	C	A	A
Approach Vol, veh/h					4			952			1477	
Approach Delay, s/veh					31.8			4.9			3.7	
Approach LOS					C			A			A	

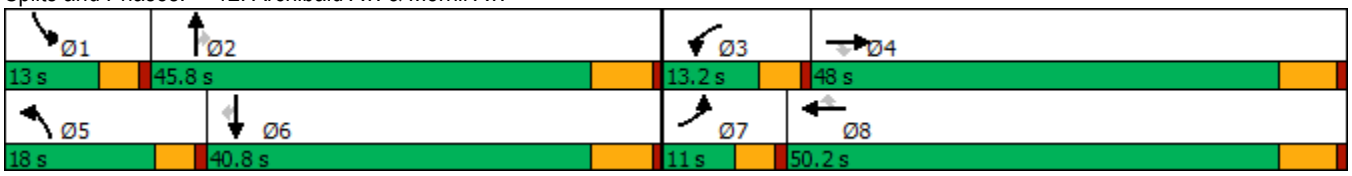
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	7.5	43.5				51.0		4.8				
Change Period (Y+Rc), s	4.6	6.5				6.5		4.5				
Max Green Setting (Gmax), s	5.0	34.9				44.5		5.0				
Max Q Clear Time (g_c+I1), s	3.9	9.2				10.0		2.1				
Green Ext Time (p_c), s	0.0	6.2				11.8		0.0				

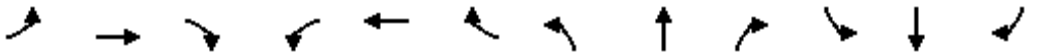
Intersection Summary												
HCM 6th Ctrl Delay			4.2									
HCM 6th LOS			A									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	75	519	49	25	54	210	738	55	72	1146	56
Future Volume (vph)	79	75	519	49	25	54	210	738	55	72	1146	56
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	11.0	48.0	48.0	13.2	50.2	50.2	18.0	45.8	45.8	13.0	40.8	40.8
Total Split (%)	9.2%	40.0%	40.0%	11.0%	41.8%	41.8%	15.0%	38.2%	38.2%	10.8%	34.0%	34.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	8.6	27.4	27.4	7.2	27.7	27.7	13.7	44.5	44.5	6.9	35.1	35.1
Actuated g/C Ratio	0.08	0.27	0.27	0.07	0.27	0.27	0.13	0.43	0.43	0.07	0.34	0.34
v/c Ratio	0.60	0.16	0.91	0.46	0.05	0.11	1.01	0.52	0.08	0.38	1.02	0.09
Control Delay	72.0	29.2	39.1	64.1	26.2	0.4	112.1	27.8	0.2	56.1	66.9	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.0	29.2	39.1	64.1	26.2	0.4	112.1	27.8	0.2	56.1	66.9	0.3
LOS	E	C	D	E	C	A	F	C	A	E	E	A
Approach Delay		41.8			29.9			43.9			63.3	
Approach LOS		D			C			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 50.9	Intersection LOS: D
Intersection Capacity Utilization 85.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	75	519	49	25	54	210	738	55	72	1146	56
Future Volume (veh/h)	79	75	519	49	25	54	210	738	55	72	1146	56
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	81	77	350	51	26	17	216	761	43	74	1181	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	101	461	391	63	419	355	220	1502	670	130	1188	530
Arrive On Green	0.06	0.26	0.26	0.04	0.23	0.23	0.14	0.44	0.44	0.04	0.35	0.00
Sat Flow, veh/h	1619	1800	1525	1619	1800	1525	1619	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	81	77	350	51	26	17	216	761	43	74	1181	0
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	1710	1525	1478	1710	1525
Q Serve(g_s), s	4.9	3.3	21.9	3.1	1.1	0.9	13.1	15.8	1.6	2.4	34.0	0.0
Cycle Q Clear(g_c), s	4.9	3.3	21.9	3.1	1.1	0.9	13.1	15.8	1.6	2.4	34.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	461	391	63	419	355	220	1502	670	130	1188	530
V/C Ratio(X)	0.81	0.17	0.90	0.81	0.06	0.05	0.98	0.51	0.06	0.57	0.99	0.00
Avail Cap(c_a), veh/h	105	762	646	141	802	680	220	1502	670	252	1188	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.7	28.5	35.4	47.1	29.5	29.4	42.5	20.0	16.0	46.3	32.1	0.0
Incr Delay (d2), s/veh	31.6	0.2	9.3	8.9	0.1	0.1	55.5	0.3	0.0	1.5	24.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	1.4	8.9	1.4	0.5	0.3	8.3	5.6	0.5	0.9	16.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.3	28.7	44.8	56.0	29.5	29.4	98.0	20.2	16.0	47.7	56.7	0.0
LnGrp LOS	E	C	D	E	C	C	F	C	B	D	E	A
Approach Vol, veh/h		508			94			1020			1255	
Approach Delay, s/veh		47.5			43.8			36.5			56.1	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	49.9	8.4	31.5	18.0	40.8	10.7	29.2
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	8.4	39.3	8.6	41.8	13.4	34.3	6.4	44.0
Max Q Clear Time (g_c+I1), s	4.4	17.8	5.1	23.9	15.1	36.0	6.9	3.1
Green Ext Time (p_c), s	0.0	4.6	0.0	1.4	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	47.3
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	9	0	1104	1709	3
Future Vol, veh/h	0	9	0	1104	1709	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	10	0	1200	1858	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	931	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	272	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	272	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

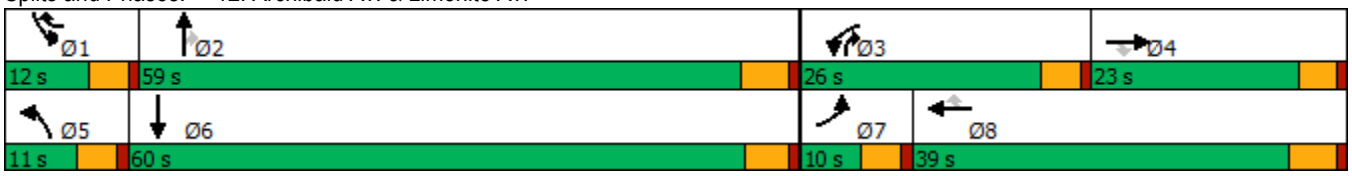
Approach	EB	NB	SB
HCM Control Delay, s	18.7	0	0
HCM LOS	C		

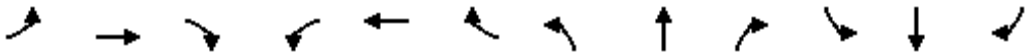
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	272	-	-
HCM Lane V/C Ratio	-	0.036	-	-
HCM Control Delay (s)	-	18.7	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	304	632	105	360	637	248	99	552	323	394	1052
Future Volume (vph)	304	632	105	360	637	248	99	552	323	394	1052
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	5.0	6.0	5.0	5.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	9.5	9.5	46.3	9.5	9.5	11.0
Total Split (s)	10.0	23.0	23.0	26.0	39.0	12.0	11.0	59.0	26.0	12.0	60.0
Total Split (%)	8.3%	19.2%	19.2%	21.7%	32.5%	10.0%	9.2%	49.2%	21.7%	10.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	3.5	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	4.5	4.5	5.3	4.5	4.5	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	5.5	18.6	18.6	21.6	33.8	46.7	6.5	46.8	69.2	7.5	48.1
Actuated g/C Ratio	0.05	0.16	0.16	0.19	0.30	0.41	0.06	0.41	0.61	0.07	0.42
v/c Ratio	1.86	1.11	0.28	1.09	0.62	0.33	1.00	0.73	0.34	3.45	0.92
Control Delay	441.1	116.5	5.0	119.9	38.1	8.9	143.6	34.1	7.9	1132.9	40.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	441.1	116.5	5.0	119.9	38.1	8.9	143.6	34.1	7.9	1132.9	40.1
LOS	F	F	A	F	D	A	F	C	A	F	D
Approach Delay		200.2			56.0			36.5			290.7
Approach LOS		F			E			D			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 113.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.45	
Intersection Signal Delay: 163.3	Intersection LOS: F
Intersection Capacity Utilization 104.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	304	632	105	360	637	248	99	552	323	394	1052	271
Future Volume (veh/h)	304	632	105	360	637	248	99	552	323	394	1052	271
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	317	658	109	375	664	139	103	575	255	410	1096	282
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	169	585	261	341	1091	593	103	783	953	119	1198	306
Arrive On Green	0.05	0.16	0.16	0.19	0.30	0.30	0.06	0.41	0.41	0.07	0.42	0.42
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	1900	1577	1810	2847	727
Grp Volume(v), veh/h	317	658	109	375	664	139	103	575	255	410	692	686
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	1900	1577	1810	1805	1769
Q Serve(g_s), s	5.5	18.5	6.9	21.5	17.9	6.8	6.5	29.1	8.8	7.5	41.1	41.9
Cycle Q Clear(g_c), s	5.5	18.5	6.9	21.5	17.9	6.8	6.5	29.1	8.8	7.5	41.1	41.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	169	585	261	341	1091	593	103	783	953	119	759	744
V/C Ratio(X)	1.87	1.12	0.42	1.10	0.61	0.23	1.00	0.73	0.27	3.45	0.91	0.92
Avail Cap(c_a), veh/h	169	585	261	341	1091	593	103	894	1045	119	870	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	47.8	43.0	46.3	34.0	24.9	53.8	28.3	10.9	53.3	31.0	31.3
Incr Delay (d2), s/veh	414.7	76.3	1.1	78.3	0.7	0.1	88.4	2.9	0.2	1122.2	11.7	13.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	14.2	2.7	16.6	7.6	2.5	5.4	12.9	2.7	40.3	18.6	18.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	469.0	124.1	44.0	124.6	34.7	25.0	142.2	31.2	11.0	1175.5	42.7	44.6
LnGrp LOS	F	F	D	F	C	C	F	C	B	F	D	D
Approach Vol, veh/h		1084			1178			933			1788	
Approach Delay, s/veh		216.9			62.2			38.0			303.2	
Approach LOS		F			E			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	52.3	26.0	23.8	11.0	53.3	10.0	39.8
Change Period (Y+Rc), s	4.5	5.3	4.5	* 5.3	4.5	* 5.3	4.5	5.3
Max Green Setting (Gmax), s	7.5	53.7	21.5	* 19	6.5	* 55	5.5	33.7
Max Q Clear Time (g_c+I1), s	9.5	31.1	23.5	20.5	8.5	43.9	7.5	19.9
Green Ext Time (p_c), s	0.0	5.3	0.0	0.0	0.0	4.1	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	177.8
HCM 6th LOS	F

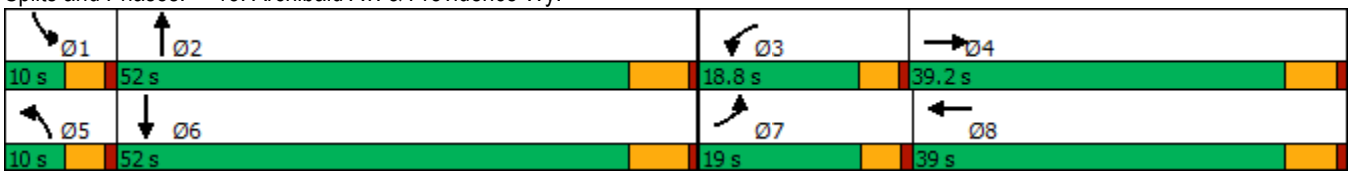
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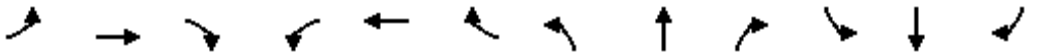
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	0	82	0	23	783	79	1398
Future Volume (vph)	105	0	82	0	23	783	79	1398
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	19.0	39.2	18.8	39.0	10.0	52.0	10.0	52.0
Total Split (%)	15.8%	32.7%	15.7%	32.5%	8.3%	43.3%	8.3%	43.3%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.9	14.4	12.6	13.8	5.5	42.5	5.7	51.7
Actuated g/C Ratio	0.11	0.17	0.15	0.16	0.06	0.49	0.07	0.60
v/c Ratio	0.55	0.09	0.34	0.22	0.22	0.53	0.72	0.72
Control Delay	51.7	0.4	43.5	1.2	51.4	20.2	78.3	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.7	0.4	43.5	1.2	51.4	20.2	78.3	22.5
LOS	D	A	D	A	D	C	E	C
Approach Delay		39.0		22.0		21.0		25.4
Approach LOS		D		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 24.4	Intersection LOS: C
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	0	34	82	0	85	23	783	87	79	1398	41
Future Volume (veh/h)	105	0	34	82	0	85	23	783	87	79	1398	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	113	0	28	89	0	92	25	842	95	86	1503	44
Peak Hour Factor	0.93	0.92	0.93	0.92	0.92	0.92	0.93	0.93	0.92	0.92	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	156	0	234	115	0	200	48	1508	170	111	1775	52
Arrive On Green	0.09	0.00	0.15	0.06	0.00	0.12	0.03	0.46	0.46	0.06	0.50	0.50
Sat Flow, veh/h	1810	0	1588	1810	0	1610	1810	3270	369	1810	3579	105
Grp Volume(v), veh/h	113	0	28	89	0	92	25	465	472	86	757	790
Grp Sat Flow(s),veh/h/ln	1810	0	1588	1810	0	1610	1810	1805	1834	1810	1805	1879
Q Serve(g_s), s	4.8	0.0	1.2	3.9	0.0	4.2	1.1	14.9	14.9	3.7	28.9	29.1
Cycle Q Clear(g_c), s	4.8	0.0	1.2	3.9	0.0	4.2	1.1	14.9	14.9	3.7	28.9	29.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		0.06
Lane Grp Cap(c), veh/h	156	0	234	115	0	200	48	833	846	111	895	932
V/C Ratio(X)	0.72	0.00	0.12	0.77	0.00	0.46	0.52	0.56	0.56	0.78	0.85	0.85
Avail Cap(c_a), veh/h	328	0	667	323	0	672	123	1040	1056	123	1040	1082
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	0.0	29.4	36.6	0.0	32.3	38.2	15.5	15.5	36.8	17.4	17.4
Incr Delay (d2), s/veh	2.4	0.0	0.2	4.0	0.0	1.6	3.2	0.6	0.6	20.9	5.8	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.4	1.7	0.0	1.6	0.5	5.2	5.3	2.2	11.0	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	0.0	29.7	40.7	0.0	34.0	41.4	16.1	16.1	57.7	23.2	23.2
LnGrp LOS	D	A	C	D	A	C	D	B	B	E	C	C
Approach Vol, veh/h		141			181			962			1633	
Approach Delay, s/veh		36.2			37.3			16.8			25.0	
Approach LOS		D			D			B			C	

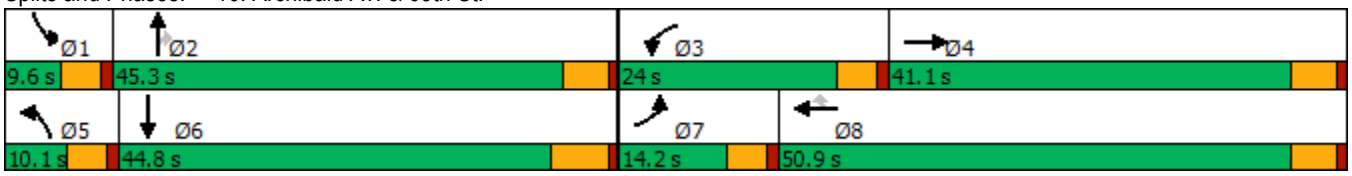
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	42.9	9.7	17.5	6.7	45.6	11.5	15.7
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.4	45.8	14.2	33.4	5.4	45.8	14.4	33.2
Max Q Clear Time (g_c+I1), s	5.7	16.9	5.9	3.2	3.1	31.1	6.8	6.2
Green Ext Time (p_c), s	0.0	5.8	0.1	0.1	0.0	8.3	0.1	0.4

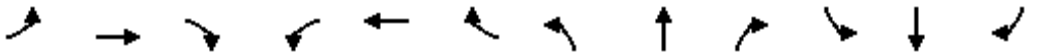
Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	37	30	135	40	37	48	819	235	124	1293
Future Volume (vph)	37	30	135	40	37	48	819	235	124	1293
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	6.6	14.2	12.4	20.8	20.8	5.5	42.0	42.0	5.1	42.8
Actuated g/C Ratio	0.07	0.16	0.14	0.23	0.23	0.06	0.47	0.47	0.06	0.48
v/c Ratio	0.29	0.13	0.57	0.10	0.08	0.46	0.51	0.28	1.27	0.60
Control Delay	49.6	17.8	48.3	27.4	0.4	59.7	21.3	4.0	217.9	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	17.8	48.3	27.4	0.4	59.7	21.3	4.0	217.9	22.5
LOS	D	B	D	C	A	E	C	A	F	C
Approach Delay		28.9		36.0			19.3			38.5
Approach LOS		C		D			B			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 89.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 30.8	Intersection LOS: C
Intersection Capacity Utilization 58.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	30	39	135	40	37	48	819	235	124	1293	96
Future Volume (veh/h)	37	30	39	135	40	37	48	819	235	124	1293	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	32	18	142	42	20	51	862	193	131	1361	85
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	64	274	140	178	346	293	75	1728	761	108	2479	155
Arrive On Green	0.04	0.12	0.12	0.10	0.18	0.18	0.04	0.48	0.48	0.06	0.50	0.50
Sat Flow, veh/h	1810	2293	1177	1810	1900	1610	1810	3610	1590	1810	4990	312
Grp Volume(v), veh/h	39	25	25	142	42	20	51	862	193	131	943	503
Grp Sat Flow(s),veh/h/ln	1810	1805	1665	1810	1900	1610	1810	1805	1590	1810	1729	1844
Q Serve(g_s), s	1.8	1.0	1.1	6.4	1.6	0.9	2.3	13.7	6.0	5.0	15.8	15.8
Cycle Q Clear(g_c), s	1.8	1.0	1.1	6.4	1.6	0.9	2.3	13.7	6.0	5.0	15.8	15.8
Prop In Lane	1.00		0.71	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	64	215	199	178	346	293	75	1728	761	108	1718	916
V/C Ratio(X)	0.61	0.11	0.13	0.80	0.12	0.07	0.68	0.50	0.25	1.22	0.55	0.55
Avail Cap(c_a), veh/h	207	774	714	418	1036	878	119	1728	761	108	1718	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	33.0	33.1	37.0	28.7	28.4	39.7	15.0	13.0	39.5	14.6	14.6
Incr Delay (d2), s/veh	3.4	0.2	0.3	3.1	0.2	0.1	4.0	1.0	0.8	155.8	1.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.4	0.5	2.9	0.7	0.3	1.1	5.2	2.1	6.7	5.5	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	33.2	33.4	40.1	28.9	28.5	43.7	16.0	13.8	195.3	15.9	17.0
LnGrp LOS	D	C	C	D	C	C	D	B	B	F	B	B
Approach Vol, veh/h		89			204			1106			1577	
Approach Delay, s/veh		37.7			36.7			16.9			31.1	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	46.4	12.9	15.1	8.1	47.9	7.6	20.4
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	7.0	15.7	8.4	3.1	4.3	17.8	3.8	3.6
Green Ext Time (p_c), s	0.0	6.8	0.1	0.2	0.0	9.2	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

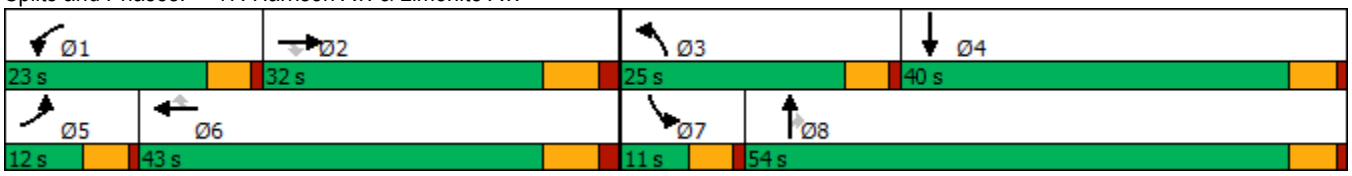
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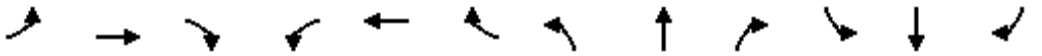
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	63	781	41	246	619	16	43	55	194	17	77
Future Volume (vph)	63	781	41	246	619	16	43	55	194	17	77
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	32.0	32.0	23.0	43.0	43.0	25.0	54.0	54.0	11.0	40.0
Total Split (%)	10.0%	26.7%	26.7%	19.2%	35.8%	35.8%	20.8%	45.0%	45.0%	9.2%	33.3%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.0	19.6	19.6	18.8	37.8	37.8	6.6	15.8	15.8	5.5	12.8
Actuated g/C Ratio	0.08	0.26	0.26	0.25	0.50	0.50	0.09	0.21	0.21	0.07	0.17
v/c Ratio	0.25	0.64	0.08	0.61	0.26	0.02	0.30	0.15	0.42	0.15	0.37
Control Delay	44.9	29.4	0.3	37.6	15.8	0.1	44.3	26.1	6.8	44.5	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	29.4	0.3	37.6	15.8	0.1	44.3	26.1	6.8	44.5	29.3
LOS	D	C	A	D	B	A	D	C	A	D	C
Approach Delay		28.6			21.6			15.9			31.5
Approach LOS		C			C			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 76	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization 52.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	781	41	246	619	16	43	55	194	17	77	28
Future Volume (veh/h)	63	781	41	246	619	16	43	55	194	17	77	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	858	35	270	680	15	47	60	139	19	85	12
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	1383	420	324	2119	656	84	255	216	41	180	25
Arrive On Green	0.04	0.27	0.27	0.18	0.41	0.41	0.05	0.13	0.13	0.02	0.11	0.11
Sat Flow, veh/h	1810	5187	1576	1810	5187	1606	1810	1900	1610	1810	1625	229
Grp Volume(v), veh/h	35	858	35	270	680	15	47	60	139	19	0	97
Grp Sat Flow(s),veh/h/ln	1810	1729	1576	1810	1729	1606	1810	1900	1610	1810	0	1854
Q Serve(g_s), s	1.1	8.2	0.9	8.1	5.0	0.3	1.4	1.6	4.6	0.6	0.0	2.8
Cycle Q Clear(g_c), s	1.1	8.2	0.9	8.1	5.0	0.3	1.4	1.6	4.6	0.6	0.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	68	1383	420	324	2119	656	84	255	216	41	0	206
V/C Ratio(X)	0.52	0.62	0.08	0.83	0.32	0.02	0.56	0.24	0.64	0.46	0.00	0.47
Avail Cap(c_a), veh/h	225	2308	701	580	3323	1029	644	1647	1395	193	0	1145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.5	18.1	15.5	22.2	11.3	9.9	26.2	21.7	23.0	27.1	0.0	23.4
Incr Delay (d2), s/veh	2.2	0.5	0.1	2.1	0.1	0.0	2.2	0.5	3.2	2.9	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.7	0.3	3.1	1.4	0.1	0.6	0.6	1.7	0.3	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	18.6	15.5	24.4	11.4	9.9	28.4	22.2	26.2	30.0	0.0	25.1
LnGrp LOS	C	B	B	C	B	A	C	C	C	C	A	C
Approach Vol, veh/h		928			965			246			116	
Approach Delay, s/veh		18.8			15.0			25.7			25.9	
Approach LOS		B			B			C			C	

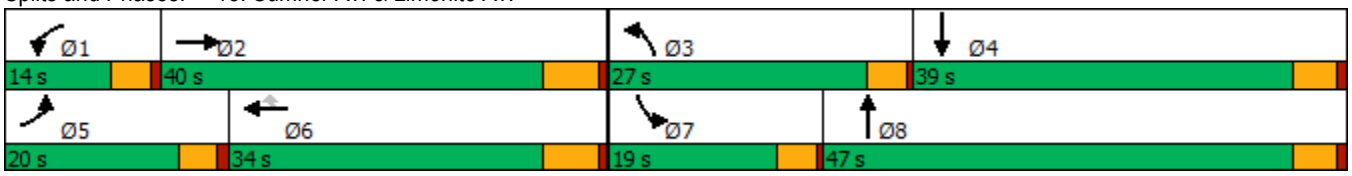
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	22.0	7.6	11.5	7.1	30.0	6.3	12.8
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	18.0	25.0	20.0	34.7	7.0	36.0	6.0	48.7
Max Q Clear Time (g_c+I1), s	10.1	10.2	3.4	4.8	3.1	7.0	2.6	6.6
Green Ext Time (p_c), s	0.1	4.7	0.0	0.4	0.0	4.4	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	218	772	207	623	71	33	239	147	506
Future Volume (vph)	218	772	207	623	71	33	239	147	506
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.0	40.0	14.0	34.0	34.0	27.0	47.0	19.0	39.0
Total Split (%)	16.7%	33.3%	11.7%	28.3%	28.3%	22.5%	39.2%	15.8%	32.5%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.6	21.0	8.8	20.1	20.1	5.9	15.9	11.1	25.6
Actuated g/C Ratio	0.12	0.27	0.11	0.26	0.26	0.08	0.21	0.14	0.33
v/c Ratio	0.53	0.63	0.55	0.49	0.14	0.26	0.52	0.60	0.64
Control Delay	39.6	27.9	42.4	27.6	0.5	44.9	20.5	45.4	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	27.9	42.4	27.6	0.5	44.9	20.5	45.4	24.6
LOS	D	C	D	C	A	D	C	D	C
Approach Delay		30.3		28.8			22.4		28.2
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 77.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 28.3	Intersection LOS: C
Intersection Capacity Utilization 62.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	772	60	207	623	71	33	239	156	147	506	204
Future Volume (veh/h)	218	772	60	207	623	71	33	239	156	147	506	204
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	229	813	36	218	656	29	35	252	70	155	533	136
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	346	1354	60	330	1355	415	54	522	142	198	757	192
Arrive On Green	0.10	0.27	0.27	0.09	0.26	0.26	0.03	0.19	0.19	0.11	0.27	0.27
Sat Flow, veh/h	3510	5089	225	3510	5187	1588	1810	2802	762	1810	2850	724
Grp Volume(v), veh/h	229	552	297	218	656	29	35	160	162	155	337	332
Grp Sat Flow(s),veh/h/ln	1755	1729	1856	1755	1729	1588	1810	1805	1759	1810	1805	1770
Q Serve(g_s), s	3.6	7.9	7.9	3.4	6.1	0.8	1.1	4.5	4.7	4.7	9.5	9.6
Cycle Q Clear(g_c), s	3.6	7.9	7.9	3.4	6.1	0.8	1.1	4.5	4.7	4.7	9.5	9.6
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.43	1.00		0.41
Lane Grp Cap(c), veh/h	346	920	494	330	1355	415	54	336	327	198	480	470
V/C Ratio(X)	0.66	0.60	0.60	0.66	0.48	0.07	0.65	0.48	0.49	0.78	0.70	0.71
Avail Cap(c_a), veh/h	961	2077	1115	589	2566	785	735	1339	1305	479	1084	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	18.1	18.2	24.8	17.7	15.7	27.2	20.6	20.6	24.5	18.8	18.8
Incr Delay (d2), s/veh	0.8	0.6	1.2	0.8	0.3	0.1	4.7	0.8	0.9	2.5	1.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.6	2.9	1.2	2.0	0.2	0.5	1.7	1.7	1.9	3.5	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	18.8	19.3	25.6	18.0	15.8	31.9	21.4	21.5	27.1	20.2	20.2
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1078			903			357			824	
Approach Delay, s/veh		20.3			19.7			22.5			21.5	
Approach LOS		C			B			C			C	

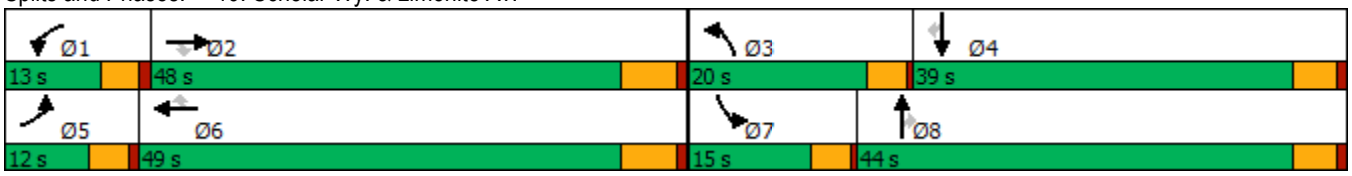
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	21.1	5.7	20.0	10.1	20.8	10.2	15.5
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	9.5	34.0	23.0	34.0	15.5	28.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	5.4	9.9	3.1	11.6	5.6	8.1	6.7	6.7
Green Ext Time (p_c), s	0.1	5.0	0.0	3.0	0.2	3.9	0.1	1.4

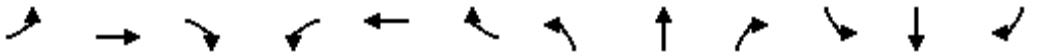
Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	1007	53	167	838	72	46	75	123	55	153	37
Future Volume (vph)	38	1007	53	167	838	72	46	75	123	55	153	37
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	48.0	48.0	13.0	49.0	49.0	20.0	44.0	44.0	15.0	39.0	39.0
Total Split (%)	10.0%	40.0%	40.0%	10.8%	40.8%	40.8%	16.7%	36.7%	36.7%	12.5%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	5.9	29.6	29.6	9.2	37.8	37.8	6.5	11.6	11.6	6.9	14.1	14.1
Actuated g/C Ratio	0.08	0.39	0.39	0.12	0.50	0.50	0.09	0.15	0.15	0.09	0.19	0.19
v/c Ratio	0.29	0.75	0.08	0.81	0.49	0.09	0.31	0.27	0.36	0.35	0.24	0.13
Control Delay	45.9	25.4	0.2	66.7	17.7	0.6	44.7	32.9	9.1	44.8	29.3	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	25.4	0.2	66.7	17.7	0.6	44.7	32.9	9.1	44.8	29.3	30.0
LOS	D	C	A	E	B	A	D	C	A	D	C	C
Approach Delay		24.9			24.2			23.1			32.9	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 75.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 25.2	Intersection LOS: C
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	1007	53	167	838	72	46	75	123	55	153	37
Future Volume (veh/h)	38	1007	53	167	838	72	46	75	123	55	153	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	40	1060	39	176	882	65	48	79	71	58	161	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	1463	642	219	1784	794	66	211	178	74	417	180
Arrive On Green	0.03	0.41	0.41	0.12	0.49	0.49	0.04	0.11	0.11	0.04	0.12	0.12
Sat Flow, veh/h	1810	3610	1584	1810	3610	1607	1810	1900	1610	1810	3610	1556
Grp Volume(v), veh/h	40	1060	39	176	882	65	48	79	71	58	161	39
Grp Sat Flow(s),veh/h/ln	1810	1805	1584	1810	1805	1607	1810	1900	1610	1810	1805	1556
Q Serve(g_s), s	1.3	15.0	0.9	5.7	9.9	1.3	1.6	2.3	2.5	1.9	2.5	1.4
Cycle Q Clear(g_c), s	1.3	15.0	0.9	5.7	9.9	1.3	1.6	2.3	2.5	1.9	2.5	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	59	1463	642	219	1784	794	66	211	178	74	417	180
V/C Ratio(X)	0.68	0.72	0.06	0.80	0.49	0.08	0.73	0.38	0.40	0.78	0.39	0.22
Avail Cap(c_a), veh/h	224	2500	1097	254	2560	1139	477	1222	1036	328	2024	873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	15.2	11.0	25.9	10.3	8.1	28.9	25.0	25.1	28.8	24.8	24.3
Incr Delay (d2), s/veh	5.1	0.7	0.0	12.7	0.2	0.0	5.5	0.8	1.1	6.4	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.8	0.3	2.9	2.8	0.4	0.7	1.0	0.9	0.9	1.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	15.9	11.0	38.6	10.5	8.1	34.4	25.8	26.1	35.2	25.3	24.8
LnGrp LOS	C	B	B	D	B	A	C	C	C	D	C	C
Approach Vol, veh/h		1139			1123			198			258	
Approach Delay, s/veh		16.4			14.8			28.0			27.4	
Approach LOS		B			B			C			C	

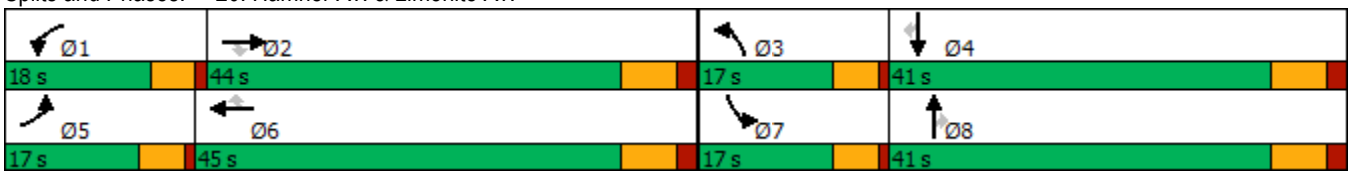
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	30.6	6.2	12.0	6.5	36.0	6.5	11.7
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	8.5	42.0	16.0	34.0	7.5	43.0	11.0	39.0
Max Q Clear Time (g_c+I1), s	7.7	17.0	3.6	4.5	3.3	11.9	3.9	4.5
Green Ext Time (p_c), s	0.0	7.5	0.0	0.9	0.0	6.3	0.0	0.5

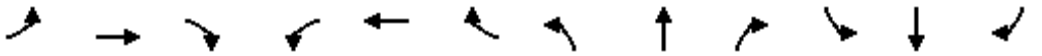
Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	311	782	92	411	602	193	206	598	232	247	743	207
Future Volume (vph)	311	782	92	411	602	193	206	598	232	247	743	207
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	44.0	44.0	18.0	45.0	45.0	17.0	41.0	41.0	17.0	41.0	41.0
Total Split (%)	14.2%	36.7%	36.7%	15.0%	37.5%	37.5%	14.2%	34.2%	34.2%	14.2%	34.2%	34.2%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	11.8	27.9	27.9	13.3	29.4	29.4	9.8	26.7	26.7	10.6	27.5	27.5
Actuated g/C Ratio	0.11	0.27	0.27	0.13	0.29	0.29	0.10	0.26	0.26	0.10	0.27	0.27
v/c Ratio	0.80	0.57	0.18	0.94	0.60	0.33	0.64	0.46	0.41	0.71	0.55	0.37
Control Delay	62.6	34.5	3.1	77.0	35.1	5.8	56.2	33.6	6.4	58.2	34.6	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.6	34.5	3.1	77.0	35.1	5.8	56.2	33.6	6.4	58.2	34.6	6.3
LOS	E	C	A	E	D	A	E	C	A	E	C	A
Approach Delay		39.4			44.7			32.0			34.6	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 37.9	Intersection LOS: D
Intersection Capacity Utilization 74.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 20: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	782	92	411	602	193	206	598	232	247	743	207
Future Volume (veh/h)	311	782	92	411	602	193	206	598	232	247	743	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	321	806	65	424	621	131	212	616	153	255	766	98
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	391	1390	420	483	1062	473	284	1283	386	327	1346	412
Arrive On Green	0.11	0.27	0.27	0.14	0.29	0.29	0.08	0.25	0.25	0.09	0.26	0.26
Sat Flow, veh/h	3510	5187	1566	3510	3610	1609	3510	5187	1559	3510	5187	1586
Grp Volume(v), veh/h	321	806	65	424	621	131	212	616	153	255	766	98
Grp Sat Flow(s),veh/h/ln	1755	1729	1566	1755	1805	1609	1755	1729	1559	1755	1729	1586
Q Serve(g_s), s	8.5	12.7	3.0	11.2	13.9	5.9	5.6	9.6	7.7	6.7	12.1	4.6
Cycle Q Clear(g_c), s	8.5	12.7	3.0	11.2	13.9	5.9	5.6	9.6	7.7	6.7	12.1	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	391	1390	420	483	1062	473	284	1283	386	327	1346	412
V/C Ratio(X)	0.82	0.58	0.15	0.88	0.58	0.28	0.75	0.48	0.40	0.78	0.57	0.24
Avail Cap(c_a), veh/h	446	2031	613	483	1452	647	446	1866	561	446	1866	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	30.0	26.4	40.0	28.4	25.6	42.5	30.4	29.7	41.9	30.4	27.6
Incr Delay (d2), s/veh	9.2	0.8	0.4	16.1	1.1	0.7	1.5	0.6	1.4	4.0	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.1	1.1	5.7	5.8	2.2	2.4	3.8	2.9	3.0	4.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	30.8	26.8	56.0	29.5	26.3	43.9	31.0	31.1	45.9	31.2	28.2
LnGrp LOS	D	C	C	E	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1192			1176			981			1119	
Approach Delay, s/veh		35.8			38.7			33.8			34.3	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	32.3	12.7	31.5	15.5	34.8	13.8	30.4
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	12.0	34.0	12.0	38.0	12.0	34.0
Max Q Clear Time (g_c+I1), s	13.2	14.7	7.6	14.1	10.5	15.9	8.7	11.6
Green Ext Time (p_c), s	0.0	9.7	0.1	8.9	0.1	8.0	0.1	8.2

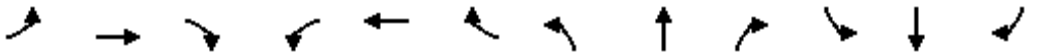
Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	865	482	892	399	172	1	438
Future Volume (vph)	865	482	892	399	172	1	438
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	22.5	22.5	22.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	4.5	4.5	4.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.7	73.7	73.7	73.7	12.9	12.9	12.9
Actuated g/C Ratio	0.76	0.76	0.76	0.76	0.13	0.13	0.13
v/c Ratio	0.23	0.37	0.23	0.31	0.38	0.39	0.74
Control Delay	3.8	1.3	3.9	1.1	42.5	42.7	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.8	1.3	3.9	1.1	42.5	42.7	23.8
LOS	A	A	A	A	D	D	C
Approach Delay	2.9		3.0			29.1	
Approach LOS	A		A			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.6	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 43.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 21: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰	↱↱
Traffic Volume (veh/h)	0	865	482	0	892	399	0	0	0	172	1	438
Future Volume (veh/h)	0	865	482	0	892	399	0	0	0	172	1	438
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	892	467	0	920	411				178	0	188
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	4145	1269	0	4145	1287				334	0	297
Arrive On Green	0.00	0.80	0.80	0.00	0.80	0.80				0.09	0.00	0.09
Sat Flow, veh/h	0	5358	1588	0	5358	1610				3619	0	3220
Grp Volume(v), veh/h	0	892	467	0	920	411				178	0	188
Grp Sat Flow(s),veh/h/ln	0	1729	1588	0	1729	1610				1810	0	1610
Q Serve(g_s), s	0.0	3.8	7.7	0.0	4.0	6.3				4.3	0.0	5.2
Cycle Q Clear(g_c), s	0.0	3.8	7.7	0.0	4.0	6.3				4.3	0.0	5.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4145	1269	0	4145	1287				334	0	297
V/C Ratio(X)	0.00	0.22	0.37	0.00	0.22	0.32				0.53	0.00	0.63
Avail Cap(c_a), veh/h	0	4145	1269	0	4145	1287				1436	0	1278
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.2	2.6	0.0	2.3	2.5				39.9	0.0	40.3
Incr Delay (d2), s/veh	0.0	0.1	0.8	0.0	0.1	0.7				1.3	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	1.6	0.0	0.8	1.4				1.9	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	2.4	3.5	0.0	2.4	3.1				41.2	0.0	42.5
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1359			1331						366	
Approach Delay, s/veh		2.7			2.6						41.9	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		13.0		79.0						
Change Period (Y+Rc), s		5.5		4.5		5.5						
Max Green Setting (Gmax), s		73.5		36.5		73.5						
Max Q Clear Time (g_c+I1), s		9.7		7.2		8.3						
Green Ext Time (p_c), s		5.7		1.3		5.7						

Intersection Summary												
HCM 6th Ctrl Delay			7.4									
HCM 6th LOS			A									

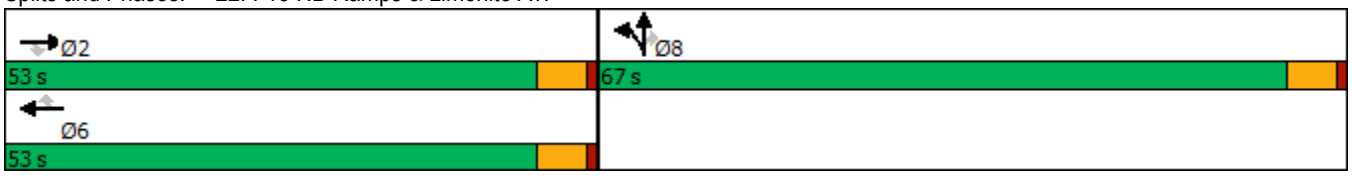
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	728	309	840	112	450	2	727
Future Volume (vph)	728	309	840	112	450	2	727
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	47.8	47.8	47.8	47.8	27.3	27.3	27.3
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.32	0.32	0.32
v/c Ratio	0.26	0.31	0.30	0.12	0.42	0.43	0.74
Control Delay	11.3	2.5	11.6	2.9	25.1	25.2	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	2.5	11.6	2.9	25.1	25.2	24.8
LOS	B	A	B	A	C	C	C
Approach Delay	8.6		10.6			24.9	
Approach LOS	A		B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.2	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 48.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 22: I-15 NB Ramps & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↰	↱↱			
Traffic Volume (veh/h)	0	728	309	0	840	112	450	2	727	0	0	0
Future Volume (veh/h)	0	728	309	0	840	112	450	2	727	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	743	315	0	857	109	460	0	439			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3359	1019	0	3359	1043	733	0	652			
Arrive On Green	0.00	0.65	0.65	0.00	0.65	0.65	0.20	0.00	0.20			
Sat Flow, veh/h	0	5358	1573	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	743	315	0	857	109	460	0	439			
Grp Sat Flow(s),veh/h/ln	0	1729	1573	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	4.3	6.5	0.0	5.1	1.9	8.5	0.0	9.2			
Cycle Q Clear(g_c), s	0.0	4.3	6.5	0.0	5.1	1.9	8.5	0.0	9.2			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3359	1019	0	3359	1043	733	0	652			
V/C Ratio(X)	0.00	0.22	0.31	0.00	0.26	0.10	0.63	0.00	0.67			
Avail Cap(c_a), veh/h	0	3359	1019	0	3359	1043	3034	0	2700			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.3	5.7	0.0	5.5	4.9	26.7	0.0	27.0			
Incr Delay (d2), s/veh	0.0	0.2	0.8	0.0	0.2	0.2	0.9	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	1.2	1.8	0.0	1.5	0.5	3.4	0.0	3.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.5	6.5	0.0	5.6	5.1	27.6	0.0	28.2			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		1058			966			899				
Approach Delay, s/veh		5.8			5.6			27.9				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		20.3				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		8.5				7.1		11.2				
Green Ext Time (p_c), s		4.3				4.5		3.6				

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 7.3:

INTERIM YEAR (2023) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		2023 WP
				CALC CP	DATE	12/18/19
Jurisdiction: **City of Eastvale**				CHK CH	DATE	12/18/19
Major Street: **Providence Way**				Critical Approach Speed (Major)		45 mph
Minor Street: **Driveway 5**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **1,204** vpd Minor Street Future ADT = **140** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……... [√]

or

In built up area of isolated community of < 10,000 population …….. [ ]

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume	Urban	Rural	Urban	Rural
Satisfied / Not Satisfied **XX** (RURAL)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **1,204** / *1* **140**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied **XX** (RURAL)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **1,204** / *1* **140**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied **XX** (RURAL)				
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** **8%** **B** **14%**	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 7.4:

INTERIM YEAR (2023) WITHOUT PROJECT CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	805	500	556	663	47	47	364
v/c Ratio	0.19	0.36	0.13	0.46	0.36	0.36	0.66
Control Delay	2.3	1.0	2.2	1.3	47.7	47.7	10.8
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	2.3	1.0	2.2	1.4	47.7	47.7	10.8
Queue Length 50th (ft)	28	0	19	0	27	27	0
Queue Length 95th (ft)	45	18	30	19	64	64	44
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	4165	1378	4165	1427	665	665	1310
Starvation Cap Reductn	0	0	0	85	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.36	0.13	0.49	0.07	0.07	0.28

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	326	564	949	258	128	129	311
v/c Ratio	0.09	0.45	0.27	0.22	0.47	0.47	0.43
Control Delay	4.2	1.8	4.9	1.2	32.2	32.3	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.2	1.8	4.9	1.2	32.2	32.3	5.5
Queue Length 50th (ft)	14	0	48	0	52	53	0
Queue Length 95th (ft)	28	31	80	22	102	103	32
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3537	1257	3537	1183	1514	1514	2545
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.45	0.27	0.22	0.08	0.09	0.12

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	863	478	911	411	88	90	444
v/c Ratio	0.22	0.36	0.23	0.31	0.40	0.41	0.74
Control Delay	3.7	1.2	3.7	1.1	43.1	43.3	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.7	1.2	3.7	1.1	43.1	43.3	22.7
Queue Length 50th (ft)	43	0	46	0	52	53	56
Queue Length 95th (ft)	77	26	82	24	101	103	111
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3974	1332	3974	1333	652	654	1249
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.36	0.23	0.31	0.13	0.14	0.36

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	737	293	855	114	226	229	742
v/c Ratio	0.26	0.29	0.30	0.12	0.42	0.42	0.74
Control Delay	11.2	2.5	11.5	2.9	25.1	25.1	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	2.5	11.5	2.9	25.1	25.1	24.6
Queue Length 50th (ft)	70	0	84	0	100	101	157
Queue Length 95th (ft)	123	42	144	28	161	164	224
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200					400
Base Capacity (vph)	2882	1005	2882	947	1233	1237	2089
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.29	0.30	0.12	0.18	0.19	0.36

Intersection Summary

APPENDIX 7.5:

INTERIM YEAR (2023) WITH PROJECT CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	813	505	577	663	47	47	384
v/c Ratio	0.20	0.37	0.14	0.47	0.35	0.35	0.67
Control Delay	2.4	1.0	2.2	1.3	47.0	47.0	10.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	2.4	1.0	2.2	1.4	47.0	47.0	10.6
Queue Length 50th (ft)	29	0	19	0	27	27	0
Queue Length 95th (ft)	49	19	34	21	63	63	45
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	4155	1377	4155	1425	663	663	1320
Starvation Cap Reductn	0	0	0	85	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.37	0.14	0.49	0.07	0.07	0.29

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	328	570	954	258	136	137	311
v/c Ratio	0.09	0.45	0.27	0.22	0.48	0.49	0.43
Control Delay	4.3	1.8	5.0	1.3	32.4	32.5	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.3	1.8	5.0	1.3	32.4	32.5	5.4
Queue Length 50th (ft)	15	0	49	0	56	56	0
Queue Length 95th (ft)	28	32	82	23	108	108	32
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3520	1256	3520	1178	1507	1507	2535
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.45	0.27	0.22	0.09	0.09	0.12

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	892	497	920	411	88	90	452
v/c Ratio	0.23	0.37	0.23	0.31	0.38	0.39	0.74
Control Delay	3.8	1.3	3.9	1.1	42.5	42.7	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.8	1.3	3.9	1.1	42.5	42.7	23.8
Queue Length 50th (ft)	46	0	48	0	52	53	60
Queue Length 95th (ft)	82	27	85	25	101	103	117
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3955	1332	3955	1329	649	651	1241
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.37	0.23	0.31	0.14	0.14	0.36

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	743	315	857	114	229	232	742
v/c Ratio	0.26	0.31	0.30	0.12	0.42	0.43	0.74
Control Delay	11.3	2.5	11.6	2.9	25.1	25.2	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	2.5	11.6	2.9	25.1	25.2	24.8
Queue Length 50th (ft)	71	0	84	0	102	103	159
Queue Length 95th (ft)	124	43	145	28	164	166	225
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200					400
Base Capacity (vph)	2878	1014	2878	947	1231	1235	2086
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.31	0.30	0.12	0.19	0.19	0.36

Intersection Summary

APPENDIX 7.6:

INTERIM YEAR (2023) WITHOUT PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2023) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4742	7146	0.66	67.0	23.6	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.893	4742	481	7200	2100	0.66	0.23	64.6	60.5	24.5	26.8	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4279	7146	0.60	67.9	21.0	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.917	4993	714	7200	1900	0.69	0.38	61.4	59.4	27.1	24.7	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4985	7146	0.70	66.3	25.1	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.935	5521	536	7200	2100	0.77	0.26	61.5	59.8	29.9	26.4	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	5526	7146	0.77	64.2	28.7	D

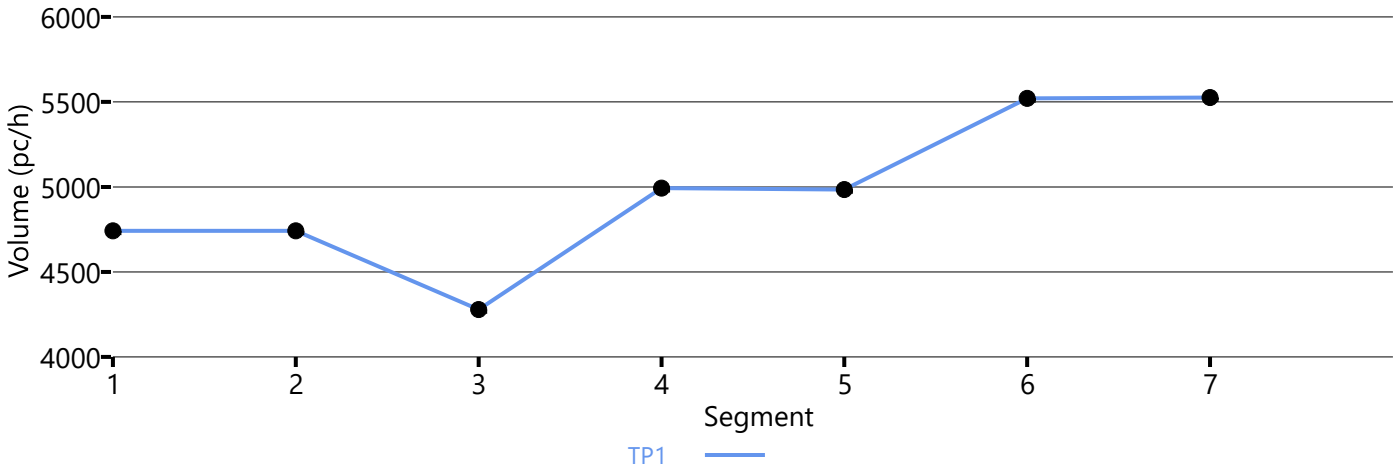
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.7	25.5	23.6	1.7	C

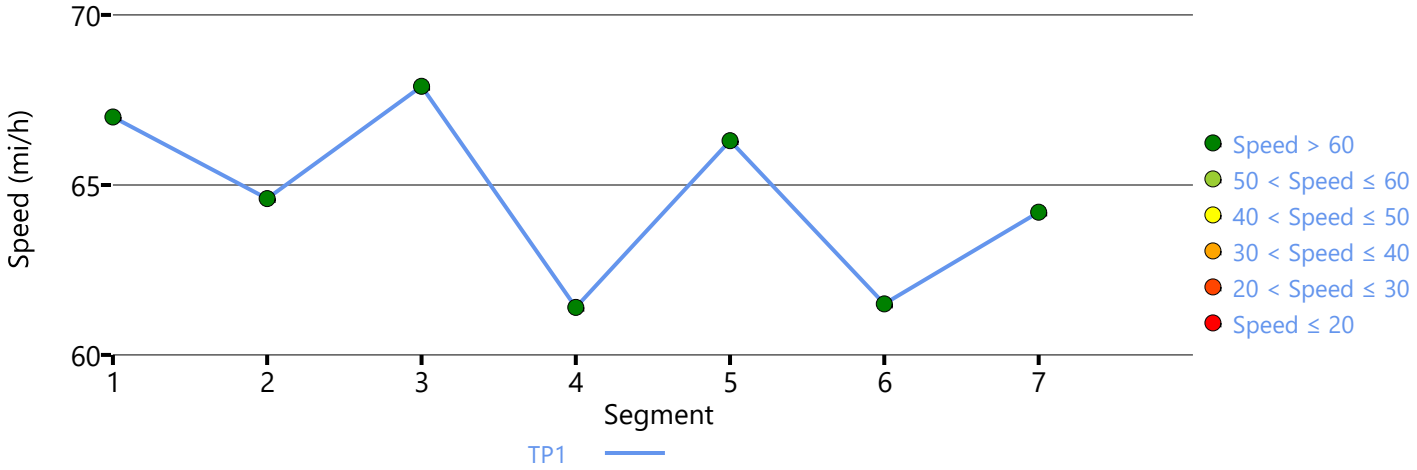
Facility Overall Results

Space Mean Speed, mi/h	64.7	Density, veh/mi/ln	23.6
Average Travel Time, min	1.7	Density, pc/mi/ln	25.5

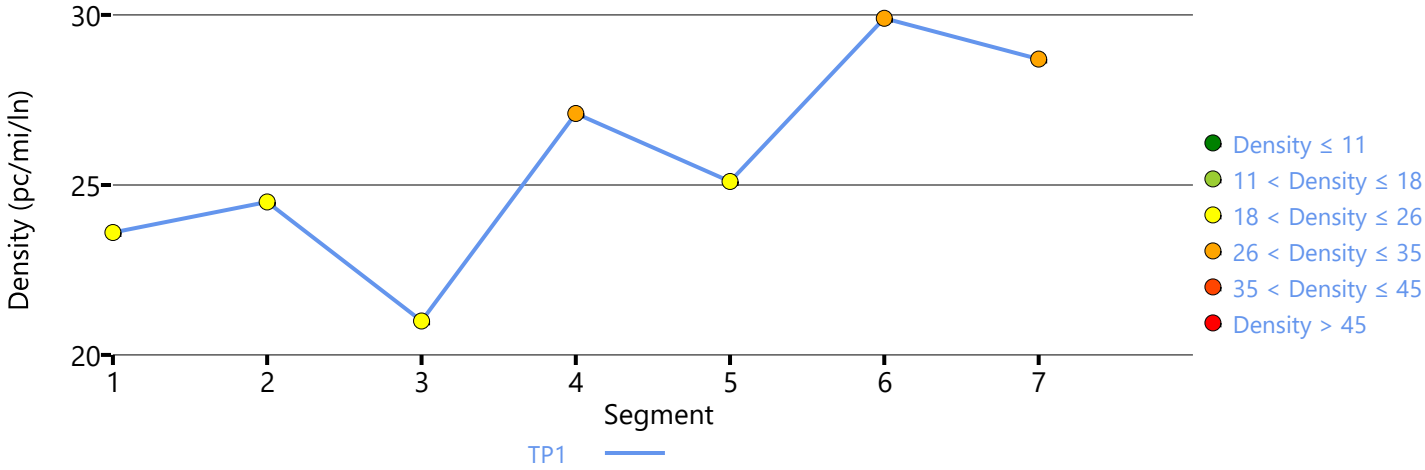
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2023) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4520	7146	0.63	67.5	22.3	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.909	4520	623	7200	2100	0.63	0.30	64.3	60.1	23.4	26.4	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3901	7146	0.55	68.2	19.1	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4504	603	7200	1900	0.63	0.32	62.2	60.3	24.1	22.1	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4499	7146	0.63	67.6	22.2	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4751	252	7200	2100	0.66	0.12	63.3	62.1	25.0	20.7	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4748	7146	0.66	67.0	23.6	C

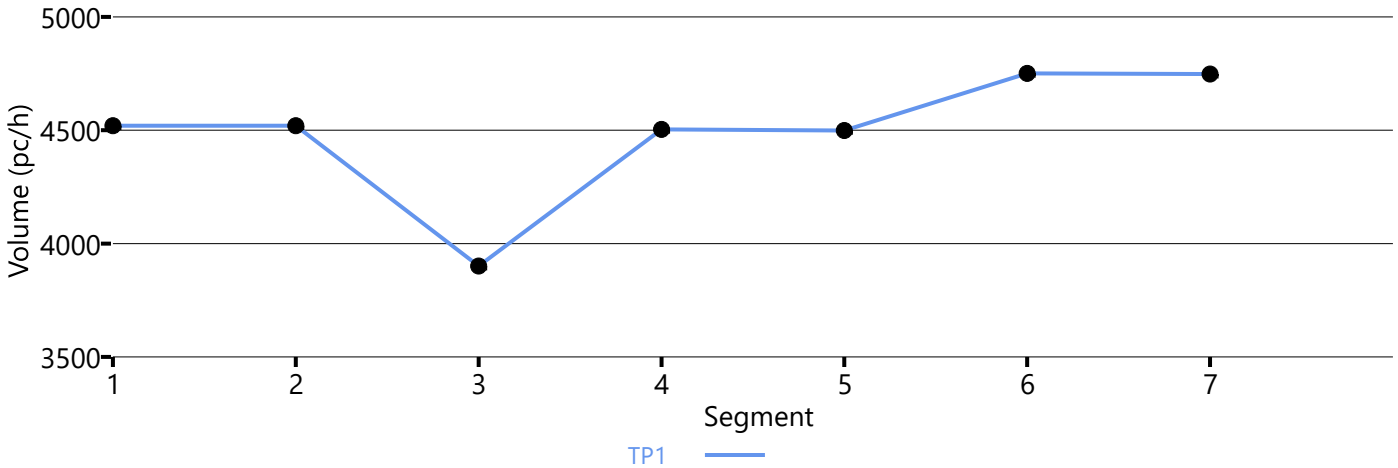
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.6	23.0	22.5	1.6	C

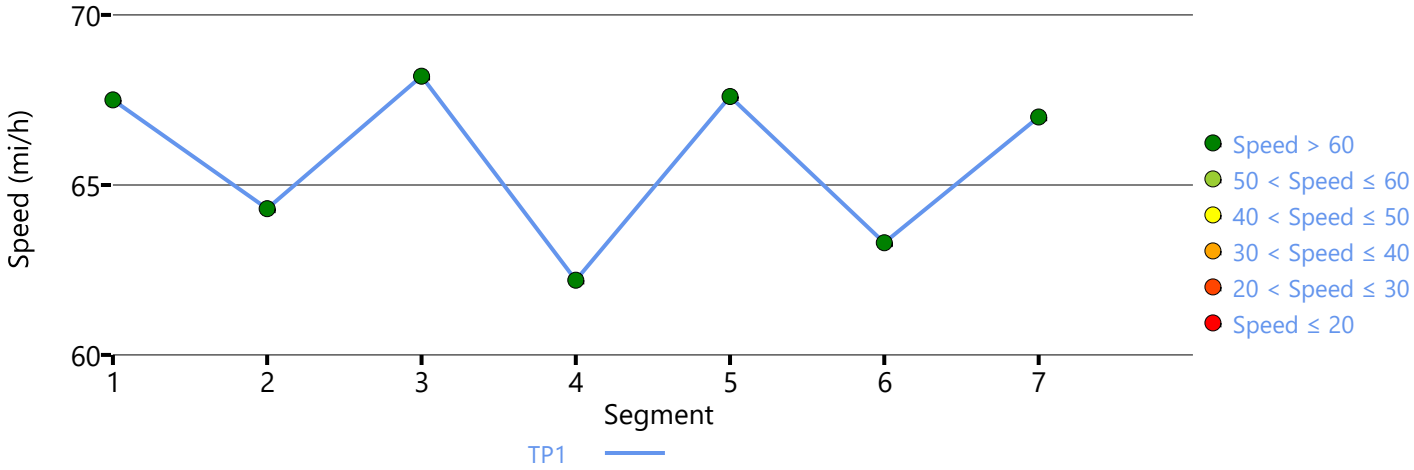
Facility Overall Results

Space Mean Speed, mi/h	65.6	Density, veh/mi/ln	22.5
Average Travel Time, min	1.6	Density, pc/mi/ln	23.0

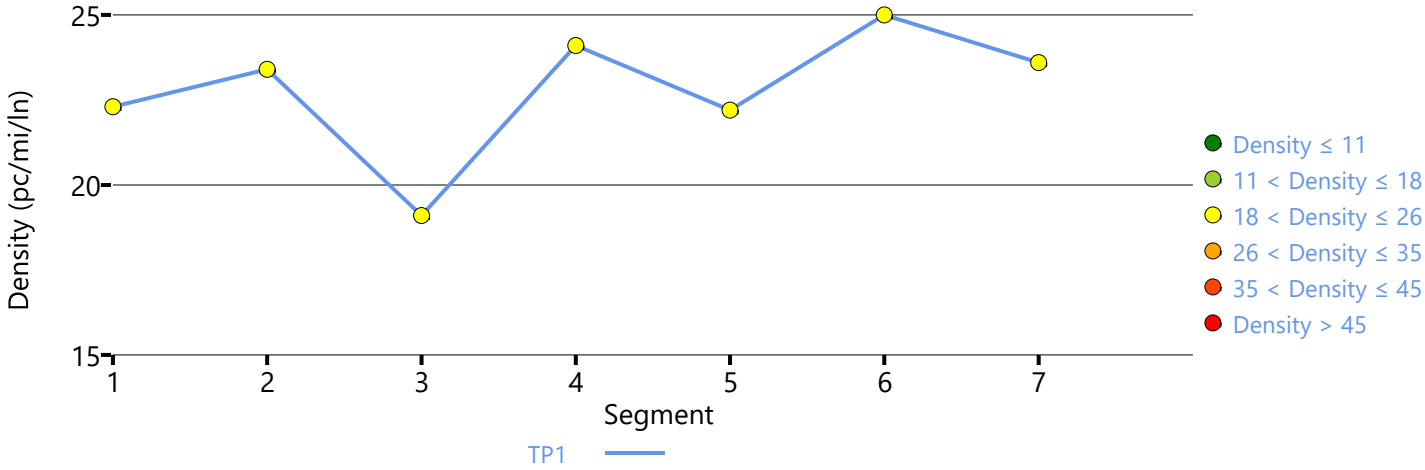
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2023) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	4099	7146	0.57	68.1	20.1	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.980	4099	657	7200	2100	0.57	0.31	64.2	60.0	21.3	24.1	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3423	7146	0.48	68.2	16.7	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.943	3862	439	7200	1900	0.54	0.23	63.0	61.1	20.4	18.7	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3858	7146	0.54	68.2	18.9	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.980	4369	511	7200	2100	0.61	0.24	63.3	61.8	23.0	20.9	C

Segment 7: Basic

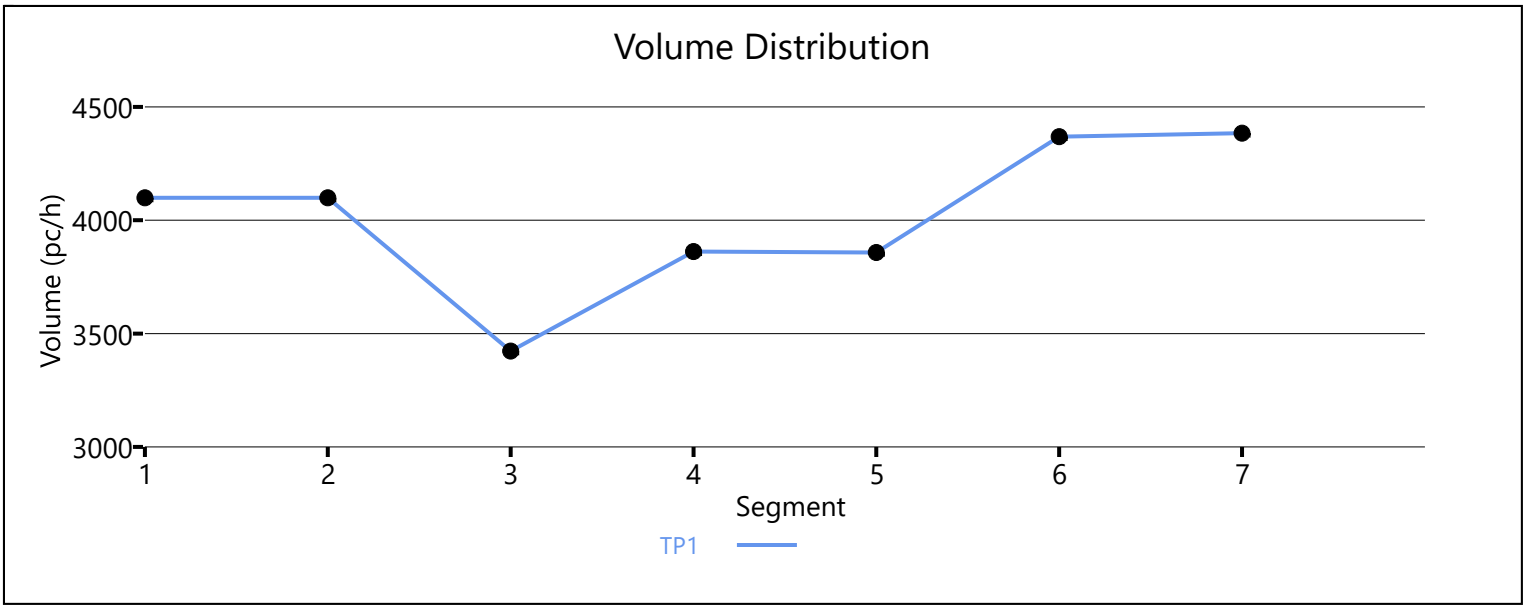
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	4384	7146	0.61	67.8	21.5	C

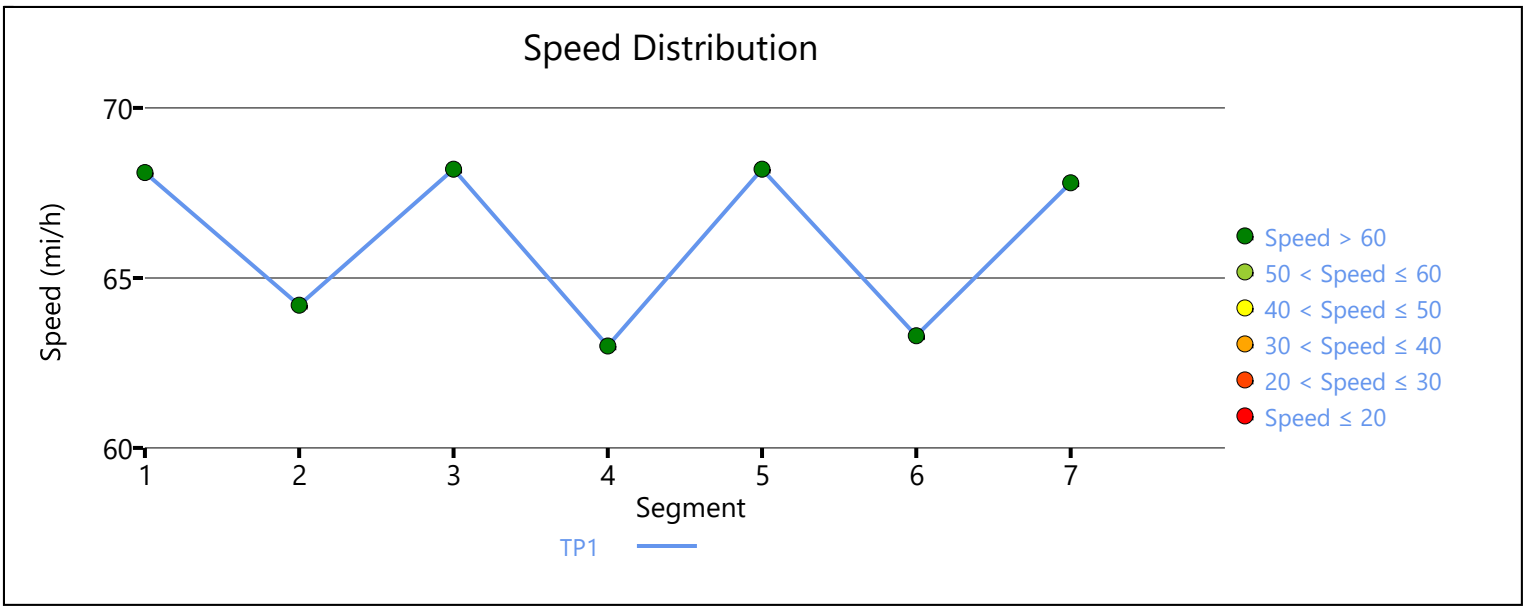
Facility Time Period Results

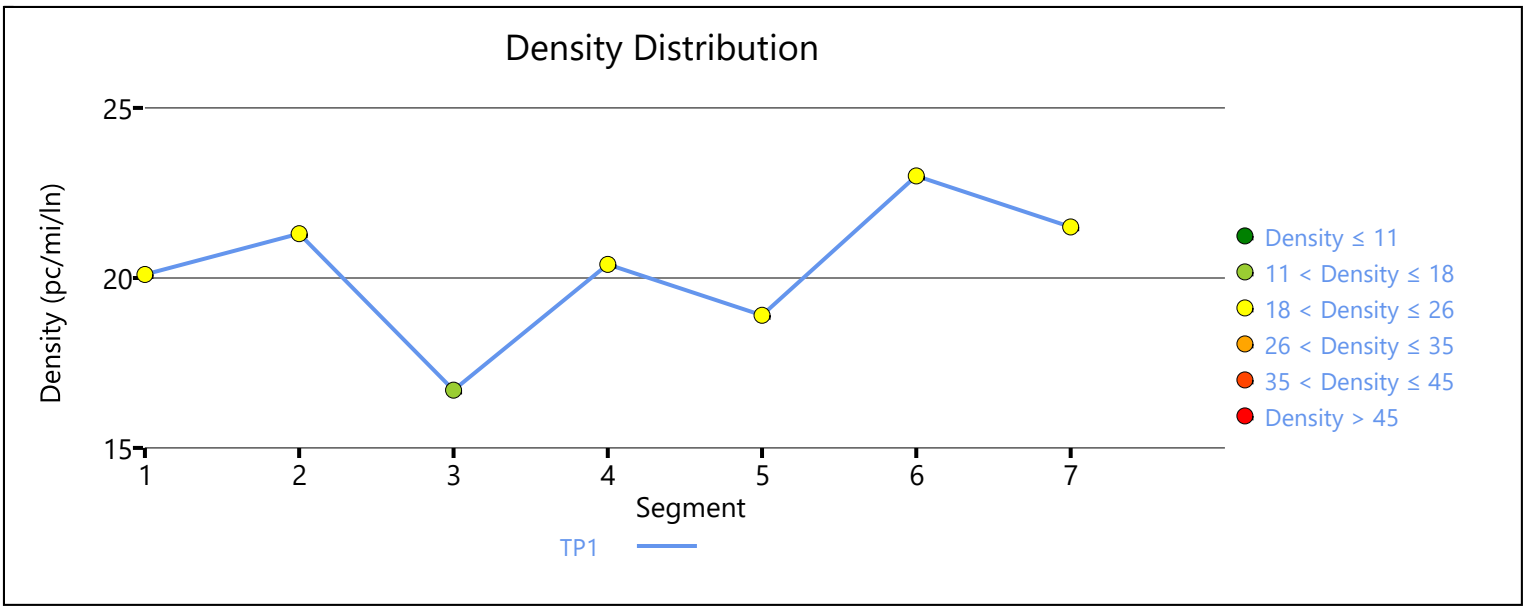
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.1	20.2	19.2	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	66.1	Density, veh/mi/ln	19.2
Average Travel Time, min	1.7	Density, pc/mi/ln	20.2







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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/12/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2023) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	5568	7146	0.78	64.0	29.0	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	5568	1339	7200	2100	0.77	0.64	62.6	58.3	29.6	32.2	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4190	7146	0.59	68.0	20.5	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.962	4506	316	7200	1900	0.63	0.17	62.4	60.5	24.1	21.4	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4501	7146	0.63	67.6	22.2	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.935	4625	124	7200	2100	0.64	0.06	63.6	62.4	24.2	19.7	B

Segment 7: Basic

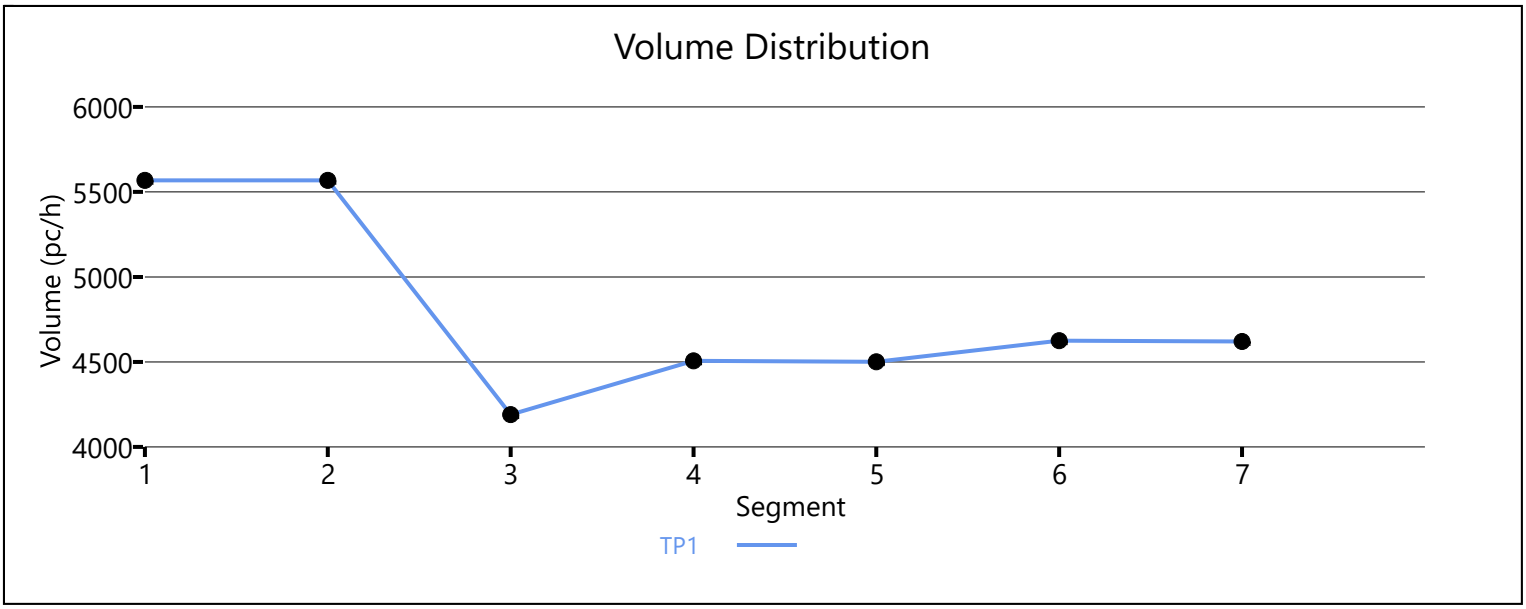
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4620	7146	0.65	67.3	22.9	C

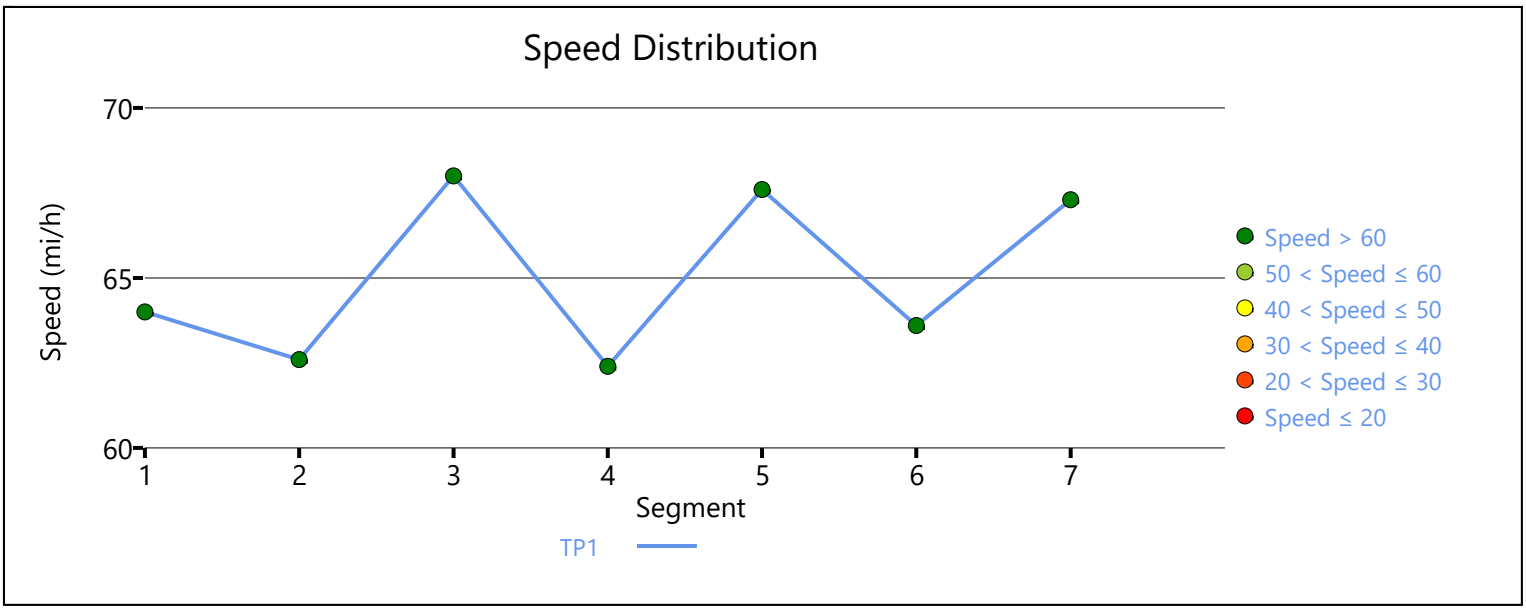
Facility Time Period Results

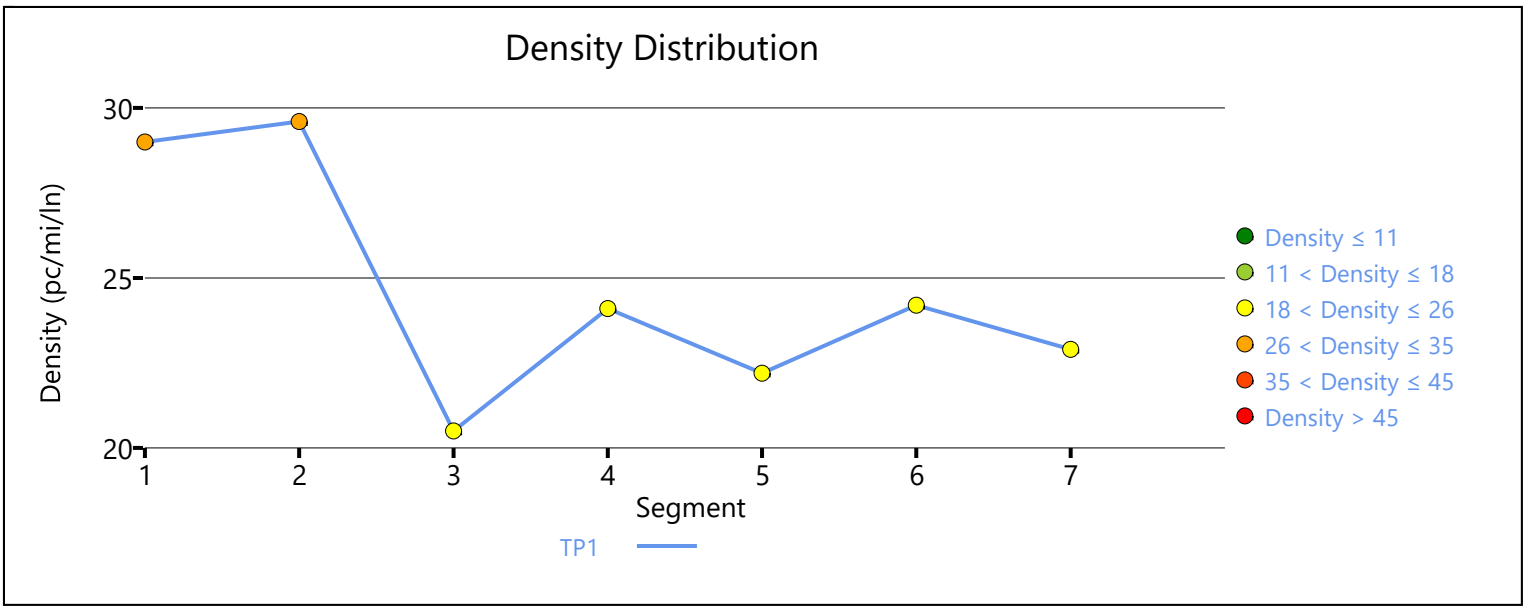
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.7	25.0	24.4	1.6	C

Facility Overall Results

Space Mean Speed, mi/h	64.7	Density, veh/mi/ln	24.4
Average Travel Time, min	1.6	Density, pc/mi/ln	25.0







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APPENDIX 7.7:

INTERIM YEAR (2023) WITH PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2023) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	4803	7146	0.67	66.9	23.9	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.885	4803	500	7200	2100	0.67	0.24	64.5	60.4	24.8	27.1	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4279	7146	0.60	67.9	21.0	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.917	4993	714	7200	1900	0.69	0.38	61.4	59.4	27.1	24.7	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4985	7146	0.70	66.3	25.1	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.935	5524	539	7200	2100	0.77	0.26	61.5	59.8	29.9	26.5	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	5530	7146	0.77	64.2	28.7	D

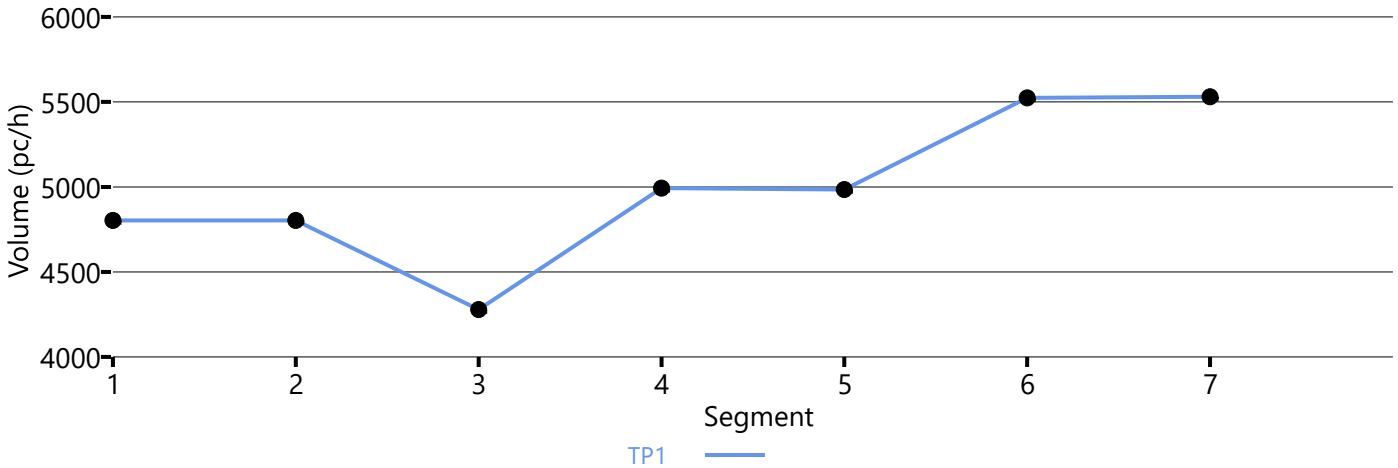
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.6	25.6	23.6	1.7	C

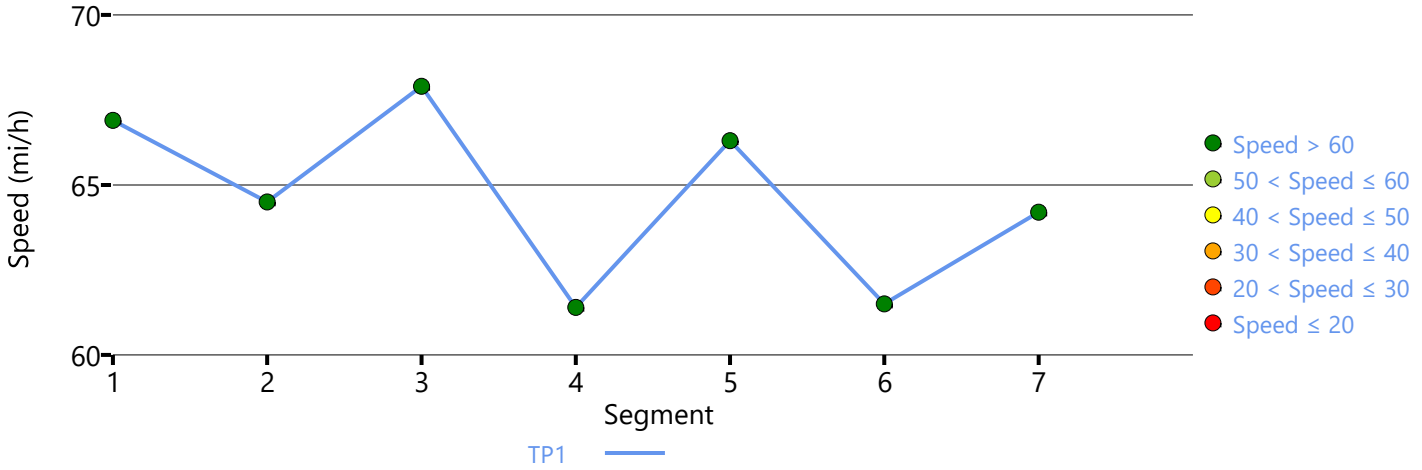
Facility Overall Results

Space Mean Speed, mi/h	64.6	Density, veh/mi/ln	23.6
Average Travel Time, min	1.7	Density, pc/mi/ln	25.6

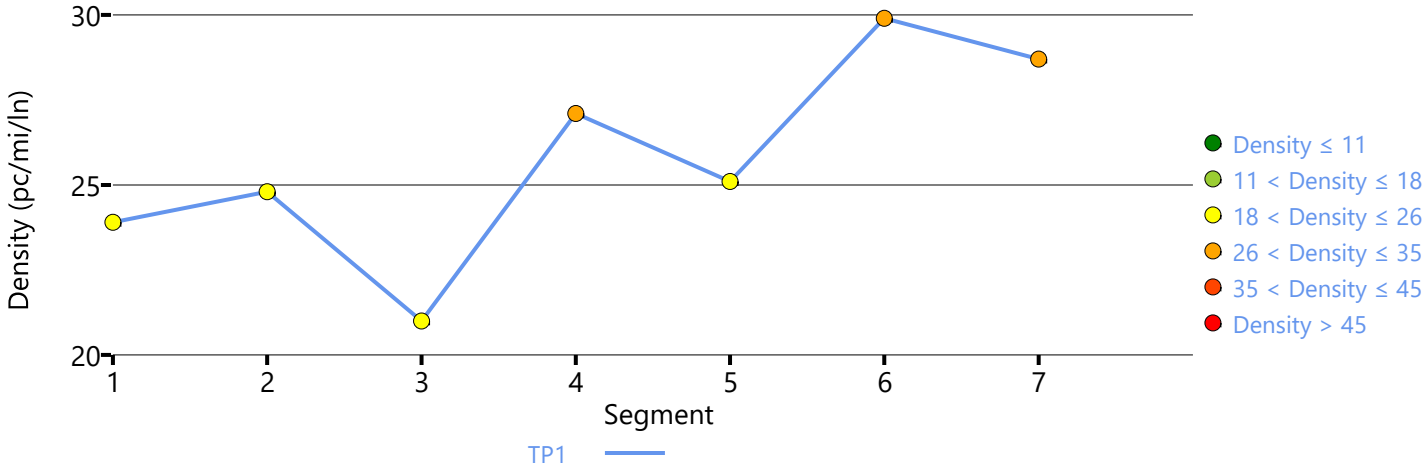
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2023) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4530	7146	0.63	67.5	22.4	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.909	4530	634	7200	2100	0.63	0.30	64.3	60.1	23.5	26.5	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3901	7146	0.55	68.2	19.1	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4509	608	7200	1900	0.63	0.32	62.2	60.3	24.2	22.2	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4503	7146	0.63	67.6	22.2	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	4755	252	7200	2100	0.66	0.12	63.3	62.1	25.0	20.7	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4753	7146	0.67	67.0	23.6	C

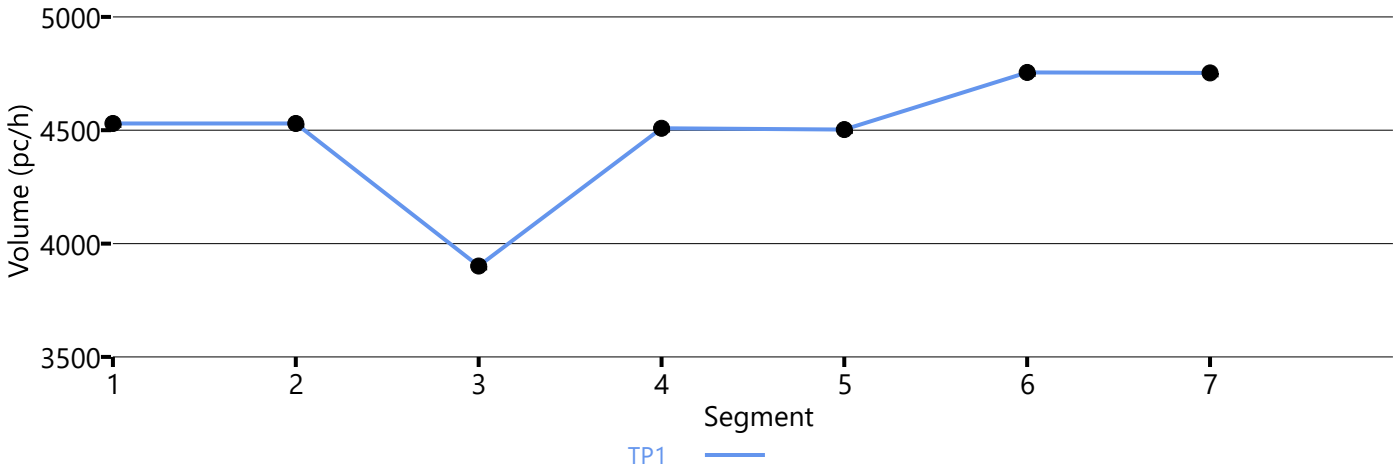
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.6	23.0	22.5	1.6	C

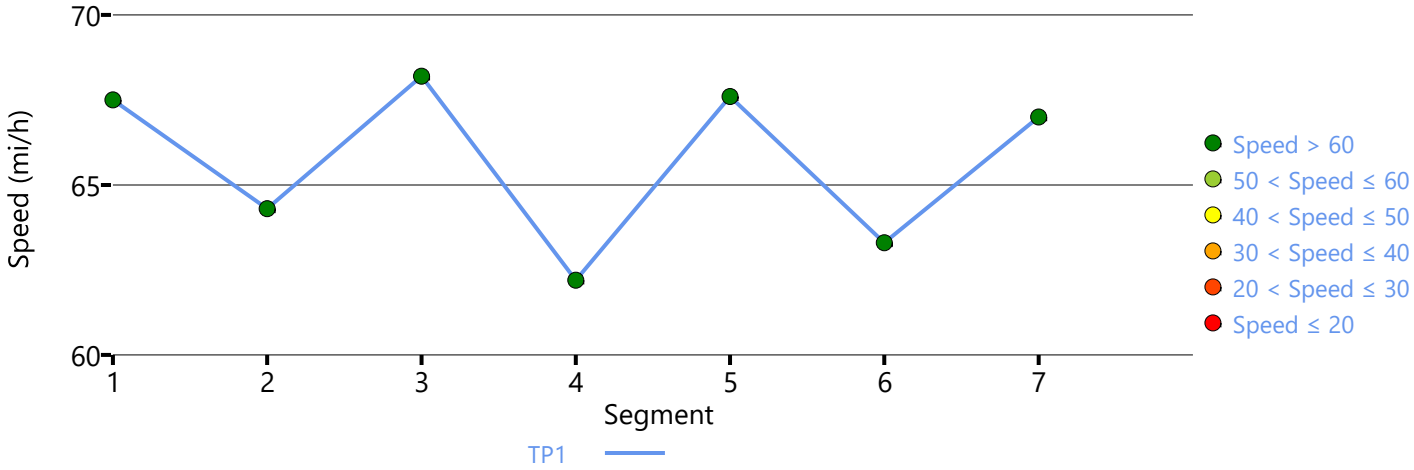
Facility Overall Results

Space Mean Speed, mi/h	65.6	Density, veh/mi/ln	22.5
Average Travel Time, min	1.6	Density, pc/mi/ln	23.0

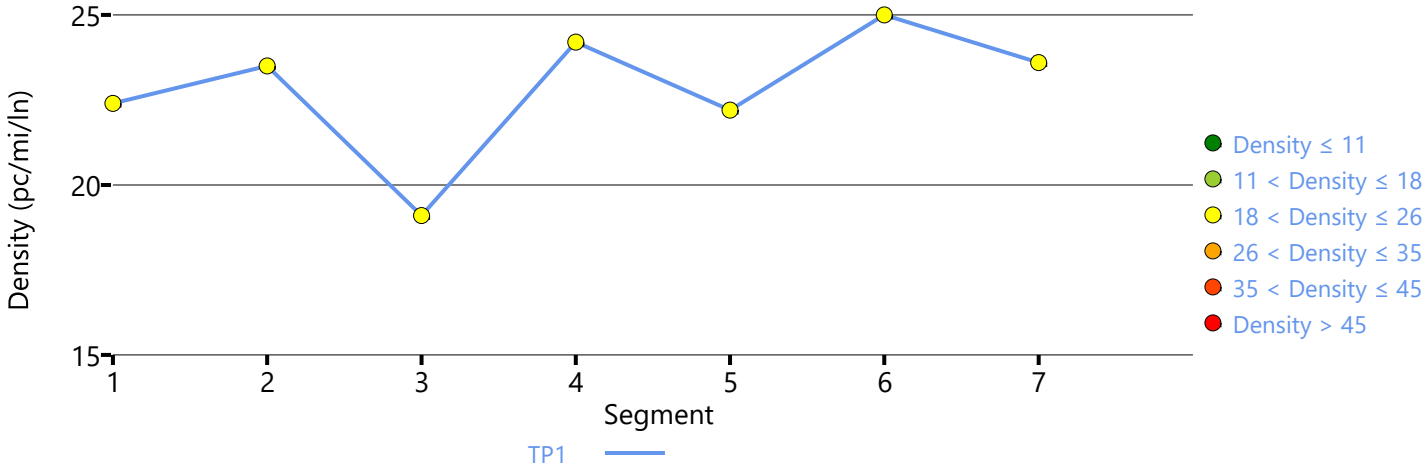
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2023) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	4105	7146	0.57	68.1	20.1	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.980	4105	662	7200	2100	0.57	0.32	64.2	60.0	21.3	24.2	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3423	7146	0.48	68.2	16.7	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.943	3862	439	7200	1900	0.54	0.23	63.0	61.1	20.4	18.7	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3858	7146	0.54	68.2	18.9	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.971	4386	528	7200	2100	0.61	0.25	63.3	61.8	23.1	21.0	C

Segment 7: Basic

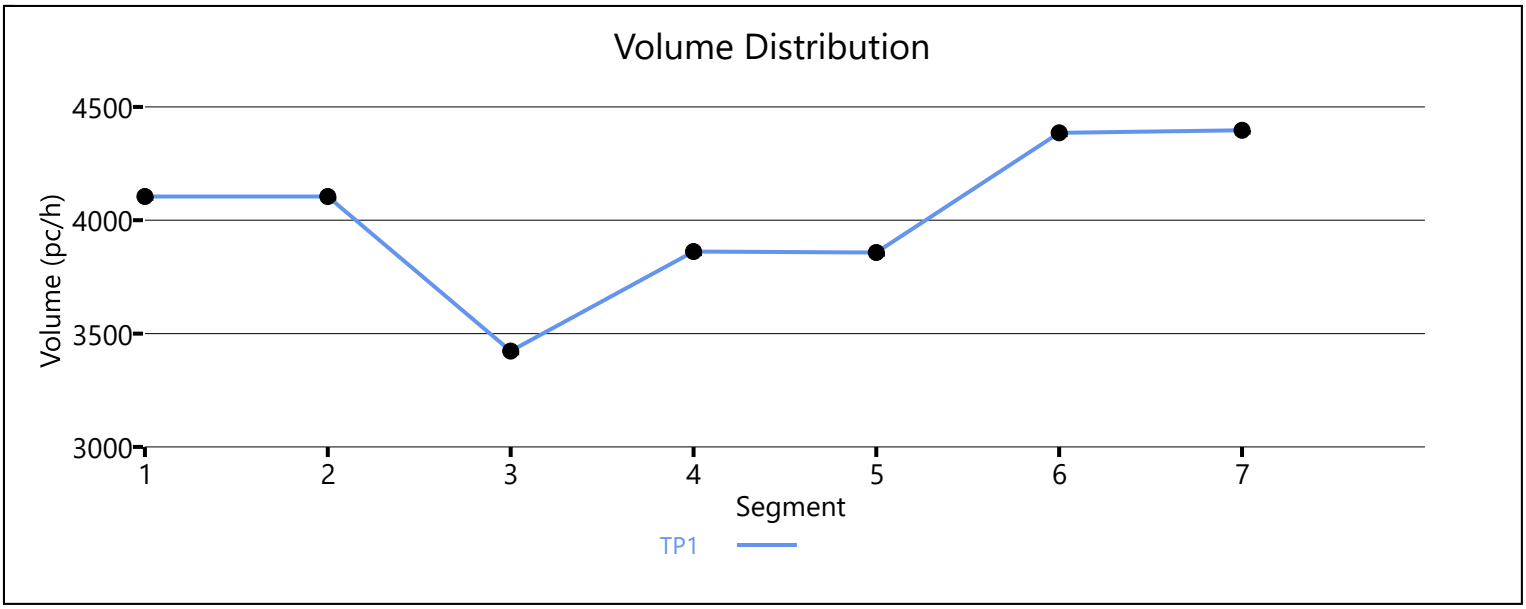
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	4397	7146	0.62	67.7	21.7	C

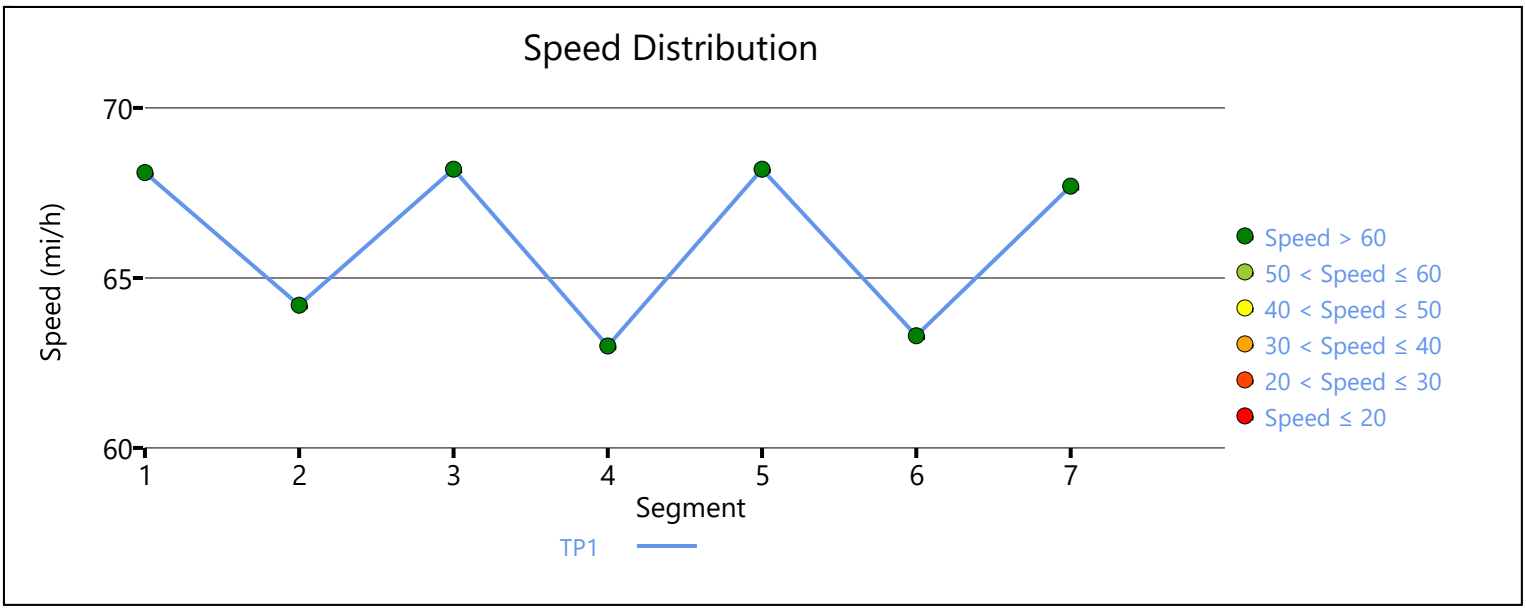
Facility Time Period Results

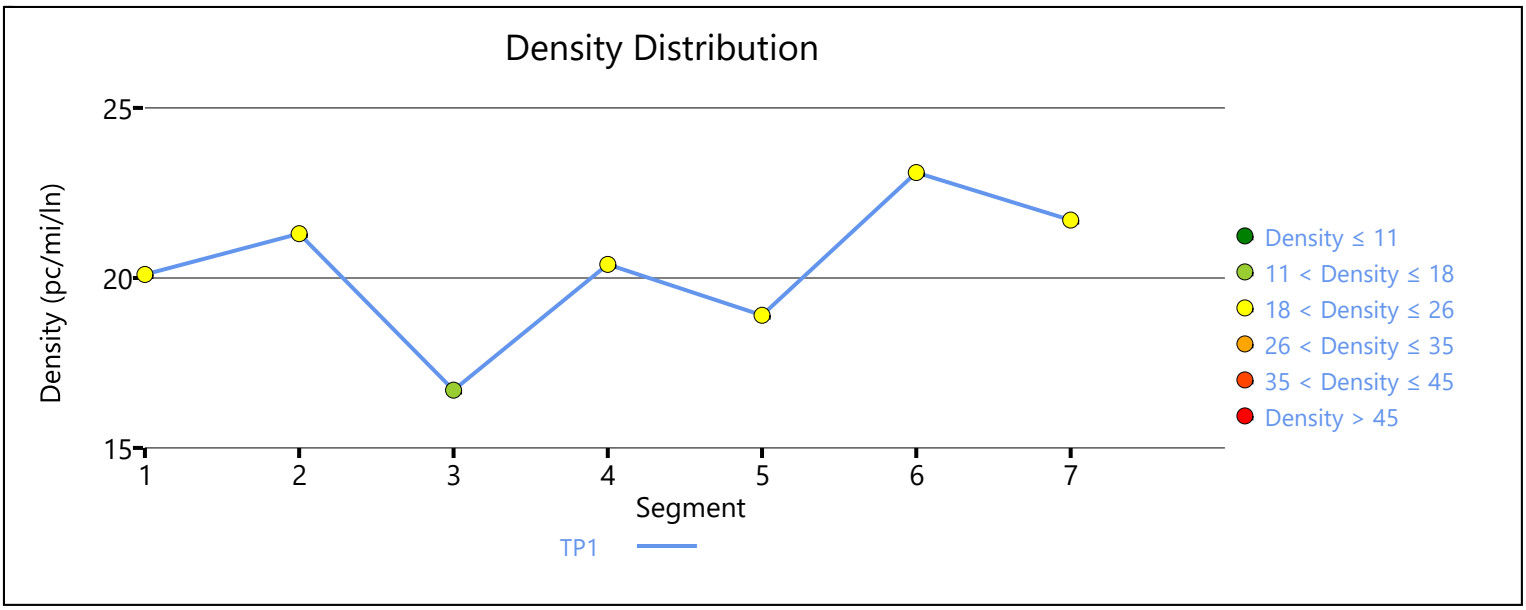
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.1	20.2	19.3	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	66.1	Density, veh/mi/ln	19.3
Average Travel Time, min	1.7	Density, pc/mi/ln	20.2







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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year Cumulative (2023) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	5572	7146	0.78	64.0	29.0	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	5572	1343	7200	2100	0.77	0.64	62.6	58.3	29.7	32.3	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4190	7146	0.59	68.0	20.5	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.952	4527	337	7200	1900	0.63	0.18	62.4	60.5	24.2	21.6	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4518	7146	0.63	67.5	22.3	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.935	4642	124	7200	2100	0.64	0.06	63.5	62.4	24.4	19.8	B

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4679	7146	0.65	67.2	23.2	C

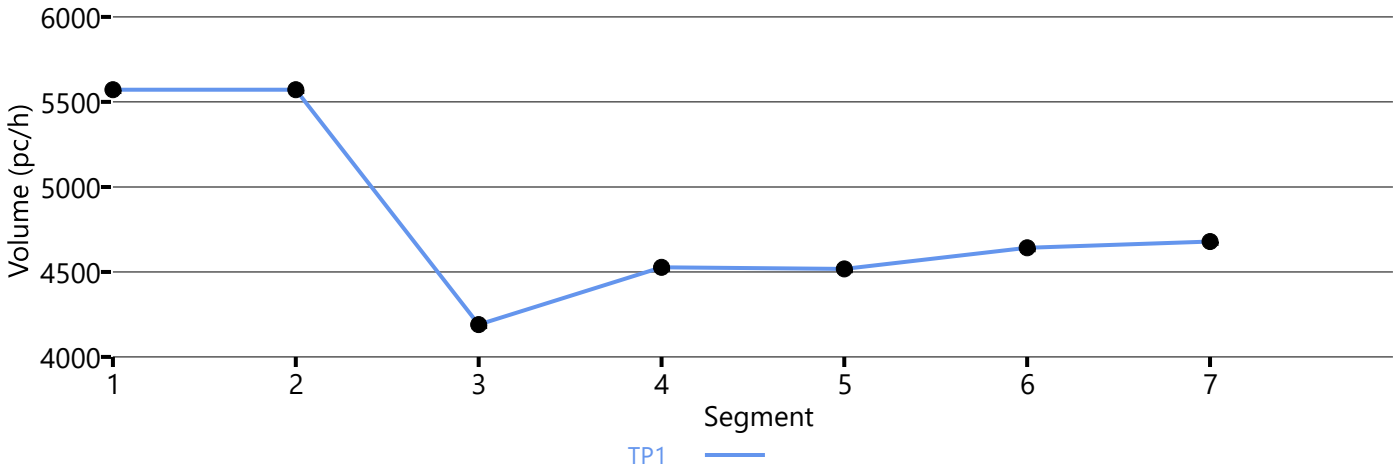
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.7	25.2	24.5	1.6	C

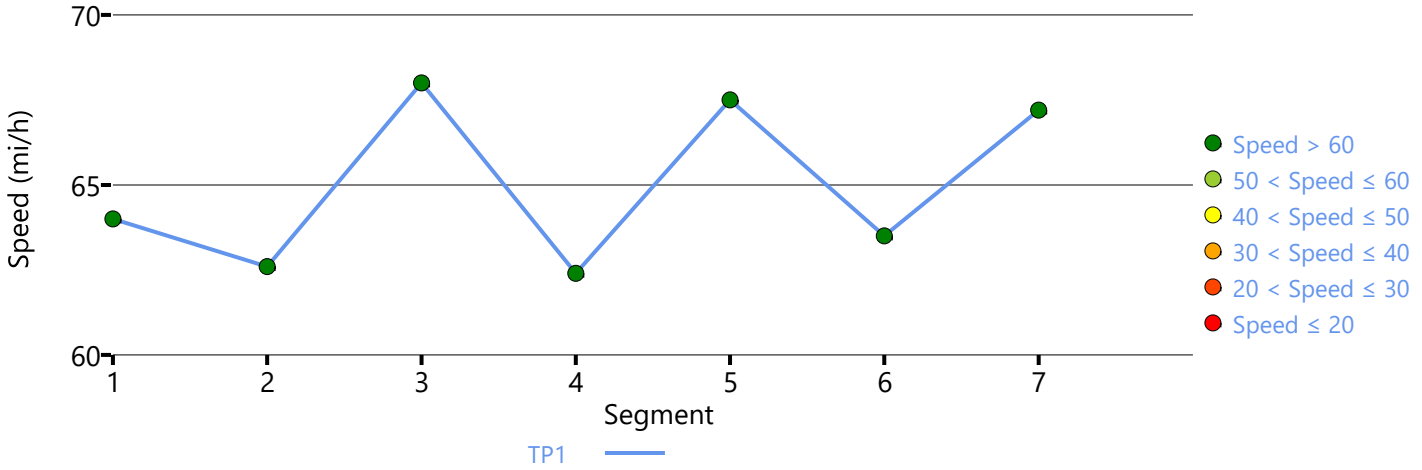
Facility Overall Results

Space Mean Speed, mi/h	64.7	Density, veh/mi/ln	24.5
Average Travel Time, min	1.6	Density, pc/mi/ln	25.2

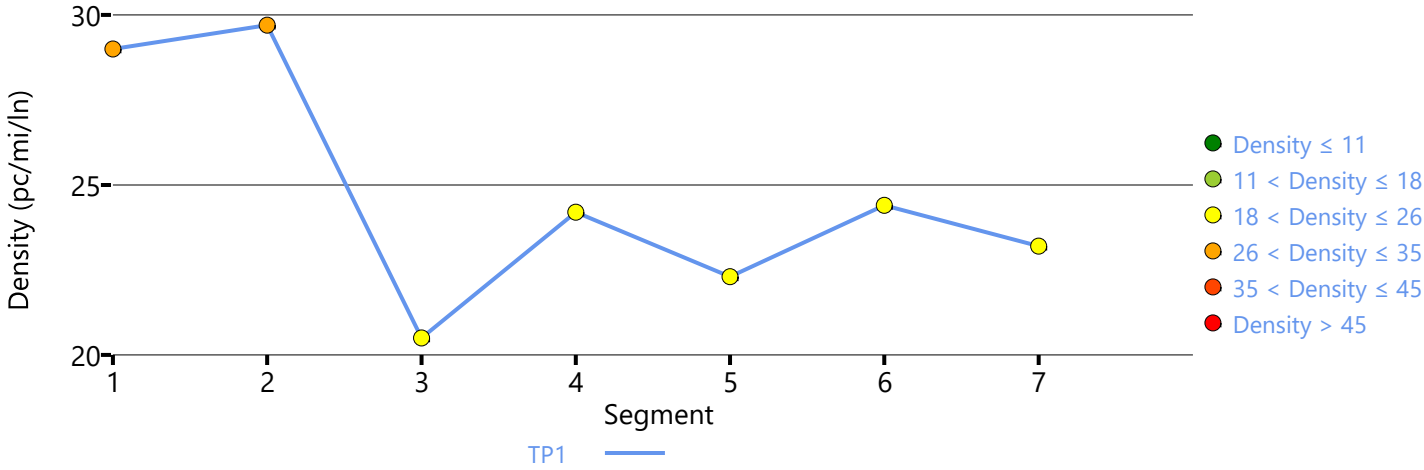
Volume Distribution



Speed Distribution



Density Distribution



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APPENDIX 7.8:

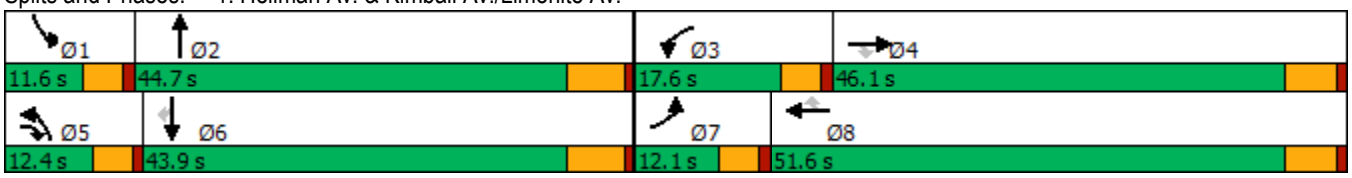
INTERIM YEAR (2023) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	37	489	105	265	659	46	130	72	35	35	19
Future Volume (vph)	37	489	105	265	659	46	130	72	35	35	19
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	12.1	46.1	12.4	17.6	51.6	51.6	12.4	44.7	11.6	43.9	43.9
Total Split (%)	10.1%	38.4%	10.3%	14.7%	43.0%	43.0%	10.3%	37.3%	9.7%	36.6%	36.6%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	6.6	34.6	56.5	12.0	44.7	44.7	15.9	39.2	6.3	28.9	28.9
Actuated g/C Ratio	0.06	0.32	0.52	0.11	0.41	0.41	0.15	0.36	0.06	0.27	0.27
v/c Ratio	0.40	0.90	0.13	0.77	0.49	0.07	0.30	0.27	0.37	0.04	0.04
Control Delay	65.8	56.4	3.8	63.5	26.8	0.2	52.7	8.1	64.6	28.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.8	56.4	3.8	63.5	26.8	0.2	52.7	8.1	64.6	28.5	0.2
LOS	E	E	A	E	C	A	D	A	E	C	A
Approach Delay		48.2			35.6			21.1		36.7	
Approach LOS		D			D			C		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 109	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 36.4	Intersection LOS: D
Intersection Capacity Utilization 67.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	489	105	265	659	46	130	72	242	35	35	19
Future Volume (veh/h)	37	489	105	265	659	46	130	72	242	35	35	19
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	1700	1800	1800	1800	1800	1800	1700	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	39	515	111	279	694	48	137	76	255	37	37	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	52	565	589	339	1313	585	227	610	544	53	1079	481
Arrive On Green	0.03	0.31	0.31	0.10	0.38	0.38	0.07	0.36	0.36	0.03	0.32	0.32
Sat Flow, veh/h	1619	1800	1525	3326	3420	1525	3141	1710	1525	1714	3420	1525
Grp Volume(v), veh/h	39	515	111	279	694	48	137	76	255	37	37	20
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1663	1710	1525	1570	1710	1525	1714	1710	1525
Q Serve(g_s), s	2.6	29.7	5.2	8.9	16.9	2.2	4.6	3.2	13.9	2.3	0.8	1.0
Cycle Q Clear(g_c), s	2.6	29.7	5.2	8.9	16.9	2.2	4.6	3.2	13.9	2.3	0.8	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	52	565	589	339	1313	585	227	610	544	53	1079	481
V/C Ratio(X)	0.75	0.91	0.19	0.82	0.53	0.08	0.60	0.12	0.47	0.70	0.03	0.04
Avail Cap(c_a), veh/h	113	672	680	401	1451	647	227	610	544	111	1195	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	35.6	21.9	47.5	25.7	21.2	48.6	23.4	26.8	51.8	25.6	25.6
Incr Delay (d2), s/veh	8.0	15.1	0.2	9.8	0.3	0.1	11.3	0.4	2.9	5.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	14.6	1.8	4.0	6.5	0.7	2.1	1.3	5.2	1.0	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	50.7	22.1	57.3	26.0	21.2	59.9	23.8	29.7	57.7	25.6	25.7
LnGrp LOS	E	D	C	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		665			1021			468			94	
Approach Delay, s/veh		46.4			34.3			37.6			38.2	
Approach LOS		D			C			D			D	

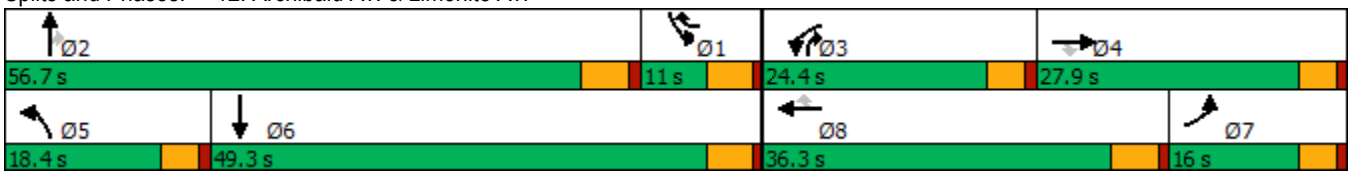
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	44.7	15.6	39.7	12.4	40.3	8.0	47.2
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	7.0	38.5	13.0	40.3	7.8	37.7	7.5	45.8
Max Q Clear Time (g_c+I1), s	4.3	15.9	10.9	31.7	6.6	3.0	4.6	18.9
Green Ext Time (p_c), s	0.0	1.8	0.1	2.2	0.0	0.2	0.0	4.7

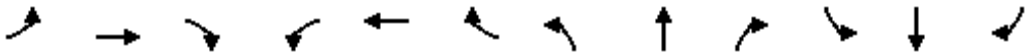
Intersection Summary	
HCM 6th Ctrl Delay	38.8
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	238	631	88	293	642	590	114	910	331	159	679
Future Volume (vph)	238	631	88	293	642	590	114	910	331	159	679
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	11.0	9.5	46.3	9.5	11.0	11.0
Total Split (s)	16.0	27.9	27.9	24.4	36.3	11.0	18.4	56.7	24.4	11.0	49.3
Total Split (%)	13.3%	23.3%	23.3%	20.3%	30.3%	9.2%	15.3%	47.3%	20.3%	9.2%	41.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	4.0	3.5	4.3	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	5.0	4.5	5.3	4.5	5.0	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	Max	Max	None	None	None	Max	None	None
Act Effct Green (s)	11.2	23.1	23.1	19.9	31.0	42.3	12.1	51.4	72.1	6.0	46.2
Actuated g/C Ratio	0.09	0.19	0.19	0.17	0.26	0.35	0.10	0.43	0.60	0.05	0.39
v/c Ratio	0.74	0.90	0.21	1.02	0.68	0.97	0.66	1.16	0.35	0.92	0.67
Control Delay	66.6	63.4	2.1	106.1	44.1	60.5	68.8	119.2	5.5	105.7	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.6	63.4	2.1	106.1	44.1	60.5	68.8	119.2	5.5	105.7	31.8
LOS	E	E	A	F	D	E	E	F	A	F	C
Approach Delay		58.5			62.4			87.2			42.7
Approach LOS		E			E			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 64.1	Intersection LOS: E
Intersection Capacity Utilization 103.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	631	88	293	642	590	114	910	331	159	679	243
Future Volume (veh/h)	238	631	88	293	642	590	114	910	331	159	679	243
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	248	657	45	305	669	313	119	948	335	166	707	243
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	328	724	307	302	987	499	146	818	946	182	1101	378
Arrive On Green	0.09	0.19	0.19	0.17	0.26	0.26	0.08	0.43	0.43	0.05	0.41	0.41
Sat Flow, veh/h	3619	3800	1610	1810	3800	1610	1810	1900	1572	3619	2704	929
Grp Volume(v), veh/h	248	657	45	305	669	313	119	948	335	166	497	453
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1572	1810	1900	1733
Q Serve(g_s), s	8.0	20.2	2.8	19.9	18.9	13.9	7.7	51.4	7.4	5.4	25.1	25.1
Cycle Q Clear(g_c), s	8.0	20.2	2.8	19.9	18.9	13.9	7.7	51.4	7.4	5.4	25.1	25.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	328	724	307	302	987	499	146	818	946	182	774	705
V/C Ratio(X)	0.76	0.91	0.15	1.01	0.68	0.63	0.82	1.16	0.35	0.91	0.64	0.64
Avail Cap(c_a), veh/h	349	745	316	302	987	499	211	818	946	182	774	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	47.3	40.2	49.7	39.7	35.3	54.0	34.0	4.6	56.4	28.4	28.4
Incr Delay (d2), s/veh	8.6	14.7	0.2	54.5	3.7	5.9	14.7	84.8	0.3	42.6	1.4	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	10.7	1.1	13.2	8.9	5.5	4.0	41.0	2.6	3.5	10.8	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.5	62.0	40.4	104.3	43.4	41.1	68.7	118.7	4.9	99.0	29.8	30.0
LnGrp LOS	E	E	D	F	D	D	E	F	A	F	C	C
Approach Vol, veh/h		950			1287			1402			1116	
Approach Delay, s/veh		60.9			57.3			87.3			40.2	
Approach LOS		E			E			F			D	

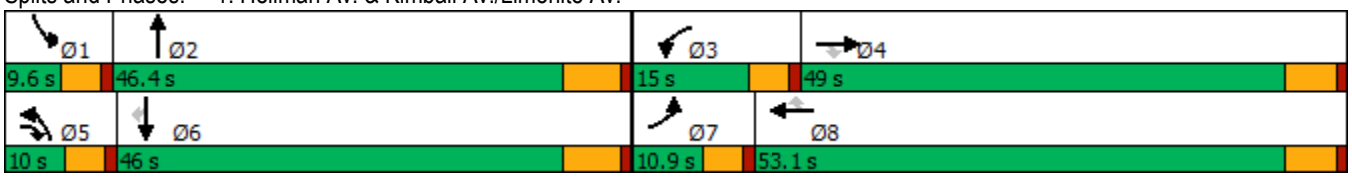
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	56.7	24.4	27.2	14.1	53.6	15.3	36.3
Change Period (Y+Rc), s	5.0	5.3	4.5	4.5	4.5	5.0	4.5	5.3
Max Green Setting (Gmax), s	6.0	51.4	19.9	23.4	13.9	44.3	11.5	31.0
Max Q Clear Time (g_c+I1), s	7.4	53.4	21.9	22.2	9.7	27.1	10.0	20.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.1	3.1	0.1	1.8

Intersection Summary	
HCM 6th Ctrl Delay	62.8
HCM 6th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	22	773	205	390	656	48	153	38	47	70	115
Future Volume (vph)	22	773	205	390	656	48	153	38	47	70	115
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	10.9	49.0	10.0	15.0	53.1	53.1	10.0	46.4	9.6	46.0	46.0
Total Split (%)	9.1%	40.8%	8.3%	12.5%	44.3%	44.3%	8.3%	38.7%	8.0%	38.3%	38.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	5.8	43.3	54.5	10.4	51.9	51.9	5.4	40.3	5.0	37.8	37.8
Actuated g/C Ratio	0.05	0.37	0.46	0.09	0.44	0.44	0.05	0.34	0.04	0.32	0.32
v/c Ratio	0.29	1.24	0.28	1.41	0.46	0.07	1.13	0.36	0.68	0.07	0.21
Control Delay	64.7	152.4	8.6	242.2	25.9	0.2	165.0	16.2	98.4	27.8	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	152.4	8.6	242.2	25.9	0.2	165.0	16.2	98.4	27.8	5.9
LOS	E	F	A	F	C	A	F	B	F	C	A
Approach Delay		121.0			101.9			58.7		31.1	
Approach LOS		F			F			E		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.41	
Intersection Signal Delay: 94.8	Intersection LOS: F
Intersection Capacity Utilization 89.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	773	205	390	656	48	153	38	344	47	70	115
Future Volume (veh/h)	22	773	205	390	656	48	153	38	344	47	70	115
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	1700	1800	1800	1800	1800	1800	1700	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	23	814	216	411	691	51	161	40	362	49	74	121
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	652	621	290	1460	651	142	576	514	62	1121	500
Arrive On Green	0.02	0.36	0.36	0.09	0.43	0.43	0.05	0.34	0.34	0.04	0.33	0.33
Sat Flow, veh/h	1619	1800	1525	3326	3420	1525	3141	1710	1525	1714	3420	1525
Grp Volume(v), veh/h	23	814	216	411	691	51	161	40	362	49	74	121
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1663	1710	1525	1570	1710	1525	1714	1710	1525
Q Serve(g_s), s	1.7	43.2	11.7	10.4	17.3	2.4	5.4	1.9	24.6	3.4	1.8	6.9
Cycle Q Clear(g_c), s	1.7	43.2	11.7	10.4	17.3	2.4	5.4	1.9	24.6	3.4	1.8	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	652	621	290	1460	651	142	576	514	62	1121	500
V/C Ratio(X)	0.64	1.25	0.35	1.42	0.47	0.08	1.13	0.07	0.70	0.79	0.07	0.24
Avail Cap(c_a), veh/h	85	652	621	290	1460	651	142	576	514	72	1141	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.8	38.1	24.4	54.5	24.6	20.3	57.0	26.9	34.4	57.0	27.5	29.3
Incr Delay (d2), s/veh	6.7	124.6	0.3	207.2	0.2	0.1	115.5	0.2	7.9	33.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	40.5	4.1	12.6	6.7	0.8	4.4	0.8	9.8	2.0	0.7	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	162.6	24.7	261.6	24.8	20.3	172.5	27.1	42.3	90.4	27.6	29.5
LnGrp LOS	E	F	C	F	C	C	F	C	D	F	C	C
Approach Vol, veh/h		1053			1153			563			244	
Approach Delay, s/veh		132.2			109.0			78.4			41.1	
Approach LOS		F			F			E			D	

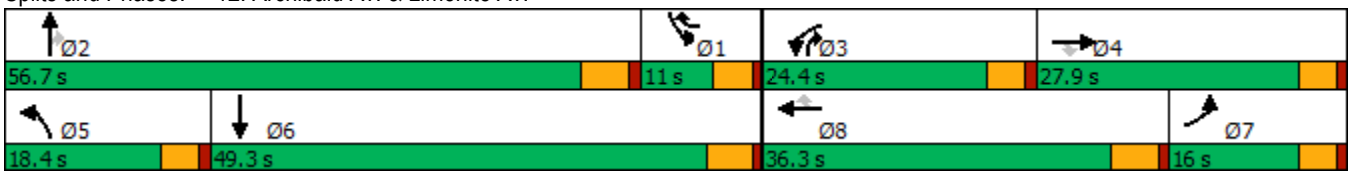
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	46.4	15.0	49.0	10.0	45.3	7.3	56.7
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	40.2	10.4	43.2	5.4	39.8	6.3	47.3
Max Q Clear Time (g_c+I1), s	5.4	26.6	12.4	45.2	7.4	8.9	3.7	19.3
Green Ext Time (p_c), s	0.0	1.9	0.0	0.0	0.0	0.7	0.0	4.8

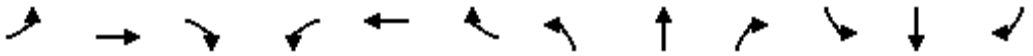
Intersection Summary	
HCM 6th Ctrl Delay	105.9
HCM 6th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	304	632	105	360	637	248	99	552	323	394	1052
Future Volume (vph)	304	632	105	360	637	248	99	552	323	394	1052
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	5.0	6.0	5.0	5.0	6.0
Minimum Split (s)	9.5	26.5	26.5	9.5	36.3	9.5	9.5	46.3	9.5	9.5	27.0
Total Split (s)	16.0	27.9	27.9	24.4	36.3	11.0	18.4	56.7	24.4	11.0	49.3
Total Split (%)	13.3%	23.3%	23.3%	20.3%	30.3%	9.2%	15.3%	47.3%	20.3%	9.2%	41.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	3.5	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	4.5	4.5	5.3	4.5	4.5	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	Max	Max	None	None	None	Max	None	None
Act Effct Green (s)	11.5	23.4	23.4	19.9	31.0	49.9	11.4	41.9	62.6	13.6	44.3
Actuated g/C Ratio	0.10	0.20	0.20	0.17	0.26	0.42	0.10	0.36	0.53	0.12	0.38
v/c Ratio	0.93	0.92	0.25	1.23	0.70	0.33	0.59	0.85	0.37	1.01	1.03
Control Delay	86.3	65.1	3.8	169.6	43.9	11.6	64.7	47.1	6.4	100.9	68.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.3	65.1	3.8	169.6	43.9	11.6	64.7	47.1	6.4	100.9	68.6
LOS	F	E	A	F	D	B	E	D	A	F	E
Approach Delay		65.2			73.8			35.4			76.0
Approach LOS		E			E			D			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 65.3	Intersection LOS: E
Intersection Capacity Utilization 96.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	304	632	105	360	637	248	99	552	323	394	1052	271
Future Volume (veh/h)	304	632	105	360	637	248	99	552	323	394	1052	271
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	317	658	52	375	664	248	103	575	326	410	1096	141
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	366	765	341	326	1014	588	130	662	839	296	1185	152
Arrive On Green	0.10	0.21	0.21	0.18	0.28	0.28	0.07	0.35	0.35	0.08	0.37	0.37
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	1900	1576	3510	3217	413
Grp Volume(v), veh/h	317	658	52	375	664	248	103	575	326	410	614	623
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	1900	1576	1755	1805	1826
Q Serve(g_s), s	9.8	19.4	2.9	19.9	17.9	3.4	6.2	31.2	7.3	9.3	36.0	36.1
Cycle Q Clear(g_c), s	9.8	19.4	2.9	19.9	17.9	3.4	6.2	31.2	7.3	9.3	36.0	36.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	366	765	341	326	1014	588	130	662	839	296	665	672
V/C Ratio(X)	0.87	0.86	0.15	1.15	0.65	0.42	0.79	0.87	0.39	1.38	0.92	0.93
Avail Cap(c_a), veh/h	366	765	341	326	1014	588	228	885	1024	296	725	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	41.9	35.4	45.2	35.0	26.3	50.4	33.6	5.6	50.5	33.4	33.4
Incr Delay (d2), s/veh	19.2	9.7	0.2	96.7	3.3	2.2	10.3	7.7	0.4	192.0	16.1	16.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	9.3	1.1	17.3	7.9	4.9	3.1	14.8	2.6	11.8	17.3	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	51.6	35.6	141.9	38.3	28.5	60.7	41.3	6.0	242.5	49.5	49.8
LnGrp LOS	E	D	D	F	D	C	E	D	A	F	D	D
Approach Vol, veh/h		1027			1287			1004			1647	
Approach Delay, s/veh		55.8			66.6			31.8			97.7	
Approach LOS		E			E			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	43.7	24.4	27.9	12.4	45.6	16.0	36.3
Change Period (Y+Rc), s	5.0	* 5.3	4.5	4.5	4.5	5.0	4.5	5.3
Max Green Setting (Gmax), s	6.5	* 51	19.9	23.4	13.9	44.3	11.5	31.0
Max Q Clear Time (g_c+I1), s	11.3	33.2	21.9	21.4	8.2	38.1	11.8	19.9
Green Ext Time (p_c), s	0.0	5.2	0.0	0.9	0.1	2.5	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	67.6
HCM 6th LOS	E

Notes

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

APPENDIX 8.1:

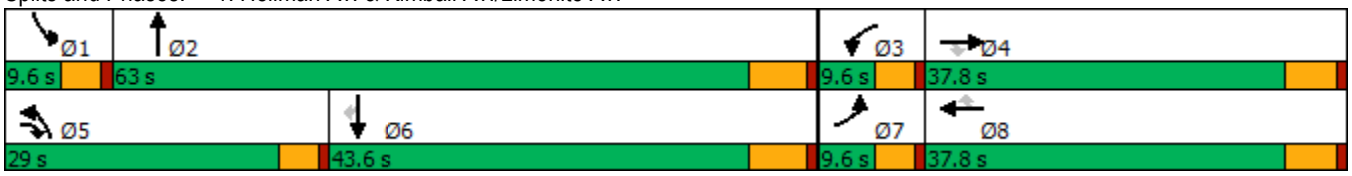
HORIZON YEAR WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

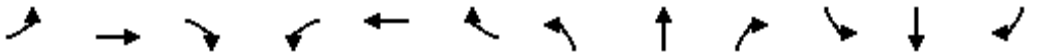
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	55	601	376	331	825	119	163	265	40	45	25
Future Volume (vph)	55	601	376	331	825	119	163	265	40	45	25
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	9.6	37.8	29.0	9.6	37.8	37.8	29.0	63.0	9.6	43.6	43.6
Total Split (%)	8.0%	31.5%	24.2%	8.0%	31.5%	31.5%	24.2%	52.5%	8.0%	36.3%	36.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	5.0	32.0	69.6	5.0	32.0	32.0	31.7	56.9	5.0	31.6	31.6
Actuated g/C Ratio	0.04	0.27	0.59	0.04	0.27	0.27	0.27	0.48	0.04	0.27	0.27
v/c Ratio	0.81	1.23	0.36	2.64	0.89	0.23	0.38	0.35	0.58	0.05	0.05
Control Delay	118.1	157.2	3.2	778.2	53.7	3.7	43.0	13.1	87.1	29.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	118.1	157.2	3.2	778.2	53.7	3.7	43.0	13.1	87.1	29.1	0.2
LOS	F	F	A	F	D	A	D	B	F	C	A
Approach Delay		99.0			237.1			19.8		43.7	
Approach LOS		F			F			B		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.64	
Intersection Signal Delay: 134.7	Intersection LOS: F
Intersection Capacity Utilization 80.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	601	376	331	825	119	163	265	298	40	45	25
Future Volume (veh/h)	55	601	376	331	825	119	163	265	298	40	45	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	58	633	396	348	868	125	172	279	314	42	47	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	72	512	765	132	973	434	352	863	770	54	1099	490
Arrive On Green	0.04	0.27	0.27	0.04	0.27	0.27	0.21	0.48	0.48	0.03	0.30	0.30
Sat Flow, veh/h	1714	1900	1610	3141	3610	1610	1714	1805	1610	1714	3610	1610
Grp Volume(v), veh/h	58	633	396	348	868	125	172	279	314	42	47	26
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1570	1805	1610	1714	1805	1610	1714	1805	1610
Q Serve(g_s), s	4.0	32.0	20.3	5.0	27.5	7.3	10.5	11.3	15.0	2.9	1.1	1.4
Cycle Q Clear(g_c), s	4.0	32.0	20.3	5.0	27.5	7.3	10.5	11.3	15.0	2.9	1.1	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	512	765	132	973	434	352	863	770	54	1099	490
V/C Ratio(X)	0.80	1.24	0.52	2.63	0.89	0.29	0.49	0.32	0.41	0.78	0.04	0.05
Avail Cap(c_a), veh/h	72	512	765	132	973	434	352	863	770	72	1137	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.4	43.4	21.7	56.9	41.7	34.4	41.7	19.1	20.1	57.1	29.1	29.2
Incr Delay (d2), s/veh	43.6	122.3	0.6	755.4	10.5	0.4	4.8	1.0	1.6	21.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	31.8	7.4	15.8	13.1	2.8	4.8	4.7	5.6	1.5	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.0	165.7	22.3	812.3	52.2	34.7	46.4	20.1	21.7	78.9	29.1	29.2
LnGrp LOS	F	F	C	F	D	C	D	C	C	E	C	C
Approach Vol, veh/h		1087			1341			765			115	
Approach Delay, s/veh		110.0			247.8			26.7			47.3	
Approach LOS		F			F			C			D	

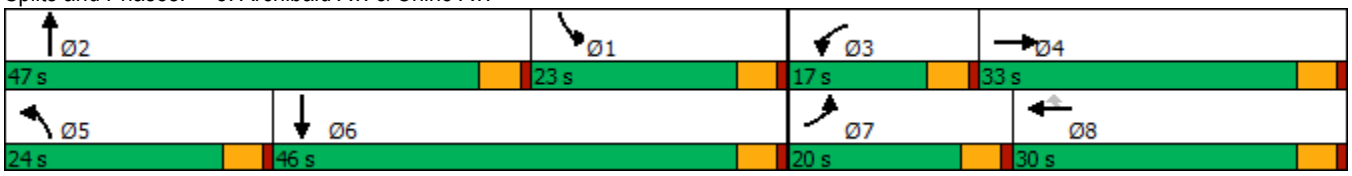
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	63.0	9.6	37.8	29.0	42.3	9.6	37.8
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	56.8	5.0	32.0	24.4	37.4	5.0	32.0
Max Q Clear Time (g_c+I1), s	4.9	17.0	7.0	34.0	12.5	3.4	6.0	29.5
Green Ext Time (p_c), s	0.0	3.6	0.0	0.0	0.2	0.3	0.0	1.4

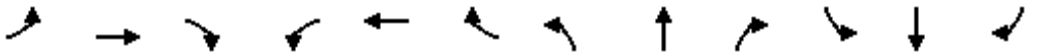
Intersection Summary	
HCM 6th Ctrl Delay	144.4
HCM 6th LOS	F

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	164	6	98	5	296	145	1898	182	1121
Future Volume (vph)	164	6	98	5	296	145	1898	182	1121
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.9	13.8	13.3	8.5	8.5	13.7	42.7	15.3	44.4
Actuated g/C Ratio	0.14	0.14	0.13	0.09	0.09	0.14	0.43	0.15	0.45
v/c Ratio	0.71	0.18	0.44	0.03	0.73	0.63	0.91	0.71	0.74
Control Delay	59.0	16.1	48.8	42.0	16.1	53.5	34.8	56.3	27.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	16.1	48.8	42.0	16.1	53.5	34.8	56.3	27.7
LOS	E	B	D	D	B	D	C	E	C
Approach Delay		49.5		24.4			36.1		31.6
Approach LOS		D		C			D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 34.2	Intersection LOS: C
Intersection Capacity Utilization 77.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	6	41	98	5	296	145	1898	66	182	1121	30
Future Volume (veh/h)	164	6	41	98	5	296	145	1898	66	182	1121	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	169	6	42	101	5	264	149	1957	65	188	1156	25
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	203	33	232	128	225	190	183	2246	74	223	1660	36
Arrive On Green	0.12	0.16	0.16	0.07	0.12	0.12	0.11	0.44	0.44	0.13	0.46	0.46
Sat Flow, veh/h	1714	205	1434	1714	1900	1610	1714	5152	171	1714	3613	78
Grp Volume(v), veh/h	169	0	48	101	5	264	149	1312	710	188	577	604
Grp Sat Flow(s),veh/h/ln	1714	0	1639	1714	1900	1610	1714	1729	1865	1714	1805	1886
Q Serve(g_s), s	9.0	0.0	2.4	5.4	0.2	8.2	7.9	32.2	32.3	10.0	23.7	23.7
Cycle Q Clear(g_c), s	9.0	0.0	2.4	5.4	0.2	8.2	7.9	32.2	32.3	10.0	23.7	23.7
Prop In Lane	1.00		0.88	1.00		1.00	1.00		0.09	1.00		0.04
Lane Grp Cap(c), veh/h	203	0	265	128	225	190	183	1508	813	223	830	867
V/C Ratio(X)	0.83	0.00	0.18	0.79	0.02	1.39	0.82	0.87	0.87	0.84	0.70	0.70
Avail Cap(c_a), veh/h	283	0	499	228	518	439	357	1573	848	338	830	867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	0.0	33.7	42.4	36.3	22.5	40.7	23.9	23.9	39.6	20.0	20.0
Incr Delay (d2), s/veh	13.9	0.0	0.3	10.4	0.0	186.1	8.5	5.4	9.7	11.3	2.6	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	0.9	2.6	0.1	12.8	3.5	12.3	14.3	4.7	9.3	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	0.0	34.0	52.8	36.4	208.6	49.2	29.3	33.6	50.9	22.6	22.5
LnGrp LOS	D	A	C	D	D	F	D	C	C	D	C	C
Approach Vol, veh/h		217			370			2171			1369	
Approach Delay, s/veh		49.6			163.8			32.1			26.4	
Approach LOS		D			F			C			C	

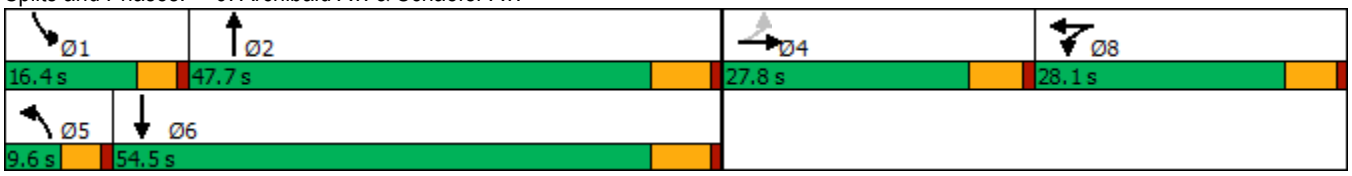
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	45.2	11.5	19.7	14.5	47.4	15.6	15.6
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	12.0	34.3	7.4	4.4	9.9	25.7	11.0	10.2
Green Ext Time (p_c), s	0.2	6.3	0.1	0.2	0.2	6.2	0.2	0.8

Intersection Summary	
HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	10	10	42	140	69	1547	22	942
Future Volume (vph)	10	10	42	140	69	1547	22	942
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	27.8	27.8	27.8	27.8	9.6	28.5	9.6	28.5
Total Split (s)	27.8	27.8	28.1	28.1	9.6	47.7	16.4	54.5
Total Split (%)	23.2%	23.2%	23.4%	23.4%	8.0%	39.8%	13.7%	45.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.8	5.8	5.8	4.6	6.5	4.6	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		12.5	23.4	23.4	5.2	42.9	6.3	36.9
Actuated g/C Ratio		0.13	0.25	0.25	0.06	0.46	0.07	0.39
v/c Ratio		0.31	0.10	1.02	0.75	0.68	0.20	0.84
Control Delay		40.5	35.8	77.4	93.0	24.3	53.2	32.3
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		40.5	35.8	77.4	93.0	24.3	53.2	32.3
LOS		D	D	E	F	C	D	C
Approach Delay		40.5		74.0		27.2		32.7
Approach LOS		D		E		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93.5	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 36.6	Intersection LOS: D
Intersection Capacity Utilization 78.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	42	140	339	69	1547	10	22	942	191
Future Volume (veh/h)	10	10	10	42	140	339	69	1547	10	22	942	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	10	10	10	44	146	336	72	1611	10	23	981	199
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	34	34	34	421	126	289	91	2245	14	42	1175	238
Arrive On Green	0.06	0.06	0.06	0.25	0.25	0.25	0.05	0.42	0.42	0.02	0.39	0.39
Sat Flow, veh/h	588	588	588	1714	511	1177	1714	5319	33	1714	2990	606
Grp Volume(v), veh/h	30	0	0	44	0	482	72	1047	574	23	592	588
Grp Sat Flow(s),veh/h/ln	1765	0	0	1714	0	1688	1714	1729	1894	1714	1805	1791
Q Serve(g_s), s	1.5	0.0	0.0	1.8	0.0	22.3	3.8	22.8	22.8	1.2	26.9	27.0
Cycle Q Clear(g_c), s	1.5	0.0	0.0	1.8	0.0	22.3	3.8	22.8	22.8	1.2	26.9	27.0
Prop In Lane	0.33		0.33	1.00		0.70	1.00		0.02	1.00		0.34
Lane Grp Cap(c), veh/h	103	0	0	421	0	414	91	1459	799	42	709	704
V/C Ratio(X)	0.29	0.00	0.00	0.10	0.00	1.16	0.79	0.72	0.72	0.55	0.83	0.84
Avail Cap(c_a), veh/h	427	0	0	421	0	414	94	1568	859	223	954	946
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	0.0	0.0	26.5	0.0	34.3	42.5	21.8	21.8	43.8	24.9	24.9
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.1	0.0	96.9	31.4	1.5	2.7	4.2	4.8	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	0.7	0.0	19.6	2.3	8.2	9.3	0.5	10.9	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	0.0	0.0	26.7	0.0	131.2	73.9	23.3	24.5	48.1	29.7	29.9
LnGrp LOS	D	A	A	C	A	F	E	C	C	D	C	C
Approach Vol, veh/h		30			526			1693			1203	
Approach Delay, s/veh		42.5			122.4			25.8			30.2	
Approach LOS		D			F			C			C	

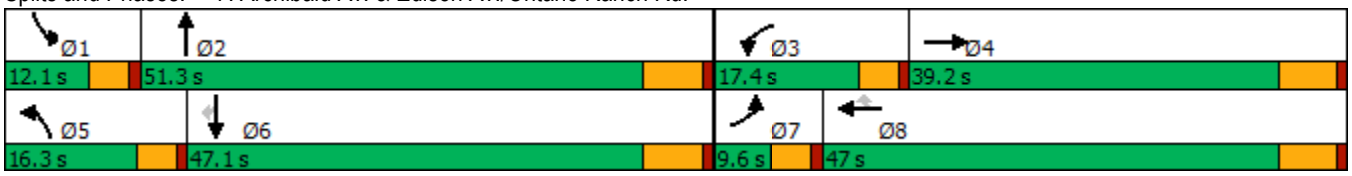
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	44.8		11.1	9.4	42.2		28.1				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	3.2	24.8		3.5	5.8	29.0		24.3				
Green Ext Time (p_c), s	0.0	8.9		0.1	0.0	6.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		42.2	
HCM 6th LOS		D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	455	866	375	611	1812	299	502	1275	520	79	671	272
Future Volume (vph)	455	866	375	611	1812	299	502	1275	520	79	671	272
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.0	33.0	119.8	12.8	40.8	40.8	11.7	44.8	119.8	7.3	40.4	40.4
Actuated g/C Ratio	0.04	0.28	1.00	0.11	0.34	0.34	0.10	0.37	1.00	0.06	0.34	0.34
v/c Ratio	3.57	0.89	0.24	1.87	2.86	0.49	3.08	0.96	0.33	0.78	0.56	0.43
Control Delay	1189.2	53.9	0.3	430.0	859.1	21.9	970.9	54.5	0.6	99.3	34.6	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1189.2	53.9	0.3	430.0	859.1	21.9	970.9	54.5	0.6	99.3	34.6	15.3
LOS	F	D	A	F	F	C	F	D	A	F	C	B
Approach Delay		346.4			670.9			242.4			34.5	
Approach LOS		F			F			F			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.57	
Intersection Signal Delay: 388.4	Intersection LOS: F
Intersection Capacity Utilization 176.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 7: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	455	866	375	611	1812	299	502	1275	520	79	671	272
Future Volume (veh/h)	455	866	375	611	1812	299	502	1275	520	79	671	272
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	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	464	884	0	623	1849	263	512	1301	0	81	685	245
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	132	998		337	649	550	168	1349		101	1209	539
Arrive On Green	0.04	0.28	0.00	0.11	0.34	0.34	0.10	0.37	0.00	0.06	0.33	0.33
Sat Flow, veh/h	3141	3610	1610	3141	1900	1610	1714	3610	1610	1714	3610	1610
Grp Volume(v), veh/h	464	884	0	623	1849	263	512	1301	0	81	685	245
Grp Sat Flow(s),veh/h/ln	1570	1805	1610	1570	1900	1610	1714	1805	1610	1714	1805	1610
Q Serve(g_s), s	5.0	28.0	0.0	12.8	40.8	15.3	11.7	42.1	0.0	5.6	18.6	14.2
Cycle Q Clear(g_c), s	5.0	28.0	0.0	12.8	40.8	15.3	11.7	42.1	0.0	5.6	18.6	14.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	132	998		337	649	550	168	1349		101	1209	539
V/C Ratio(X)	3.53	0.89		1.85	2.85	0.48	3.05	0.96		0.80	0.57	0.45
Avail Cap(c_a), veh/h	132	998		337	649	550	168	1355		108	1228	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	41.4	0.0	53.3	39.3	30.9	53.8	36.6	0.0	55.5	32.6	31.1
Incr Delay (d2), s/veh	1156.0	9.7	0.0	393.8	835.6	0.6	937.0	16.6	0.0	29.1	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.0	13.2	0.0	23.3	168.5	5.8	48.6	20.1	0.0	3.1	7.7	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1213.2	51.1	0.0	447.0	874.9	31.6	990.9	53.2	0.0	84.6	33.2	31.7
LnGrp LOS	F	D		F	F	C	F	D		F	C	C
Approach Vol, veh/h		1348	A		2735			1813	A		1011	
Approach Delay, s/veh		451.1			696.3			318.0			37.0	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	51.1	17.4	39.2	16.3	46.5	9.6	47.0
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	7.6	44.1	14.8	30.0	13.7	20.6	7.0	42.8
Green Ext Time (p_c), s	0.0	0.5	0.0	1.5	0.0	4.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	452.6
HCM 6th LOS	F

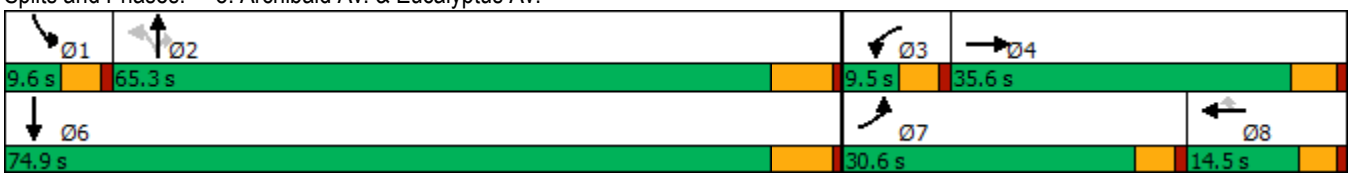
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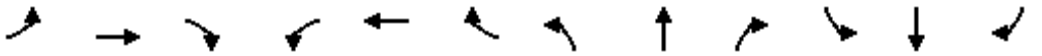
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	47	30	122	276	162	237	1974	84	60	1305
Future Volume (vph)	47	30	122	276	162	237	1974	84	60	1305
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Prot	NA
Protected Phases	7	4	3	8			2		1	6
Permitted Phases					8	2		2		
Detector Phase	7	4	3	8	8	2	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	30.6	23.2	9.5	14.5	14.5	32.5	32.5	32.5	9.6	24.5
Total Split (s)	30.6	35.6	9.5	14.5	14.5	65.3	65.3	65.3	9.6	74.9
Total Split (%)	25.5%	29.7%	7.9%	12.1%	12.1%	54.4%	54.4%	54.4%	8.0%	62.4%
Yellow Time (s)	3.6	4.2	3.5	3.5	3.5	5.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.2	4.5	4.5	4.5	6.5	6.5	6.5	4.6	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	Max	Max	Max	None	Max
Act Effct Green (s)	10.3	14.9	6.2	10.1	10.1	59.3	59.3	59.3	5.0	69.0
Actuated g/C Ratio	0.10	0.14	0.06	0.10	0.10	0.58	0.58	0.58	0.05	0.67
v/c Ratio	0.34	0.25	0.69	1.76	0.53	1.95	1.01	0.10	0.77	0.66
Control Delay	48.8	22.8	69.9	392.4	15.1	476.7	45.9	12.5	101.3	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	22.8	69.9	392.4	15.1	476.7	45.9	12.5	101.3	13.3
LOS	D	C	E	F	B	F	D	B	F	B
Approach Delay		33.6		224.0			89.1			16.8
Approach LOS		C		F			F			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.95	
Intersection Signal Delay: 79.9	Intersection LOS: E
Intersection Capacity Utilization 97.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	30	36	122	276	162	237	1974	84	60	1305	169
Future Volume (veh/h)	47	30	36	122	276	162	237	1974	84	60	1305	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1728	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	50	32	38	130	294	115	252	2100	89	64	1388	180
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	62	79	94	163	212	180	213	2142	936	81	2209	284
Arrive On Green	0.04	0.10	0.10	0.05	0.11	0.11	0.59	0.59	0.59	0.05	0.69	0.69
Sat Flow, veh/h	1646	791	940	3238	1900	1610	315	3610	1577	1714	3217	414
Grp Volume(v), veh/h	50	0	70	130	294	115	252	2100	89	64	774	794
Grp Sat Flow(s),veh/h/ln	1646	0	1731	1619	1900	1610	315	1805	1577	1714	1805	1826
Q Serve(g_s), s	3.0	0.0	3.8	4.0	11.1	6.8	44.4	56.3	2.4	3.7	23.4	24.0
Cycle Q Clear(g_c), s	3.0	0.0	3.8	4.0	11.1	6.8	59.1	56.3	2.4	3.7	23.4	24.0
Prop In Lane	1.00		0.54	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	62	0	174	163	212	180	213	2142	936	81	1240	1254
V/C Ratio(X)	0.80	0.00	0.40	0.80	1.39	0.64	1.18	0.98	0.10	0.79	0.62	0.63
Avail Cap(c_a), veh/h	430	0	528	163	212	180	213	2142	936	86	1240	1254
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	0.0	42.0	46.8	44.2	42.3	35.2	19.7	8.7	47.0	8.6	8.7
Incr Delay (d2), s/veh	8.5	0.0	1.5	22.4	200.1	7.4	120.3	15.4	0.2	32.6	2.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.7	2.1	16.9	3.0	12.1	22.8	0.8	2.2	7.1	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	0.0	43.5	69.2	244.3	49.7	155.5	35.1	8.9	79.6	10.9	11.1
LnGrp LOS	E	A	D	E	F	D	F	D	A	E	B	B
Approach Vol, veh/h		120			539			2441			1632	
Approach Delay, s/veh		48.7			160.6			46.6			13.7	
Approach LOS		D			F			D			B	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	9.3	65.6	9.5	15.2		74.9	8.4	16.3				
Change Period (Y+Rc), s	4.6	6.5	4.5	5.2		6.5	4.6	* 5.2				
Max Green Setting (Gmax), s	5.0	58.8	5.0	30.4		68.4	26.0	* 10				
Max Q Clear Time (g_c+I1), s	5.7	61.1	6.0	5.8		26.0	5.0	13.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3		13.5	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	48.3
HCM 6th LOS	D

Notes

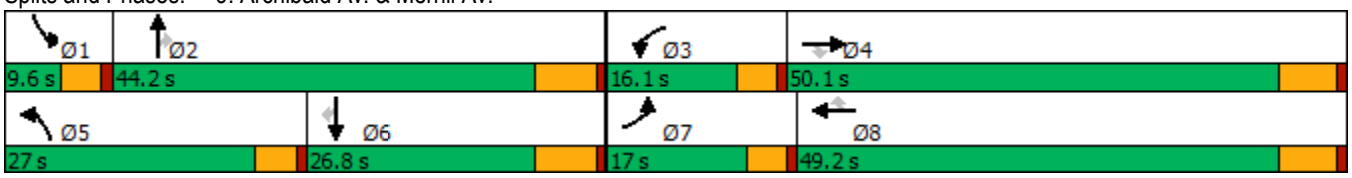
User approved volume balancing among the lanes for turning movement.

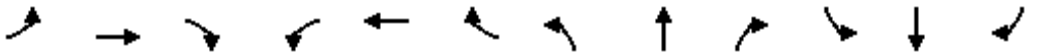
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	347	28	530	195	97	158	732	1479	88	48	1106	603
Future Volume (vph)	347	28	530	195	97	158	732	1479	88	48	1106	603
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.6	19.9	19.9	11.7	19.0	19.0	22.7	42.5	42.5	5.1	20.6	20.6
Actuated g/C Ratio	0.13	0.20	0.20	0.12	0.20	0.20	0.23	0.44	0.44	0.05	0.21	0.21
v/c Ratio	1.62	0.07	0.83	0.98	0.27	0.37	1.89	0.97	0.12	0.30	1.49	1.27
Control Delay	329.6	28.8	21.0	103.8	33.0	7.6	434.3	45.5	3.6	53.4	257.6	162.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	329.6	28.8	21.0	103.8	33.0	7.6	434.3	45.5	3.6	53.4	257.6	162.0
LOS	F	C	C	F	C	A	F	D	A	D	F	F
Approach Delay		139.7			54.7			167.7			219.3	
Approach LOS		F			D			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.89	
Intersection Signal Delay: 170.4	Intersection LOS: F
Intersection Capacity Utilization 114.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	28	530	195	97	158	732	1479	88	48	1106	603
Future Volume (veh/h)	347	28	530	195	97	158	732	1479	88	48	1106	603
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	358	29	491	201	100	68	755	1525	72	49	1140	556
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	188	618	524	175	603	511	340	1241	554	109	650	290
Arrive On Green	0.11	0.33	0.33	0.10	0.32	0.32	0.20	0.34	0.34	0.03	0.18	0.18
Sat Flow, veh/h	1714	1900	1610	1714	1900	1610	1714	3610	1610	3141	3610	1610
Grp Volume(v), veh/h	358	29	491	201	100	68	755	1525	72	49	1140	556
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	1900	1610	1714	1805	1610	1570	1805	1610
Q Serve(g_s), s	12.4	1.2	33.4	11.5	4.3	3.4	22.4	38.8	3.5	1.7	20.3	20.3
Cycle Q Clear(g_c), s	12.4	1.2	33.4	11.5	4.3	3.4	22.4	38.8	3.5	1.7	20.3	20.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	188	618	524	175	603	511	340	1241	554	109	650	290
V/C Ratio(X)	1.90	0.05	0.94	1.15	0.17	0.13	2.22	1.23	0.13	0.45	1.75	1.92
Avail Cap(c_a), veh/h	188	740	627	175	724	614	340	1241	554	139	650	290
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	26.1	36.9	50.6	27.7	27.4	45.2	37.0	25.4	53.4	46.2	46.2
Incr Delay (d2), s/veh	424.0	0.0	19.9	114.1	0.1	0.1	557.3	110.2	0.1	1.1	345.8	425.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.3	0.5	15.6	10.4	1.9	1.3	61.7	34.6	1.3	0.7	39.8	42.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	474.2	26.1	56.9	164.8	27.9	27.6	602.5	147.2	25.5	54.4	392.1	472.1
LnGrp LOS	F	C	E	F	C	C	F	F	C	D	F	F
Approach Vol, veh/h		878			369			2352			1745	
Approach Delay, s/veh		226.0			102.4			289.6			408.1	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	45.3	16.1	42.9	27.0	26.8	17.0	42.0
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.7	40.8	13.5	35.4	24.4	22.3	14.4	6.3
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.8

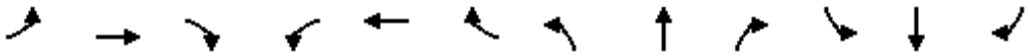
Intersection Summary	
HCM 6th Ctrl Delay	304.9
HCM 6th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	281	773	116	355	841	750	137	1414	432	423	1141
Future Volume (vph)	281	773	116	355	841	750	137	1414	432	423	1141
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Perm	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1		2	3	1	6
Permitted Phases			4			8	2		2		
Detector Phase	7	4	4	3	8	1	2	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	11.0	46.3	46.3	9.5	11.0	11.0
Total Split (s)	13.0	35.3	35.3	14.0	36.3	12.0	58.7	58.7	14.0	12.0	70.7
Total Split (%)	10.8%	29.4%	29.4%	11.7%	30.3%	10.0%	48.9%	48.9%	11.7%	10.0%	58.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	4.0	4.3	4.3	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	5.0	5.3	5.3	4.5	5.0	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	Min	None	None	Min
Act Effct Green (s)	8.5	30.1	30.1	9.5	30.3	37.6	53.4	53.4	63.7	7.0	65.7
Actuated g/C Ratio	0.07	0.25	0.25	0.08	0.25	0.32	0.45	0.45	0.53	0.06	0.55
v/c Ratio	1.18	0.89	0.25	2.59	0.96	1.42	2.27	1.73	0.50	4.16	1.43
Control Delay	160.4	55.6	9.9	756.7	65.2	224.2	633.4	360.0	13.5	1465.5	226.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	160.4	55.6	9.9	756.7	65.2	224.2	633.4	360.0	13.5	1465.5	226.6
LOS	F	E	A	F	E	F	F	F	B	F	F
Approach Delay		76.3			252.7			303.4			512.8
Approach LOS		E			F			F			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 4.16	
Intersection Signal Delay: 306.2	Intersection LOS: F
Intersection Capacity Utilization 155.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	281	773	116	355	841	750	137	1414	432	423	1141	268
Future Volume (veh/h)	281	773	116	355	841	750	137	1414	432	423	1141	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	293	805	121	370	876	662	143	1473	351	441	1189	279
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	248	920	410	143	926	507	60	849	830	105	814	191
Arrive On Green	0.07	0.25	0.25	0.08	0.26	0.26	0.45	0.45	0.45	0.06	0.55	0.55
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	367	1900	1573	1810	1488	349
Grp Volume(v), veh/h	293	805	121	370	876	662	143	1473	351	441	0	1468
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	367	1900	1573	1810	0	1837
Q Serve(g_s), s	8.5	25.7	7.3	9.5	28.6	27.1	0.0	53.7	16.4	7.0	0.0	65.7
Cycle Q Clear(g_c), s	8.5	25.7	7.3	9.5	28.6	27.1	53.7	53.7	16.4	7.0	0.0	65.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	248	920	410	143	926	507	60	849	830	105	0	1005
V/C Ratio(X)	1.18	0.87	0.29	2.59	0.95	1.31	2.39	1.73	0.42	4.18	0.00	1.46
Avail Cap(c_a), veh/h	248	926	413	143	932	509	60	849	830	105	0	1005
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.8	42.9	36.1	55.3	43.8	22.2	60.1	33.2	17.4	56.6	0.0	27.2
Incr Delay (d2), s/veh	114.4	9.3	0.4	733.4	17.5	151.4	671.6	335.3	0.4	1454.1	0.0	213.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	12.2	2.8	33.3	14.4	30.6	13.0	101.6	5.5	45.7	0.0	84.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	170.2	52.2	36.4	788.7	61.4	173.5	731.7	368.5	17.8	1510.6	0.0	240.2
LnGrp LOS	F	D	D	F	E	F	F	F	B	F	A	F
Approach Vol, veh/h		1219			1908			1967			1909	
Approach Delay, s/veh		79.0			241.3			332.4			533.7	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	12.0	59.0	14.0	35.1		71.0	13.0	36.1
Change Period (Y+Rc), s	5.0	5.3	4.5	4.5		* 5.3	4.5	5.3
Max Green Setting (Gmax), s	7.0	53.4	9.5	30.8		* 66	8.5	31.0
Max Q Clear Time (g_c+I1), s	9.0	55.7	11.5	27.7		67.7	10.5	30.6
Green Ext Time (p_c), s	0.0	0.0	0.0	1.6		0.0	0.0	0.2

Intersection Summary		
HCM 6th Ctrl Delay		318.3
HCM 6th LOS		F

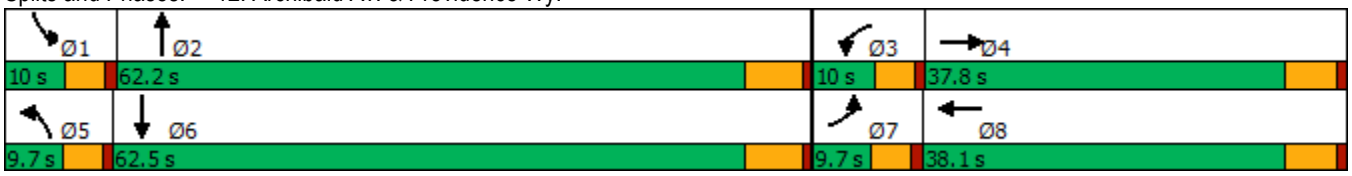
Notes

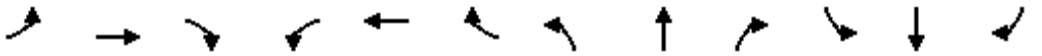
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	48	0	73	0	29	1863	82	1460
Future Volume (vph)	48	0	73	0	29	1863	82	1460
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	9.7	37.8	10.0	38.1	9.7	62.2	10.0	62.5
Total Split (%)	8.1%	31.5%	8.3%	31.8%	8.1%	51.8%	8.3%	52.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.1	13.9	13.2	14.0	5.1	59.4	5.4	63.7
Actuated g/C Ratio	0.05	0.13	0.13	0.14	0.05	0.58	0.05	0.62
v/c Ratio	0.58	0.04	0.34	0.25	0.36	1.04	0.95	0.75
Control Delay	75.7	0.2	49.9	4.2	61.2	54.0	129.0	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.7	0.2	49.9	4.2	61.2	54.0	129.0	20.1
LOS	E	A	D	A	E	D	F	C
Approach Delay		62.5		27.2		54.1		25.7
Approach LOS		E		C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 41.2	Intersection LOS: D
Intersection Capacity Utilization 83.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	0	10	73	0	72	29	1863	103	82	1460	71
Future Volume (veh/h)	48	0	10	73	0	72	29	1863	103	82	1460	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	52	0	6	79	0	39	32	2025	57	89	1587	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	91	0	153	100	0	162	54	2065	58	100	2166	53
Arrive On Green	0.05	0.00	0.10	0.06	0.00	0.10	0.03	0.58	0.58	0.06	0.60	0.60
Sat Flow, veh/h	1810	0	1610	1810	0	1610	1810	3586	100	1810	3601	88
Grp Volume(v), veh/h	52	0	6	79	0	39	32	1014	1068	89	794	832
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1610	1810	1805	1882	1810	1805	1884
Q Serve(g_s), s	2.7	0.0	0.3	4.2	0.0	2.2	1.7	52.9	54.1	4.8	30.4	30.7
Cycle Q Clear(g_c), s	2.7	0.0	0.3	4.2	0.0	2.2	1.7	52.9	54.1	4.8	30.4	30.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		0.05
Lane Grp Cap(c), veh/h	91	0	153	100	0	162	54	1039	1083	100	1086	1133
V/C Ratio(X)	0.57	0.00	0.04	0.79	0.00	0.24	0.59	0.98	0.99	0.89	0.73	0.73
Avail Cap(c_a), veh/h	95	0	530	100	0	535	95	1039	1083	100	1086	1133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	0.0	40.0	45.4	0.0	40.3	46.6	20.0	20.2	45.6	13.8	13.8
Incr Delay (d2), s/veh	4.4	0.0	0.1	30.4	0.0	0.8	3.9	22.2	23.8	53.7	2.6	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.1	2.7	0.0	0.9	0.8	24.2	26.1	3.5	10.7	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	0.0	40.1	75.8	0.0	41.1	50.5	42.2	44.0	99.4	16.4	16.3
LnGrp LOS	D	A	D	E	A	D	D	D	D	F	B	B
Approach Vol, veh/h		58			118			2114			1715	
Approach Delay, s/veh		48.6			64.3			43.2			20.7	
Approach LOS		D			E			D			C	

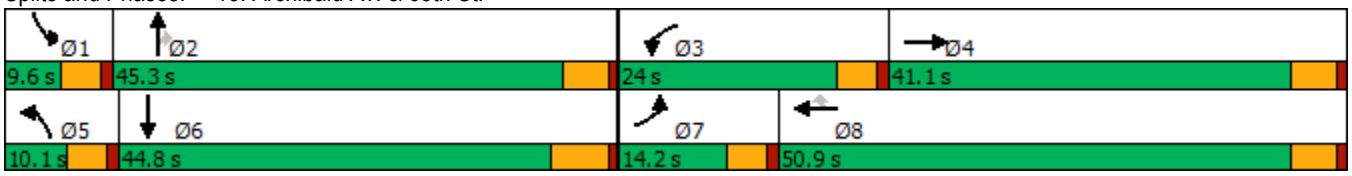
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	62.2	10.0	15.1	7.5	64.7	9.5	15.6
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.4	56.0	5.4	32.0	5.1	56.3	5.1	32.3
Max Q Clear Time (g_c+I1), s	6.8	56.1	6.2	2.3	3.7	32.7	4.7	4.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	11.7	0.0	0.1

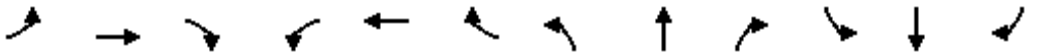
Intersection Summary	
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	155	89	264	40	131	20	1709	161	101	1381
Future Volume (vph)	155	89	264	40	131	20	1709	161	101	1381
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	9.7	14.4	19.6	24.3	24.3	5.3	40.6	40.6	5.0	45.4
Actuated g/C Ratio	0.10	0.15	0.20	0.24	0.24	0.05	0.41	0.41	0.05	0.46
v/c Ratio	0.95	0.31	0.81	0.09	0.30	0.23	1.26	0.24	1.20	0.66
Control Delay	103.8	21.9	57.7	28.0	9.6	54.1	150.1	6.8	199.3	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.8	21.9	57.7	28.0	9.6	54.1	150.1	6.8	199.3	25.0
LOS	F	C	E	C	A	D	F	A	F	C
Approach Delay		62.5		40.5			136.9			36.4
Approach LOS		E		D			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 84.2	Intersection LOS: F
Intersection Capacity Utilization 93.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	89	68	264	40	131	20	1709	161	101	1381	61
Future Volume (veh/h)	155	89	68	264	40	131	20	1709	161	101	1381	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	168	97	39	287	43	102	22	1858	139	110	1501	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	187	293	112	322	360	301	42	1562	688	97	2376	90
Arrive On Green	0.10	0.11	0.11	0.18	0.19	0.19	0.02	0.43	0.43	0.05	0.46	0.46
Sat Flow, veh/h	1810	2550	974	1810	1900	1589	1810	3610	1589	1810	5128	195
Grp Volume(v), veh/h	168	67	69	287	43	102	22	1858	139	110	1012	546
Grp Sat Flow(s),veh/h/ln	1810	1805	1719	1810	1900	1589	1810	1805	1589	1810	1729	1865
Q Serve(g_s), s	8.5	3.2	3.4	14.4	1.7	5.2	1.1	40.2	5.1	5.0	20.6	20.6
Cycle Q Clear(g_c), s	8.5	3.2	3.4	14.4	1.7	5.2	1.1	40.2	5.1	5.0	20.6	20.6
Prop In Lane	1.00		0.57	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	187	207	197	322	360	301	42	1562	688	97	1602	864
V/C Ratio(X)	0.90	0.32	0.35	0.89	0.12	0.34	0.52	1.19	0.20	1.13	0.63	0.63
Avail Cap(c_a), veh/h	187	699	666	378	937	783	107	1562	688	97	1602	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	37.8	37.9	37.3	31.2	32.6	44.9	26.3	16.4	43.9	18.9	18.9
Incr Delay (d2), s/veh	37.9	0.9	1.0	18.6	0.1	0.7	3.7	91.9	0.7	130.3	1.9	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	1.4	1.5	7.8	0.8	2.0	0.5	35.5	1.8	5.6	7.6	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.0	38.7	39.0	55.9	31.4	33.3	48.5	118.3	17.0	174.3	20.8	22.4
LnGrp LOS	E	D	D	E	C	C	D	F	B	F	C	C
Approach Vol, veh/h		304			432			2019			1668	
Approach Delay, s/veh		61.0			48.1			110.6			31.5	
Approach LOS		E			D			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	46.4	21.1	15.8	6.8	49.2	14.2	22.7
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	7.0	42.2	16.4	5.4	3.1	22.6	10.5	7.2
Green Ext Time (p_c), s	0.0	0.0	0.1	0.7	0.0	8.6	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	71.2
HCM 6th LOS	E

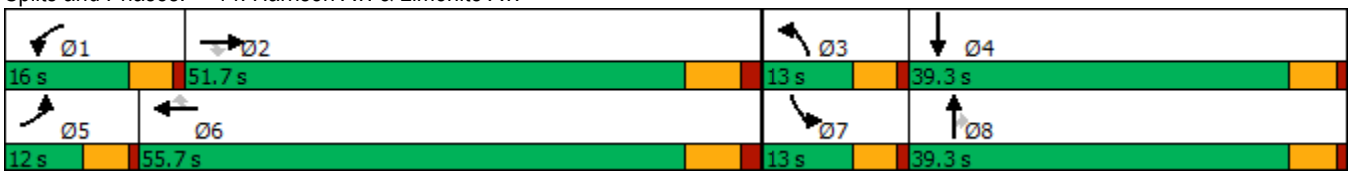
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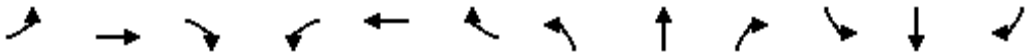
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	66	1923	51	185	1678	74	128	121	250	134	136
Future Volume (vph)	66	1923	51	185	1678	74	128	121	250	134	136
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	51.7	51.7	16.0	55.7	55.7	13.0	39.3	39.3	13.0	39.3
Total Split (%)	10.0%	43.1%	43.1%	13.3%	46.4%	46.4%	10.8%	32.8%	32.8%	10.8%	32.8%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.6	44.9	44.9	11.1	51.6	51.6	8.0	19.9	19.9	8.0	19.9
Actuated g/C Ratio	0.06	0.42	0.42	0.10	0.49	0.49	0.08	0.19	0.19	0.08	0.19
v/c Ratio	0.63	0.93	0.07	1.05	0.71	0.09	1.00	0.36	0.65	1.05	0.72
Control Delay	75.4	39.3	0.2	127.8	25.4	1.8	127.8	39.7	26.4	139.8	46.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.4	39.3	0.2	127.8	25.4	1.8	127.8	39.7	26.4	139.8	46.6
LOS	E	D	A	F	C	A	F	D	C	F	D
Approach Delay		39.5			34.3			55.6			79.9
Approach LOS		D			C			E			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 42.2	Intersection LOS: D
Intersection Capacity Utilization 86.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	1923	51	185	1678	74	128	121	250	134	136	105
Future Volume (veh/h)	66	1923	51	185	1678	74	128	121	250	134	136	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	70	2046	51	197	1785	77	136	129	173	143	145	95
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	90	2237	694	195	2537	788	142	312	260	142	176	115
Arrive On Green	0.05	0.43	0.43	0.11	0.49	0.49	0.08	0.16	0.16	0.08	0.16	0.16
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	1900	1586	1810	1072	702
Grp Volume(v), veh/h	70	2046	51	197	1785	77	136	129	173	143	0	240
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	1900	1586	1810	0	1774
Q Serve(g_s), s	3.9	37.8	1.9	11.0	27.4	2.6	7.6	6.2	10.4	8.0	0.0	13.4
Cycle Q Clear(g_c), s	3.9	37.8	1.9	11.0	27.4	2.6	7.6	6.2	10.4	8.0	0.0	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	90	2237	694	195	2537	788	142	312	260	142	0	291
V/C Ratio(X)	0.78	0.91	0.07	1.01	0.70	0.10	0.96	0.41	0.66	1.01	0.00	0.82
Avail Cap(c_a), veh/h	124	2271	705	195	2537	788	142	633	528	142	0	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.9	27.3	17.0	45.5	20.3	14.0	46.9	38.3	40.0	47.0	0.0	41.2
Incr Delay (d2), s/veh	12.1	6.3	0.0	67.1	0.9	0.1	62.5	0.9	2.9	77.8	0.0	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	15.2	0.7	8.3	9.9	0.9	5.8	2.9	4.1	6.5	0.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	33.5	17.1	112.7	21.2	14.0	109.4	39.1	42.9	124.8	0.0	47.1
LnGrp LOS	E	C	B	F	C	B	F	D	D	F	A	D
Approach Vol, veh/h		2167			2059			438			383	
Approach Delay, s/veh		34.0			29.7			62.5			76.1	
Approach LOS		C			C			E			E	

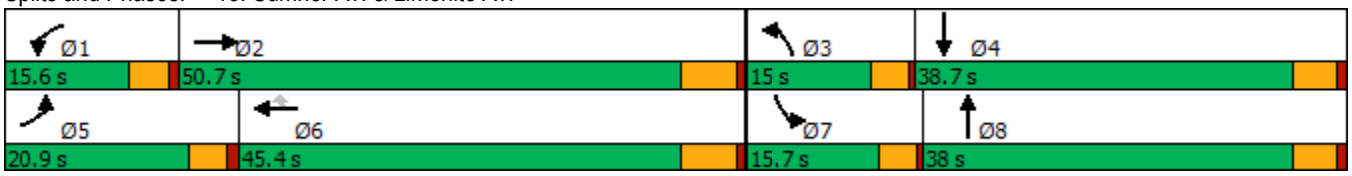
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	51.0	13.0	22.1	10.1	56.9	13.0	22.1
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	11.0	44.7	8.0	34.0	7.0	48.7	8.0	34.0
Max Q Clear Time (g_c+I1), s	13.0	39.8	9.6	15.4	5.9	29.4	10.0	12.4
Green Ext Time (p_c), s	0.0	4.2	0.0	1.1	0.0	12.0	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	522	1508	103	1430	55	142	491	98	307
Future Volume (vph)	522	1508	103	1430	55	142	491	98	307
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.9	50.7	15.6	45.4	45.4	15.0	38.0	15.7	38.7
Total Split (%)	17.4%	42.3%	13.0%	37.8%	37.8%	12.5%	31.7%	13.1%	32.3%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	16.6	47.0	7.4	37.8	37.8	10.9	26.2	9.4	24.8
Actuated g/C Ratio	0.15	0.43	0.07	0.34	0.34	0.10	0.24	0.09	0.23
v/c Ratio	1.05	0.75	0.47	0.85	0.09	0.84	0.82	0.67	0.70
Control Delay	99.5	30.3	57.7	39.7	0.3	87.7	46.0	71.8	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.5	30.3	57.7	39.7	0.3	87.7	46.0	71.8	30.6
LOS	F	C	E	D	A	F	D	E	C
Approach Delay		47.7		39.5			53.4		36.4
Approach LOS		D		D			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 109.8	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 44.5	Intersection LOS: D
Intersection Capacity Utilization 84.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	522	1508	54	103	1430	55	142	491	165	98	307	288
Future Volume (veh/h)	522	1508	54	103	1430	55	142	491	165	98	307	288
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	555	1604	48	110	1521	41	151	522	115	104	327	153
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	573	2425	73	171	1837	570	182	635	139	131	452	207
Arrive On Green	0.16	0.47	0.47	0.05	0.35	0.35	0.10	0.22	0.22	0.07	0.19	0.19
Sat Flow, veh/h	3510	5173	155	3510	5187	1610	1810	2942	645	1810	2404	1102
Grp Volume(v), veh/h	555	1072	580	110	1521	41	151	319	318	104	244	236
Grp Sat Flow(s),veh/h/ln	1755	1729	1870	1755	1729	1610	1810	1805	1783	1810	1805	1702
Q Serve(g_s), s	15.8	24.0	24.0	3.1	26.9	1.7	8.2	16.9	17.1	5.7	12.7	13.1
Cycle Q Clear(g_c), s	15.8	24.0	24.0	3.1	26.9	1.7	8.2	16.9	17.1	5.7	12.7	13.1
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.36	1.00		0.65
Lane Grp Cap(c), veh/h	573	1621	876	171	1837	570	182	390	385	131	339	320
V/C Ratio(X)	0.97	0.66	0.66	0.64	0.83	0.07	0.83	0.82	0.83	0.79	0.72	0.74
Avail Cap(c_a), veh/h	573	1621	876	388	2035	632	198	593	586	211	606	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	20.5	20.6	46.9	29.6	21.5	44.3	37.5	37.6	45.8	38.3	38.5
Incr Delay (d2), s/veh	29.5	1.0	1.9	1.5	2.7	0.1	21.4	4.5	4.8	4.0	2.1	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	8.8	9.7	1.3	10.7	0.6	4.6	7.6	7.6	2.6	5.6	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.2	21.6	22.4	48.4	32.4	21.5	65.7	42.0	42.4	49.9	40.4	40.9
LnGrp LOS	E	C	C	D	C	C	E	D	D	D	D	D
Approach Vol, veh/h		2207			1672			788			584	
Approach Delay, s/veh		34.3			33.2			46.7			42.3	
Approach LOS		C			C			D			D	

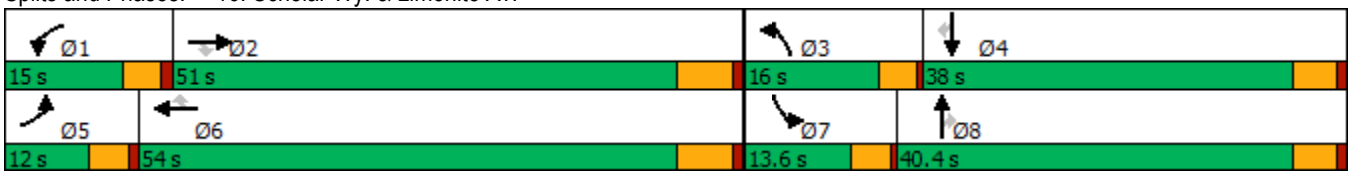
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	53.1	14.1	23.9	20.9	41.6	11.3	26.7
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	11.1	44.7	11.0	33.7	16.4	39.4	11.7	33.0
Max Q Clear Time (g_c+I1), s	5.1	26.0	10.2	15.1	17.8	28.9	7.7	19.1
Green Ext Time (p_c), s	0.0	10.1	0.0	2.0	0.0	6.7	0.0	2.4

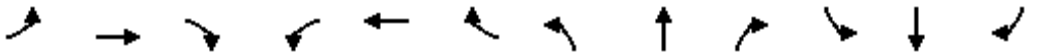
Intersection Summary	
HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	1621	73	74	1300	40	101	198	140	61	229	71
Future Volume (vph)	74	1621	73	74	1300	40	101	198	140	61	229	71
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	51.0	51.0	15.0	54.0	54.0	16.0	40.4	40.4	13.6	38.0	38.0
Total Split (%)	10.0%	42.5%	42.5%	12.5%	45.0%	45.0%	13.3%	33.7%	33.7%	11.3%	31.7%	31.7%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	7.0	46.7	46.7	7.9	47.7	47.7	9.2	19.8	19.8	7.1	15.5	15.5
Actuated g/C Ratio	0.07	0.48	0.48	0.08	0.49	0.49	0.09	0.20	0.20	0.07	0.16	0.16
v/c Ratio	0.61	0.99	0.10	0.54	0.78	0.05	0.63	0.55	0.34	0.49	0.42	0.30
Control Delay	68.2	47.3	3.6	60.8	26.9	0.1	62.0	41.8	7.7	60.1	39.1	39.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.2	47.3	3.6	60.8	26.9	0.1	62.0	41.8	7.7	60.1	39.1	39.9
LOS	E	D	A	E	C	A	E	D	A	E	D	D
Approach Delay		46.3			27.9			35.5			42.8	
Approach LOS		D			C			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 38.3	Intersection LOS: D
Intersection Capacity Utilization 82.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 16: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1621	73	74	1300	40	101	198	140	61	229	71
Future Volume (veh/h)	74	1621	73	74	1300	40	101	198	140	61	229	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	79	1724	58	79	1383	32	107	211	104	65	244	76
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	102	1839	819	102	1840	820	136	310	259	84	485	207
Arrive On Green	0.06	0.51	0.51	0.06	0.51	0.51	0.08	0.16	0.16	0.05	0.13	0.13
Sat Flow, veh/h	1810	3610	1607	1810	3610	1609	1810	1900	1589	1810	3610	1542
Grp Volume(v), veh/h	79	1724	58	79	1383	32	107	211	104	65	244	76
Grp Sat Flow(s),veh/h/ln	1810	1805	1607	1810	1805	1609	1810	1900	1589	1810	1805	1542
Q Serve(g_s), s	3.7	39.0	1.6	3.7	26.5	0.9	5.1	9.1	5.1	3.1	5.5	3.9
Cycle Q Clear(g_c), s	3.7	39.0	1.6	3.7	26.5	0.9	5.1	9.1	5.1	3.1	5.5	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	102	1839	819	102	1840	820	136	310	259	84	485	207
V/C Ratio(X)	0.77	0.94	0.07	0.77	0.75	0.04	0.79	0.68	0.40	0.77	0.50	0.37
Avail Cap(c_a), veh/h	156	1869	832	219	1994	888	250	774	647	200	1371	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	20.0	10.8	40.5	16.9	10.7	39.5	34.2	32.6	41.0	34.9	34.2
Incr Delay (d2), s/veh	5.3	9.6	0.0	4.6	1.5	0.0	3.7	2.0	0.7	5.5	0.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	15.8	0.5	1.7	9.4	0.3	2.3	4.2	2.0	1.5	2.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.7	29.6	10.9	45.1	18.5	10.7	43.2	36.2	33.3	46.5	35.5	35.1
LnGrp LOS	D	C	B	D	B	B	D	D	C	D	D	D
Approach Vol, veh/h		1861			1494			422			385	
Approach Delay, s/veh		29.7			19.7			37.3			37.3	
Approach LOS		C			B			D			D	

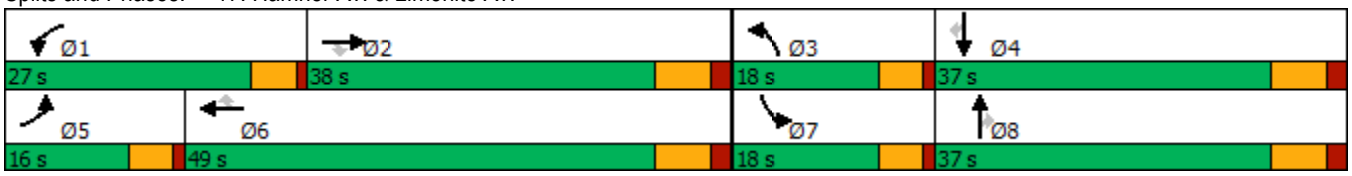
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	50.3	10.5	16.7	9.4	50.3	8.0	19.2
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	10.5	45.0	12.0	33.0	7.5	48.0	9.6	35.4
Max Q Clear Time (g_c+I1), s	5.7	41.0	7.1	7.5	5.7	28.5	5.1	11.1
Green Ext Time (p_c), s	0.0	3.3	0.0	1.4	0.0	9.3	0.0	1.2

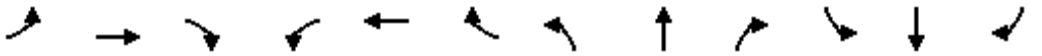
Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	1447	123	443	1037	484	159	672	640	299	456	118
Future Volume (vph)	183	1447	123	443	1037	484	159	672	640	299	456	118
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	16.0	38.0	38.0	27.0	49.0	49.0	18.0	37.0	37.0	18.0	37.0	37.0
Total Split (%)	13.3%	31.7%	31.7%	22.5%	40.8%	40.8%	15.0%	30.8%	30.8%	15.0%	30.8%	30.8%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	9.7	32.7	32.7	19.0	42.0	42.0	9.6	30.0	30.0	12.5	33.0	33.0
Actuated g/C Ratio	0.08	0.28	0.28	0.16	0.36	0.36	0.08	0.25	0.25	0.11	0.28	0.28
v/c Ratio	0.67	1.00	0.24	0.83	0.83	0.70	0.59	0.50	1.10	0.85	0.31	0.22
Control Delay	64.5	65.5	3.1	61.0	41.8	20.2	61.0	39.4	90.3	73.1	34.9	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	65.5	3.1	61.0	41.8	20.2	61.0	39.4	90.3	73.1	34.9	2.7
LOS	E	E	A	E	D	C	E	D	F	E	C	A
Approach Delay		61.0			40.8			63.9			43.7	
Approach LOS		E			D			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 52.7	Intersection LOS: D
Intersection Capacity Utilization 92.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 17: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	1447	123	443	1037	484	159	672	640	299	456	118
Future Volume (veh/h)	183	1447	123	443	1037	484	159	672	640	299	456	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	199	1573	68	482	1127	263	173	730	348	325	496	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	261	1570	437	547	1347	564	236	1454	404	385	1688	471
Arrive On Green	0.07	0.28	0.28	0.15	0.35	0.35	0.07	0.26	0.26	0.11	0.30	0.30
Sat Flow, veh/h	3619	5700	1587	3619	3800	1590	3619	5700	1584	3619	5700	1590
Grp Volume(v), veh/h	199	1573	68	482	1127	263	173	730	348	325	496	64
Grp Sat Flow(s),veh/h/ln	1810	1900	1587	1810	1900	1590	1810	1900	1584	1810	1900	1590
Q Serve(g_s), s	6.1	31.2	3.7	14.8	30.8	14.5	5.3	12.4	23.7	10.0	7.6	3.3
Cycle Q Clear(g_c), s	6.1	31.2	3.7	14.8	30.8	14.5	5.3	12.4	23.7	10.0	7.6	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	1570	437	547	1347	564	236	1454	404	385	1688	471
V/C Ratio(X)	0.76	1.00	0.16	0.88	0.84	0.47	0.73	0.50	0.86	0.84	0.29	0.14
Avail Cap(c_a), veh/h	352	1570	437	704	1410	590	416	1511	420	416	1688	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	41.0	31.0	47.0	33.5	28.3	51.9	36.0	40.2	49.6	30.7	29.2
Incr Delay (d2), s/veh	4.3	23.2	0.4	8.8	5.0	1.3	1.7	0.6	17.6	12.8	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	17.2	1.4	7.1	14.3	5.5	2.4	5.6	10.8	5.1	3.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	64.2	31.4	55.8	38.5	29.5	53.6	36.6	57.8	62.5	30.9	29.5
LnGrp LOS	E	F	C	E	D	C	D	D	E	E	C	C
Approach Vol, veh/h		1840			1872			1251			885	
Approach Delay, s/veh		62.1			41.7			44.9			42.4	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.1	38.2	12.4	40.5	13.2	47.1	17.0	35.9
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	22.0	31.0	13.0	30.0	11.0	42.0	13.0	30.0
Max Q Clear Time (g_c+I1), s	16.8	33.2	7.3	9.6	8.1	32.8	12.0	25.7
Green Ext Time (p_c), s	0.3	0.0	0.1	5.8	0.1	7.3	0.1	3.1

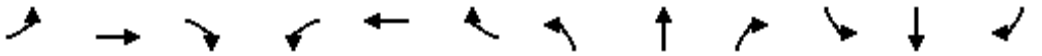
Intersection Summary	
HCM 6th Ctrl Delay	48.9
HCM 6th LOS	D

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	2008	1062	1775	970	432	0	418
Future Volume (vph)	2008	1062	1775	970	432	0	418
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	36.5	36.5	23.5	23.5	23.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.7	73.7	73.7	73.7	20.4	20.4	20.4
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.19	0.19	0.19
v/c Ratio	0.57	0.77	0.50	0.70	0.67	0.67	0.75
Control Delay	9.2	5.5	8.4	3.5	49.3	49.4	45.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	9.2	5.5	8.4	3.6	49.3	49.4	45.6
LOS	A	A	A	A	D	D	D
Approach Delay	7.9		6.7			47.5	
Approach LOS	A		A			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 105.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 12.5	Intersection LOS: B
Intersection Capacity Utilization 87.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰↑	↱↱
Traffic Volume (veh/h)	0	2008	1062	0	1775	970	0	0	0	432	0	418
Future Volume (veh/h)	0	2008	1062	0	1775	970	0	0	0	432	0	418
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	2070	1058	0	1830	1000				445	0	223
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	3828	1173	0	3828	1188				548	0	487
Arrive On Green	0.00	0.74	0.74	0.00	0.74	0.74				0.15	0.00	0.15
Sat Flow, veh/h	0	5358	1590	0	5358	1610				3619	0	3214
Grp Volume(v), veh/h	0	2070	1058	0	1830	1000				445	0	223
Grp Sat Flow(s),veh/h/ln	0	1729	1590	0	1729	1610				1810	0	1607
Q Serve(g_s), s	0.0	17.3	51.9	0.0	14.2	42.8				11.8	0.0	6.3
Cycle Q Clear(g_c), s	0.0	17.3	51.9	0.0	14.2	42.8				11.8	0.0	6.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3828	1173	0	3828	1188				548	0	487
V/C Ratio(X)	0.00	0.54	0.90	0.00	0.48	0.84				0.81	0.00	0.46
Avail Cap(c_a), veh/h	0	3828	1173	0	3828	1188				1290	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	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.7	10.2	0.0	5.3	9.0				40.9	0.0	38.5
Incr Delay (d2), s/veh	0.0	0.6	11.2	0.0	0.4	7.3				1.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.9	16.7	0.0	4.0	13.3				5.1	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.2	21.4	0.0	5.7	16.3				42.0	0.0	38.8
LnGrp LOS	A	A	C	A	A	B				D	A	D
Approach Vol, veh/h		3128			2830						668	
Approach Delay, s/veh		11.4			9.5						40.9	
Approach LOS		B			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		20.6		79.0						
Change Period (Y+Rc), s		5.5		5.5		5.5						
Max Green Setting (Gmax), s		73.5		35.5		73.5						
Max Q Clear Time (g_c+I1), s		53.9		13.8		44.8						
Green Ext Time (p_c), s		14.3		1.2		16.0						

Intersection Summary												
HCM 6th Ctrl Delay			13.5									
HCM 6th LOS			B									

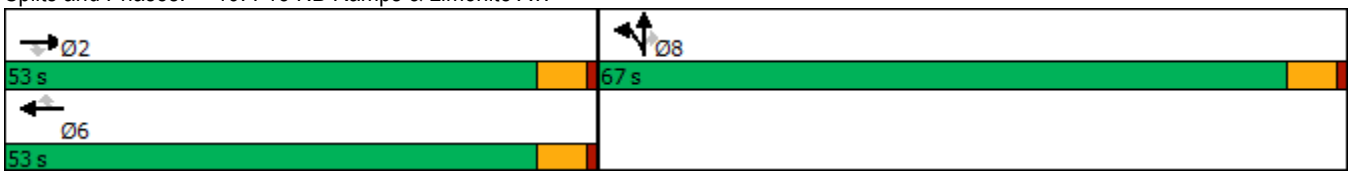
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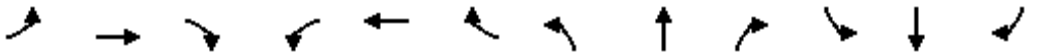
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	1829	611	1864	374	881	0	531
Future Volume (vph)	1829	611	1864	374	881	0	531
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	48.1	48.1	48.1	48.1	34.5	34.5	34.5
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.37	0.37	0.37
v/c Ratio	0.70	0.62	0.72	0.40	0.71	0.71	0.51
Control Delay	21.0	9.4	21.3	7.5	31.4	31.5	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	9.4	21.3	7.5	31.4	31.5	23.0
LOS	C	A	C	A	C	C	C
Approach Delay	18.1		19.0			28.3	
Approach LOS	B		B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 69.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↰	↱↱			
Traffic Volume (veh/h)	0	1829	611	0	1864	374	881	0	531	0	0	0
Future Volume (veh/h)	0	1829	611	0	1864	374	881	0	531	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	1866	623	0	1902	349	899	0	344			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	2892	897	0	2892	898	1134	0	1009			
Arrive On Green	0.00	0.56	0.56	0.00	0.56	0.56	0.31	0.00	0.31			
Sat Flow, veh/h	0	5358	1609	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	1866	623	0	1902	349	899	0	344			
Grp Sat Flow(s),veh/h/ln	0	1729	1609	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	21.2	23.8	0.0	21.8	10.4	19.3	0.0	7.0			
Cycle Q Clear(g_c), s	0.0	21.2	23.8	0.0	21.8	10.4	19.3	0.0	7.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2892	897	0	2892	898	1134	0	1009			
V/C Ratio(X)	0.00	0.65	0.69	0.00	0.66	0.39	0.79	0.00	0.34			
Avail Cap(c_a), veh/h	0	2892	897	0	2892	898	2612	0	2324			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	13.0	13.6	0.0	13.2	10.7	26.7	0.0	22.5			
Incr Delay (d2), s/veh	0.0	1.1	4.4	0.0	1.2	1.3	1.3	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	7.5	8.6	0.0	7.7	3.6	7.8	0.0	2.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.2	18.0	0.0	14.4	11.9	28.0	0.0	22.7			
LnGrp LOS	A	B	B	A	B	B	C	A	C			
Approach Vol, veh/h		2489			2251			1243				
Approach Delay, s/veh		15.1			14.0			26.5				
Approach LOS		B			B			C				

Timer - Assigned Phs	2				6		8					
Phs Duration (G+Y+Rc), s	53.0				53.0		32.2					
Change Period (Y+Rc), s	5.5				5.5		5.5					
Max Green Setting (Gmax), s	47.5				47.5		61.5					
Max Q Clear Time (g_c+I1), s	25.8				23.8		21.3					
Green Ext Time (p_c), s	12.2				12.2		5.4					

Intersection Summary												
HCM 6th Ctrl Delay			17.1									
HCM 6th LOS			B									

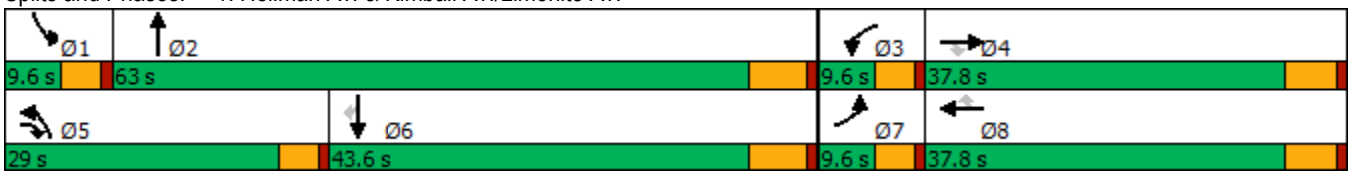
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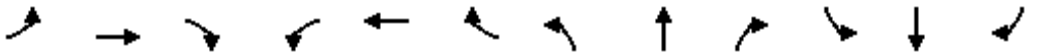
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	30	967	258	483	809	62	326	93	123	98	148
Future Volume (vph)	30	967	258	483	809	62	326	93	123	98	148
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	9.6	37.8	29.0	9.6	37.8	37.8	29.0	63.0	9.6	43.6	43.6
Total Split (%)	8.0%	31.5%	24.2%	8.0%	31.5%	31.5%	24.2%	52.5%	8.0%	36.3%	36.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	5.0	32.0	62.2	5.0	35.8	35.8	24.4	56.8	5.0	37.4	37.4
Actuated g/C Ratio	0.04	0.27	0.52	0.04	0.30	0.30	0.20	0.47	0.04	0.31	0.31
v/c Ratio	0.45	2.01	0.30	3.91	0.79	0.11	0.99	0.35	1.82	0.09	0.26
Control Delay	76.1	488.2	7.6	1342.0	45.8	0.4	93.6	15.3	449.5	29.6	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.1	488.2	7.6	1342.0	45.8	0.4	93.6	15.3	449.5	29.6	6.4
LOS	E	F	A	F	D	A	F	B	F	C	A
Approach Delay		379.3			505.8			45.4		159.9	
Approach LOS		F			F			D		F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.91	
Intersection Signal Delay: 328.8	Intersection LOS: F
Intersection Capacity Utilization 111.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	967	258	483	809	62	326	93	430	123	98	148
Future Volume (veh/h)	30	967	258	483	809	62	326	93	430	123	98	148
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	32	1018	272	508	852	65	343	98	453	129	103	156
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	507	757	131	1014	452	349	854	762	71	1125	502
Arrive On Green	0.03	0.27	0.27	0.04	0.28	0.28	0.20	0.47	0.47	0.04	0.31	0.31
Sat Flow, veh/h	1714	1900	1610	3141	3610	1610	1714	1805	1610	1714	3610	1610
Grp Volume(v), veh/h	32	1018	272	508	852	65	343	98	453	129	103	156
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1570	1805	1610	1714	1805	1610	1714	1805	1610
Q Serve(g_s), s	2.2	32.0	12.9	5.0	26.7	3.6	23.9	3.6	24.7	5.0	2.4	8.9
Cycle Q Clear(g_c), s	2.2	32.0	12.9	5.0	26.7	3.6	23.9	3.6	24.7	5.0	2.4	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	507	757	131	1014	452	349	854	762	71	1125	502
V/C Ratio(X)	0.68	2.01	0.36	3.88	0.84	0.14	0.98	0.11	0.59	1.81	0.09	0.31
Avail Cap(c_a), veh/h	71	507	757	131	1014	452	349	854	762	71	1125	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.8	44.0	20.3	57.5	40.6	32.3	47.6	17.6	23.2	57.5	29.3	31.5
Incr Delay (d2), s/veh	6.4	461.1	0.3	1315.0	6.4	0.1	44.4	0.3	3.4	412.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	79.3	4.7	25.8	12.3	1.4	14.1	1.5	9.4	10.3	1.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	505.1	20.6	1372.5	47.0	32.5	92.0	17.9	26.6	469.9	29.3	31.8
LnGrp LOS	E	F	C	F	D	C	F	B	C	F	C	C
Approach Vol, veh/h		1322			1425			894			388	
Approach Delay, s/veh		394.7			518.9			50.7			176.8	
Approach LOS		F			F			D			F	

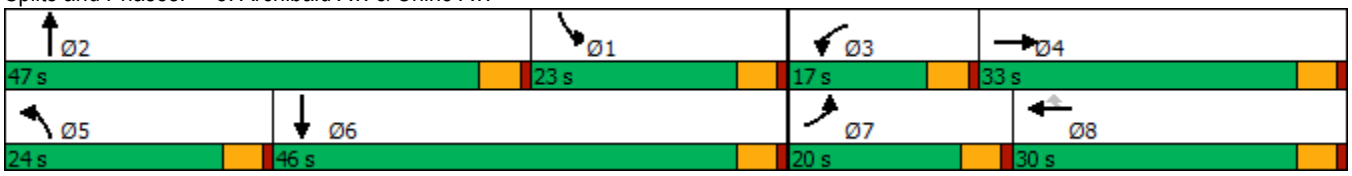
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	63.0	9.6	37.8	29.0	43.6	7.9	39.5
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	56.8	5.0	32.0	24.4	37.4	5.0	32.0
Max Q Clear Time (g_c+I1), s	7.0	26.7	7.0	34.0	25.9	10.9	4.2	28.7
Green Ext Time (p_c), s	0.0	3.5	0.0	0.0	0.0	1.0	0.0	1.7

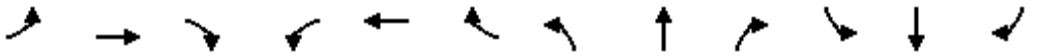
Intersection Summary	
HCM 6th Ctrl Delay	341.3
HCM 6th LOS	F

Lane Group	EBL	EBT	WBL	WBR	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	2	84	164	57	1264	173	1992
Future Volume (vph)	25	2	84	164	57	1264	173	1992
Turn Type	Prot	NA	Prot	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3		5	2	1	6
Permitted Phases				8				
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.1	7.8	9.6	10.4	8.6	30.6	20.4	45.3
Actuated g/C Ratio	0.09	0.10	0.12	0.13	0.11	0.38	0.25	0.57
v/c Ratio	0.17	0.11	0.43	0.29	0.32	0.73	0.41	1.03
Control Delay	43.4	20.4	44.8	1.2	43.2	24.1	34.6	49.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	20.4	44.8	1.2	43.2	24.1	34.6	49.3
LOS	D	C	D	A	D	C	C	D
Approach Delay		33.7				24.9		48.1
Approach LOS		C				C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 80.1	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 37.4	Intersection LOS: D
Intersection Capacity Utilization 82.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	2	16	84	0	164	57	1264	110	173	1992	17
Future Volume (veh/h)	25	2	16	84	0	164	57	1264	110	173	1992	17
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	26	2	17	88	0	132	59	1317	112	180	2075	13
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	48	11	98	113	198	168	82	1868	159	397	2087	13
Arrive On Green	0.03	0.07	0.07	0.07	0.00	0.10	0.05	0.38	0.38	0.23	0.57	0.57
Sat Flow, veh/h	1714	172	1464	1714	1900	1610	1714	4869	414	1714	3678	23
Grp Volume(v), veh/h	26	0	19	88	0	132	59	935	494	180	1017	1071
Grp Sat Flow(s),veh/h/ln	1714	0	1636	1714	1900	1610	1714	1729	1825	1714	1805	1896
Q Serve(g_s), s	1.1	0.0	0.8	3.7	0.0	3.5	2.5	16.7	16.7	6.6	40.7	40.9
Cycle Q Clear(g_c), s	1.1	0.0	0.8	3.7	0.0	3.5	2.5	16.7	16.7	6.6	40.7	40.9
Prop In Lane	1.00		0.89	1.00		1.00	1.00		0.23	1.00		0.01
Lane Grp Cap(c), veh/h	48	0	109	113	198	168	82	1326	700	397	1024	1076
V/C Ratio(X)	0.54	0.00	0.17	0.78	0.00	0.79	0.72	0.71	0.71	0.45	0.99	1.00
Avail Cap(c_a), veh/h	362	0	637	291	662	561	456	2010	1061	432	1024	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	32.1	33.6	0.0	11.5	34.3	19.0	19.0	24.1	15.6	15.7
Incr Delay (d2), s/veh	9.1	0.0	0.8	11.0	0.0	7.8	11.2	0.7	1.3	0.8	26.4	26.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.3	1.8	0.0	2.4	1.2	5.6	6.0	2.5	19.1	20.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	0.0	32.9	44.5	0.0	19.3	45.5	19.7	20.3	24.9	42.0	41.9
LnGrp LOS	D	A	C	D	A	B	D	B	C	C	D	D
Approach Vol, veh/h		45			220			1488			2268	
Approach Delay, s/veh		39.4			29.4			20.9			40.6	
Approach LOS		D			C			C			D	

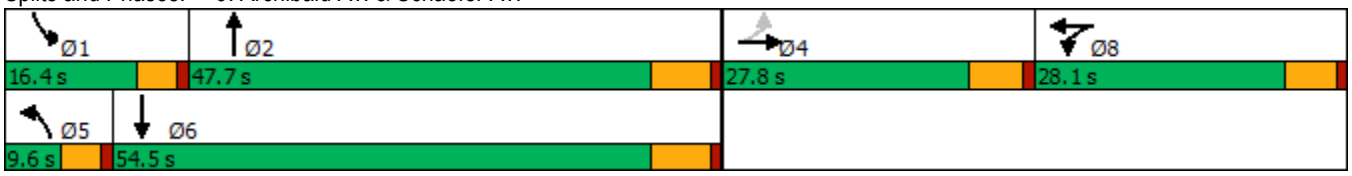
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.5	32.6	9.4	9.5	8.1	46.0	6.6	12.2
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	8.6	18.7	5.7	2.8	4.5	42.9	3.1	5.5
Green Ext Time (p_c), s	0.3	9.3	0.1	0.0	0.1	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	32.7
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	351	268	23	10	10	1174	322	1422
Future Volume (vph)	351	268	23	10	10	1174	322	1422
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	27.8	27.8	27.8	27.8	9.6	28.5	9.6	28.5
Total Split (s)	27.8	27.8	28.1	28.1	9.6	47.7	16.4	54.5
Total Split (%)	23.2%	23.2%	23.4%	23.4%	8.0%	39.8%	13.7%	45.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.8	5.8	5.8	4.6	6.5	4.6	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		22.3	12.2	12.2	5.1	35.3	12.0	50.3
Actuated g/C Ratio		0.22	0.12	0.12	0.05	0.35	0.12	0.50
v/c Ratio		13.07	0.12	0.30	0.13	0.73	1.68	0.85
Control Delay		5466.7	43.0	16.7	54.8	32.1	355.5	29.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		5466.7	43.0	16.7	54.8	32.1	355.5	29.7
LOS		F	D	B	D	C	F	C
Approach Delay		5466.7		22.9		32.3		88.9
Approach LOS		F		C		C		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.9	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 13.07	
Intersection Signal Delay: 1103.0	Intersection LOS: F
Intersection Capacity Utilization 106.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	351	268	126	23	10	64	10	1174	73	322	1422	29
Future Volume (veh/h)	351	268	126	23	10	64	10	1174	73	322	1422	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	369	282	133	24	11	51	11	1236	76	339	1497	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	185	142	67	155	27	123	23	1741	107	201	1639	34
Arrive On Green	0.22	0.22	0.22	0.09	0.09	0.09	0.01	0.35	0.35	0.12	0.45	0.45
Sat Flow, veh/h	848	648	306	1714	294	1361	1714	4988	307	1714	3617	75
Grp Volume(v), veh/h	784	0	0	24	0	62	11	857	455	339	746	782
Grp Sat Flow(s),veh/h/ln	1803	0	0	1714	0	1655	1714	1729	1837	1714	1805	1887
Q Serve(g_s), s	22.0	0.0	0.0	1.3	0.0	3.6	0.6	21.6	21.6	11.8	38.9	39.0
Cycle Q Clear(g_c), s	22.0	0.0	0.0	1.3	0.0	3.6	0.6	21.6	21.6	11.8	38.9	39.0
Prop In Lane	0.47		0.17	1.00		0.82	1.00		0.17	1.00		0.04
Lane Grp Cap(c), veh/h	393	0	0	155	0	149	23	1207	641	201	818	855
V/C Ratio(X)	1.99	0.00	0.00	0.16	0.00	0.41	0.49	0.71	0.71	1.69	0.91	0.91
Avail Cap(c_a), veh/h	393	0	0	379	0	366	85	1414	751	201	860	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	0.0	42.3	0.0	43.3	49.4	28.4	28.4	44.5	25.7	25.7
Incr Delay (d2), s/veh	455.6	0.0	0.0	0.5	0.0	1.8	6.0	1.4	2.6	330.7	13.6	13.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	59.0	0.0	0.0	0.6	0.0	1.5	0.3	8.3	9.0	23.1	17.5	18.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	495.0	0.0	0.0	42.8	0.0	45.2	55.3	29.8	31.0	375.1	39.3	39.1
LnGrp LOS	F	A	A	D	A	D	E	C	C	F	D	D
Approach Vol, veh/h		784			86			1323			1867	
Approach Delay, s/veh		495.0			44.5			30.4			100.2	
Approach LOS		F			D			C			F	

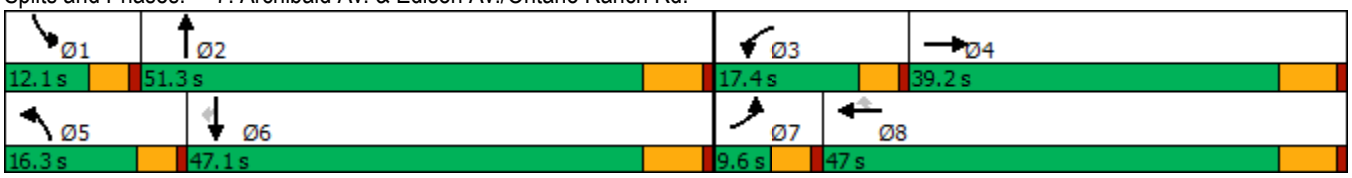
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.4	41.7		27.8	5.9	52.2		14.9				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	13.8	23.6		24.0	2.6	41.0		5.6				
Green Ext Time (p_c), s	0.0	7.3		0.0	0.0	4.7		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		152.5	
HCM 6th LOS		F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	402	2005	591	421	1342	157	397	888	537	278	1062	431
Future Volume (vph)	402	2005	591	421	1342	157	397	888	537	278	1062	431
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.0	33.0	119.1	12.8	40.8	40.8	11.7	43.9	119.1	7.5	39.7	39.7
Actuated g/C Ratio	0.04	0.28	1.00	0.11	0.34	0.34	0.10	0.37	1.00	0.06	0.33	0.33
v/c Ratio	3.16	2.07	0.38	1.29	2.13	0.26	2.45	0.69	0.35	2.68	0.91	0.71
Control Delay	1010.5	509.2	0.7	193.6	535.7	10.6	692.0	35.0	0.6	807.0	50.1	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1010.5	509.2	0.7	193.6	535.7	10.6	692.0	35.0	0.6	807.0	50.1	28.9
LOS	F	F	A	F	F	B	F	C	A	F	D	C
Approach Delay		476.1			417.8			167.9			163.9	
Approach LOS		F			F			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.16	
Intersection Signal Delay: 332.0	Intersection LOS: F
Intersection Capacity Utilization 154.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 7: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	402	2005	591	421	1342	157	397	888	537	278	1062	431
Future Volume (veh/h)	402	2005	591	421	1342	157	397	888	537	278	1062	431
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	414	2067	0	434	1384	128	409	915	0	287	1095	428
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	132	1003		339	653	553	169	1324		108	1196	521
Arrive On Green	0.04	0.28	0.00	0.11	0.34	0.34	0.10	0.37	0.00	0.06	0.33	0.33
Sat Flow, veh/h	3141	3610	1610	3141	1900	1610	1714	3610	1610	1714	3610	1572
Grp Volume(v), veh/h	414	2067	0	434	1384	128	409	915	0	287	1095	428
Grp Sat Flow(s),veh/h/ln	1570	1805	1610	1570	1900	1610	1714	1805	1610	1714	1805	1572
Q Serve(g_s), s	5.0	33.0	0.0	12.8	40.8	6.7	11.7	25.5	0.0	7.5	34.6	29.7
Cycle Q Clear(g_c), s	5.0	33.0	0.0	12.8	40.8	6.7	11.7	25.5	0.0	7.5	34.6	29.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	132	1003		339	653	553	169	1324		108	1196	521
V/C Ratio(X)	3.13	2.06		1.28	2.12	0.23	2.42	0.69		2.65	0.92	0.82
Avail Cap(c_a), veh/h	132	1003		339	653	553	169	1362		108	1234	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	42.9	0.0	53.0	39.0	27.8	53.5	31.9	0.0	55.6	38.1	36.5
Incr Delay (d2), s/veh	978.3	480.7	0.0	147.7	509.3	0.2	657.4	1.5	0.0	768.7	10.5	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.9	80.9	0.0	11.8	110.1	2.5	35.7	10.6	0.0	26.2	15.9	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1035.2	523.6	0.0	200.6	548.2	28.0	710.9	33.4	0.0	824.3	48.6	46.1
LnGrp LOS	F	F		F	F	C	F	C		F	D	D
Approach Vol, veh/h		2481	A		1946			1324	A		1810	
Approach Delay, s/veh		608.9			436.5			242.7			171.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	50.1	17.4	39.2	16.3	45.9	9.6	47.0
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	9.5	27.5	14.8	35.0	13.7	36.6	7.0	42.8
Green Ext Time (p_c), s	0.0	5.2	0.0	0.0	0.0	2.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	395.6
HCM 6th LOS	F

Notes

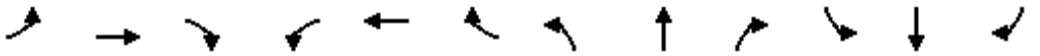
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	207	369	107	74	73	89	1498	160	184	1623
Future Volume (vph)	207	369	107	74	73	89	1498	160	184	1623
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Prot	NA
Protected Phases	7	4	3	8			2		1	6
Permitted Phases					8	2		2		
Detector Phase	7	4	3	8	8	2	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	30.6	23.2	9.5	14.5	14.5	32.5	32.5	32.5	9.6	24.5
Total Split (s)	30.6	35.6	9.5	14.5	14.5	65.3	65.3	65.3	9.6	74.9
Total Split (%)	25.5%	29.7%	7.9%	12.1%	12.1%	54.4%	54.4%	54.4%	8.0%	62.4%
Yellow Time (s)	3.6	4.2	3.5	3.5	3.5	5.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.2	4.5	4.5	4.5	6.5	6.5	6.5	4.6	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	Max	Max	Max	None	Max
Act Effct Green (s)	19.2	30.4	5.0	16.8	16.8	58.8	58.8	58.8	5.0	68.4
Actuated g/C Ratio	0.16	0.25	0.04	0.14	0.14	0.49	0.49	0.49	0.04	0.57
v/c Ratio	0.78	1.50	0.85	0.33	0.19	1.56	0.87	0.21	2.68	0.87
Control Delay	67.0	266.6	103.3	51.5	1.2	346.1	34.1	18.3	814.8	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	266.6	103.3	51.5	1.2	346.1	34.1	18.3	814.8	27.8
LOS	E	F	F	D	A	F	C	B	F	C
Approach Delay		219.7		60.4			48.6			103.8
Approach LOS		F		E			D			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.68	
Intersection Signal Delay: 102.7	Intersection LOS: F
Intersection Capacity Utilization 117.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	369	305	107	74	73	89	1498	160	184	1623	102
Future Volume (veh/h)	207	369	305	107	74	73	89	1498	160	184	1623	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	213	380	314	110	76	56	92	1544	164	190	1673	105
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	240	244	201	135	293	248	101	1769	789	71	1967	123
Arrive On Green	0.14	0.25	0.25	0.04	0.15	0.15	0.49	0.49	0.49	0.04	0.57	0.57
Sat Flow, veh/h	1714	962	795	3238	1900	1610	257	3610	1610	1714	3451	215
Grp Volume(v), veh/h	213	0	694	110	76	56	92	1544	164	190	869	909
Grp Sat Flow(s),veh/h/ln	1714	0	1757	1619	1900	1610	257	1805	1610	1714	1805	1861
Q Serve(g_s), s	14.6	0.0	30.4	4.0	4.2	3.7	19.2	45.7	6.9	5.0	47.9	49.2
Cycle Q Clear(g_c), s	14.6	0.0	30.4	4.0	4.2	3.7	58.8	45.7	6.9	5.0	47.9	49.2
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	240	0	445	135	293	248	101	1769	789	71	1029	1061
V/C Ratio(X)	0.89	0.00	1.56	0.82	0.26	0.23	0.91	0.87	0.21	2.66	0.84	0.86
Avail Cap(c_a), veh/h	371	0	445	135	293	248	101	1769	789	71	1029	1061
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	44.8	57.0	44.7	44.5	55.7	27.3	17.4	57.5	21.4	21.7
Incr Delay (d2), s/veh	10.4	0.0	262.5	28.9	0.5	0.5	67.5	6.3	0.6	785.4	8.5	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	45.4	2.2	2.0	1.5	4.6	19.0	0.1	17.7	19.7	21.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	0.0	307.3	85.9	45.2	45.0	123.3	33.6	18.0	842.9	29.9	30.6
LnGrp LOS	E	A	F	F	D	D	F	C	B	F	C	C
Approach Vol, veh/h		907			242			1800			1968	
Approach Delay, s/veh		249.5			63.6			36.7			108.7	
Approach LOS		F			E			D			F	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	9.6	65.3	9.5	35.6		74.9	21.4	23.7				
Change Period (Y+Rc), s	4.6	6.5	4.5	5.2		6.5	4.6	* 5.2				
Max Green Setting (Gmax), s	5.0	58.8	5.0	30.4		68.4	26.0	* 10				
Max Q Clear Time (g_c+I1), s	7.0	60.8	6.0	32.4		51.2	16.6	6.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0		10.6	0.2	0.1				

Intersection Summary	
HCM 6th Ctrl Delay	106.1
HCM 6th LOS	F

Notes

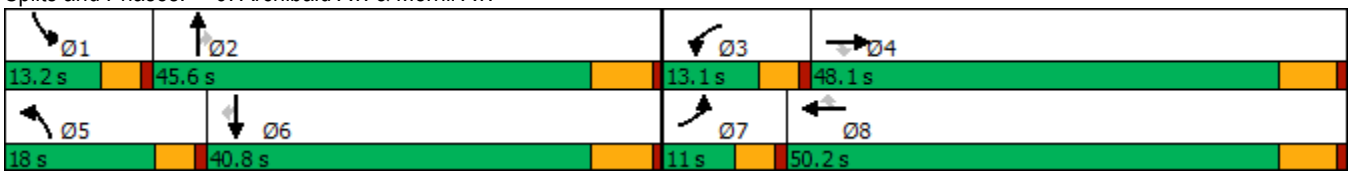
User approved volume balancing among the lanes for turning movement.

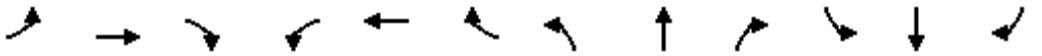
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	642	100	859	143	64	67	372	2161	396	88	1654	330
Future Volume (vph)	642	100	859	143	64	67	372	2161	396	88	1654	330
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	11.0	48.1	48.1	13.1	50.2	50.2	18.0	45.6	45.6	13.2	40.8	40.8
Total Split (%)	9.2%	40.1%	40.1%	10.9%	41.8%	41.8%	15.0%	38.0%	38.0%	11.0%	34.0%	34.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	16.4	41.9	41.9	8.5	37.2	37.2	13.4	40.2	40.2	7.5	34.3	34.3
Actuated g/C Ratio	0.14	0.35	0.35	0.07	0.31	0.31	0.11	0.34	0.34	0.06	0.29	0.29
v/c Ratio	2.83	0.16	1.27	1.21	0.11	0.11	2.02	1.84	0.57	0.47	1.65	0.59
Control Delay	854.0	27.7	161.1	197.3	26.3	0.4	505.6	408.7	14.7	62.0	328.5	24.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	854.0	27.7	161.1	197.3	26.3	0.4	505.6	408.7	14.7	62.0	328.5	24.3
LOS	F	C	F	F	C	A	F	F	B	E	F	C
Approach Delay		430.6			109.1			367.8			268.7	
Approach LOS		F			F			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.83	
Intersection Signal Delay: 342.3	Intersection LOS: F
Intersection Capacity Utilization 126.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	642	100	859	143	64	67	372	2161	396	88	1654	330
Future Volume (veh/h)	642	100	859	143	64	67	372	2161	396	88	1654	330
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	662	103	701	147	66	30	384	2228	394	91	1705	282
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	91	663	562	121	697	590	191	1279	570	136	1032	460
Arrive On Green	0.05	0.35	0.35	0.07	0.37	0.37	0.11	0.35	0.35	0.04	0.29	0.29
Sat Flow, veh/h	1714	1900	1610	1714	1900	1610	1714	3610	1610	3141	3610	1610
Grp Volume(v), veh/h	662	103	701	147	66	30	384	2228	394	91	1705	282
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	1900	1610	1714	1805	1610	1570	1805	1610
Q Serve(g_s), s	6.4	4.5	41.9	8.5	2.7	1.4	13.4	42.5	25.1	3.4	34.3	18.2
Cycle Q Clear(g_c), s	6.4	4.5	41.9	8.5	2.7	1.4	13.4	42.5	25.1	3.4	34.3	18.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	663	562	121	697	590	191	1279	570	136	1032	460
V/C Ratio(X)	7.24	0.16	1.25	1.21	0.09	0.05	2.01	1.74	0.69	0.67	1.65	0.61
Avail Cap(c_a), veh/h	91	663	562	121	697	590	191	1279	570	225	1032	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.8	26.9	39.1	55.8	24.9	24.5	53.3	38.7	33.1	56.6	42.9	37.1
Incr Delay (d2), s/veh	2830.9	0.1	125.4	149.0	0.1	0.0	470.7	337.3	3.5	2.1	297.9	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	74.6	2.0	35.6	8.7	1.2	0.6	30.6	77.3	10.2	1.3	57.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2887.7	27.0	164.5	204.7	25.0	24.6	524.0	376.1	36.7	58.7	340.8	39.5
LnGrp LOS	F	C	F	F	C	C	F	F	D	E	F	D
Approach Vol, veh/h		1466			243			3006			2078	
Approach Delay, s/veh		1384.5			133.7			350.5			287.5	
Approach LOS		F			F			F			F	

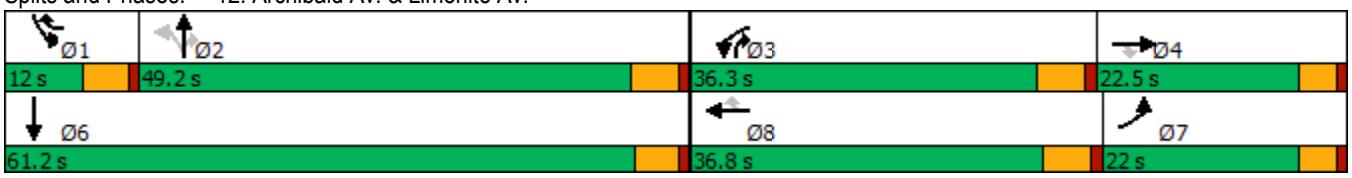
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	49.0	13.1	48.1	18.0	40.8	11.0	50.2
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	8.6	39.1	8.5	41.9	13.4	34.3	6.4	44.0
Max Q Clear Time (g_c+I1), s	5.4	44.5	10.5	43.9	15.4	36.3	8.4	4.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4

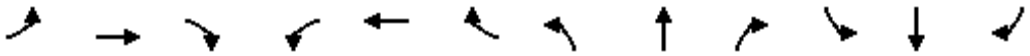
Intersection Summary	
HCM 6th Ctrl Delay	546.6
HCM 6th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	316	722	128	469	975	956	131	1757	446	430	1774
Future Volume (vph)	316	722	128	469	975	956	131	1757	446	430	1774
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Perm	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1		2	3	1	6
Permitted Phases			4			8	2		2		
Detector Phase	7	4	4	3	8	1	2	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	36.3	36.3	11.0	46.3	46.3	36.3	11.0	11.0
Total Split (s)	22.0	22.5	22.5	36.3	36.8	12.0	49.2	49.2	36.3	12.0	61.2
Total Split (%)	18.3%	18.8%	18.8%	30.3%	30.7%	10.0%	41.0%	41.0%	30.3%	10.0%	51.0%
Yellow Time (s)	3.5	3.5	3.5	4.3	4.3	4.0	4.3	4.3	4.3	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	5.3	5.3	5.0	5.3	5.3	5.3	5.0	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	Min	None	None	Min
Act Effct Green (s)	17.5	18.0	18.0	31.0	31.5	38.8	43.9	43.9	74.9	7.0	56.2
Actuated g/C Ratio	0.15	0.15	0.15	0.26	0.26	0.32	0.37	0.37	0.62	0.06	0.47
v/c Ratio	0.65	1.39	0.39	1.05	1.07	1.77	2.16	2.63	0.46	4.27	2.50
Control Delay	54.9	225.1	14.9	98.6	93.1	375.4	593.2	758.7	9.7	1505.9	699.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.9	225.1	14.9	98.6	93.1	375.4	593.2	758.7	9.7	1505.9	699.4
LOS	D	F	B	F	F	F	F	F	A	F	F
Approach Delay		156.0			206.6			606.1			836.5
Approach LOS		F			F			F			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 4.27	
Intersection Signal Delay: 499.3	Intersection LOS: F
Intersection Capacity Utilization 183.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	316	722	128	469	975	956	131	1757	446	430	1774	326
Future Volume (veh/h)	316	722	128	469	975	956	131	1757	446	430	1774	326
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	329	752	133	489	1016	877	136	1830	384	448	1848	340
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	511	540	241	466	945	515	60	698	994	105	729	134
Arrive On Green	0.15	0.15	0.15	0.26	0.26	0.26	0.37	0.37	0.37	0.06	0.47	0.47
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	182	1900	1576	1810	1561	287
Grp Volume(v), veh/h	329	752	133	489	1016	877	136	1830	384	448	0	2188
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	182	1900	1576	1810	0	1848
Q Serve(g_s), s	10.6	18.0	9.2	31.0	31.5	26.7	0.0	44.2	14.5	7.0	0.0	56.2
Cycle Q Clear(g_c), s	10.6	18.0	9.2	31.0	31.5	26.7	44.2	44.2	14.5	7.0	0.0	56.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	511	540	241	466	945	515	60	698	994	105	0	863
V/C Ratio(X)	0.64	1.39	0.55	1.05	1.07	1.70	2.27	2.62	0.39	4.25	0.00	2.53
Avail Cap(c_a), veh/h	511	540	241	466	945	515	60	698	994	105	0	863
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.5	51.1	47.4	44.7	44.4	22.2	60.2	38.1	11.2	56.7	0.0	32.1
Incr Delay (d2), s/veh	2.8	187.6	2.7	55.0	51.5	324.1	622.0	733.8	0.3	1486.7	0.0	693.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	22.0	3.8	20.3	20.1	55.4	12.1	161.5	4.5	46.6	0.0	188.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	238.8	50.1	99.7	95.9	346.4	682.1	771.8	11.5	1543.3	0.0	725.8
LnGrp LOS	D	F	D	F	F	F	F	F	B	F	A	F
Approach Vol, veh/h		1214			2382			2350			2636	
Approach Delay, s/veh		167.3			188.9			642.4			864.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	12.0	49.5	36.3	22.5		61.5	22.0	36.8
Change Period (Y+Rc), s	5.0	5.3	5.3	4.5		* 5.3	4.5	5.3
Max Green Setting (Gmax), s	7.0	43.9	31.0	18.0		* 56	17.5	31.5
Max Q Clear Time (g_c+I1), s	9.0	46.2	33.0	20.0		58.2	12.6	33.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0		0.0	0.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	517.6
HCM 6th LOS	F

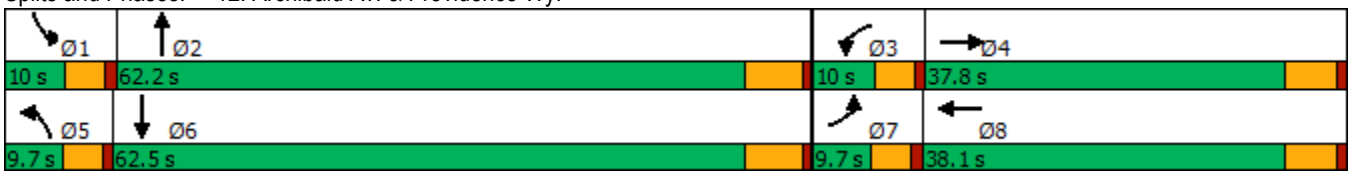
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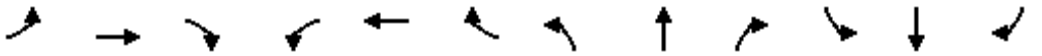
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	269	0	93	0	24	1838	111	2206
Future Volume (vph)	269	0	93	0	24	1838	111	2206
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	9.7	37.8	10.0	38.1	9.7	62.2	10.0	62.5
Total Split (%)	8.1%	31.5%	8.3%	31.8%	8.1%	51.8%	8.3%	52.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.1	16.1	12.2	16.4	5.1	56.3	5.4	60.7
Actuated g/C Ratio	0.05	0.15	0.12	0.16	0.05	0.54	0.05	0.58
v/c Ratio	3.28	0.09	0.47	0.70	0.30	1.08	1.28	1.16
Control Delay	1073.7	0.5	57.5	32.4	60.2	72.6	227.4	103.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1073.7	0.5	57.5	32.4	60.2	72.6	227.4	103.4
LOS	F	A	E	C	E	E	F	F
Approach Delay		972.8		39.7		72.5		109.1
Approach LOS		F		D		E		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.28	
Intersection Signal Delay: 141.8	Intersection LOS: F
Intersection Capacity Utilization 113.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	269	0	28	93	0	227	24	1838	108	111	2206	54
Future Volume (veh/h)	269	0	28	93	0	227	24	1838	108	111	2206	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	289	0	15	100	0	125	26	1976	58	119	2372	29
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	94	0	162	100	0	170	47	2044	60	100	2191	27
Arrive On Green	0.05	0.00	0.10	0.06	0.00	0.11	0.03	0.57	0.57	0.06	0.60	0.60
Sat Flow, veh/h	1810	0	1587	1810	0	1610	1810	3582	105	1810	3651	45
Grp Volume(v), veh/h	289	0	15	100	0	125	26	991	1043	119	1170	1231
Grp Sat Flow(s),veh/h/ln	1810	0	1587	1810	0	1610	1810	1805	1881	1810	1805	1891
Q Serve(g_s), s	5.1	0.0	0.8	5.4	0.0	7.4	1.4	51.1	52.3	5.4	58.7	58.7
Cycle Q Clear(g_c), s	5.1	0.0	0.8	5.4	0.0	7.4	1.4	51.1	52.3	5.4	58.7	58.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		0.02
Lane Grp Cap(c), veh/h	94	0	162	100	0	170	47	1030	1074	100	1083	1135
V/C Ratio(X)	3.06	0.00	0.09	1.00	0.00	0.74	0.55	0.96	0.97	1.19	1.08	1.09
Avail Cap(c_a), veh/h	94	0	519	100	0	532	94	1033	1077	100	1083	1135
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	0.0	39.8	46.2	0.0	42.5	47.1	20.0	20.2	46.2	19.6	19.6
Incr Delay (d2), s/veh	956.3	0.0	0.2	90.4	0.0	6.1	3.8	19.4	20.8	150.4	51.7	53.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.3	0.0	0.3	4.8	0.0	3.1	0.6	22.8	24.6	6.5	34.8	36.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1002.6	0.0	40.1	136.6	0.0	48.6	50.9	39.4	41.0	196.6	71.2	72.6
LnGrp LOS	F	A	D	F	A	D	D	D	D	F	F	F
Approach Vol, veh/h		304			225			2060			2520	
Approach Delay, s/veh		955.1			87.7			40.3			77.8	
Approach LOS		F			F			D			E	

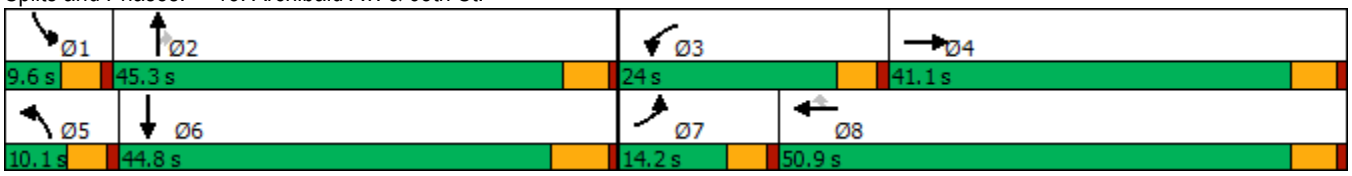
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	62.0	10.0	15.8	7.1	64.9	9.7	16.1
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.4	56.0	5.4	32.0	5.1	56.3	5.1	32.3
Max Q Clear Time (g_c+I1), s	7.4	54.3	7.4	2.8	3.4	60.7	7.1	9.4
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.6

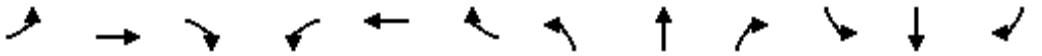
Intersection Summary		
HCM 6th Ctrl Delay		115.3
HCM 6th LOS		F

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	111	39	228	98	157	61	1702	258	218	1887
Future Volume (vph)	111	39	228	98	157	61	1702	258	218	1887
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	9.2	14.3	19.2	20.7	20.7	5.6	40.9	40.9	5.1	41.6
Actuated g/C Ratio	0.10	0.15	0.20	0.22	0.22	0.06	0.43	0.43	0.05	0.44
v/c Ratio	0.67	0.16	0.66	0.25	0.36	0.61	1.16	0.36	2.39	1.00
Control Delay	64.1	19.3	48.2	30.8	10.2	72.2	108.2	11.8	681.1	47.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.1	19.3	48.2	30.8	10.2	72.2	108.2	11.8	681.1	47.3
LOS	E	B	D	C	B	E	F	B	F	D
Approach Delay		45.0		32.3			94.8			106.6
Approach LOS		D		C			F			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.39	
Intersection Signal Delay: 92.4	Intersection LOS: F
Intersection Capacity Utilization 90.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	39	44	228	98	157	61	1702	258	218	1887	221
Future Volume (veh/h)	111	39	44	228	98	157	61	1702	258	218	1887	221
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	117	41	23	240	103	146	64	1792	218	229	1986	217
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	147	264	135	277	355	301	83	1616	712	101	2175	235
Arrive On Green	0.08	0.12	0.12	0.15	0.19	0.19	0.05	0.45	0.45	0.06	0.46	0.46
Sat Flow, veh/h	1810	2293	1177	1810	1900	1610	1810	3610	1590	1810	4751	514
Grp Volume(v), veh/h	117	31	33	240	103	146	64	1792	218	229	1440	763
Grp Sat Flow(s),veh/h/ln	1810	1805	1665	1810	1900	1610	1810	1805	1590	1810	1729	1807
Q Serve(g_s), s	5.7	1.4	1.6	11.6	4.2	7.3	3.1	40.2	7.9	5.0	34.8	35.5
Cycle Q Clear(g_c), s	5.7	1.4	1.6	11.6	4.2	7.3	3.1	40.2	7.9	5.0	34.8	35.5
Prop In Lane	1.00		0.71	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	147	208	192	277	355	301	83	1616	712	101	1583	827
V/C Ratio(X)	0.79	0.15	0.17	0.87	0.29	0.49	0.77	1.11	0.31	2.27	0.91	0.92
Avail Cap(c_a), veh/h	193	724	668	391	969	821	111	1616	712	101	1583	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	35.8	35.9	37.1	31.4	32.6	42.4	24.8	15.9	42.4	22.6	22.8
Incr Delay (d2), s/veh	11.5	0.3	0.4	10.3	0.4	1.2	14.6	58.4	1.1	603.0	9.3	17.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.6	0.6	5.7	1.9	0.1	1.7	28.4	2.9	19.0	14.1	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	36.1	36.3	47.4	31.8	33.9	56.9	83.2	17.0	645.4	32.0	40.0
LnGrp LOS	D	D	D	D	C	C	E	F	B	F	C	D
Approach Vol, veh/h		181			489			2074			2432	
Approach Delay, s/veh		46.4			40.1			75.5			92.3	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	46.4	18.4	15.4	8.7	47.3	11.9	21.9
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	7.0	42.2	13.6	3.6	5.1	37.5	7.7	9.3
Green Ext Time (p_c), s	0.0	0.0	0.2	0.3	0.0	1.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	79.0
HCM 6th LOS	E

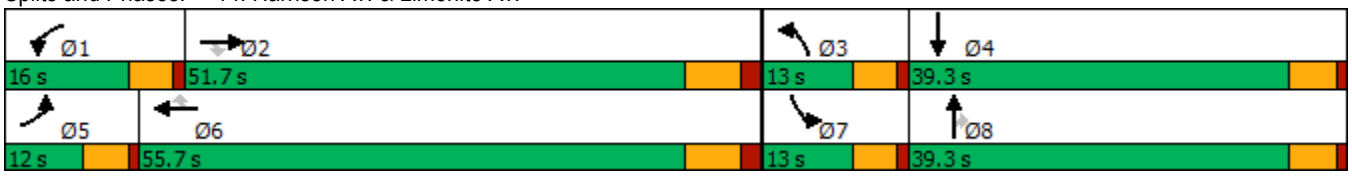
Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	69	1931	254	314	2116	80	47	60	214	88	104
Future Volume (vph)	69	1931	254	314	2116	80	47	60	214	88	104
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	51.7	51.7	16.0	55.7	55.7	13.0	39.3	39.3	13.0	39.3
Total Split (%)	10.0%	43.1%	43.1%	13.3%	46.4%	46.4%	10.8%	32.8%	32.8%	10.8%	32.8%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.0	45.1	45.1	11.1	54.6	54.6	6.6	15.4	15.4	7.7	18.8
Actuated g/C Ratio	0.06	0.44	0.44	0.11	0.54	0.54	0.06	0.15	0.15	0.08	0.18
v/c Ratio	0.36	0.91	0.34	1.74	0.83	0.10	0.44	0.23	0.63	0.71	0.56
Control Delay	59.0	35.1	8.6	381.3	26.0	2.4	60.6	38.0	22.2	75.4	38.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	35.1	8.6	381.3	26.0	2.4	60.6	38.0	22.2	75.4	38.6
LOS	E	D	A	F	C	A	E	D	C	E	D
Approach Delay		32.5			69.7			30.7			50.6
Approach LOS		C			E			C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.74	
Intersection Signal Delay: 50.8	Intersection LOS: D
Intersection Capacity Utilization 88.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Harrison Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	1931	254	314	2116	80	47	60	214	88	104	78
Future Volume (veh/h)	69	1931	254	314	2116	80	47	60	214	88	104	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	2099	266	341	2300	84	51	65	160	96	113	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	60	2368	720	208	2792	865	70	243	206	122	174	103
Arrive On Green	0.03	0.46	0.46	0.11	0.54	0.54	0.04	0.13	0.13	0.07	0.16	0.16
Sat Flow, veh/h	1810	5187	1577	1810	5187	1607	1810	1900	1610	1810	1111	659
Grp Volume(v), veh/h	38	2099	266	341	2300	84	51	65	160	96	0	180
Grp Sat Flow(s),veh/h/ln	1810	1729	1577	1810	1729	1607	1810	1900	1610	1810	0	1769
Q Serve(g_s), s	2.0	35.4	10.6	11.0	35.2	2.4	2.7	3.0	9.2	5.0	0.0	9.1
Cycle Q Clear(g_c), s	2.0	35.4	10.6	11.0	35.2	2.4	2.7	3.0	9.2	5.0	0.0	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	60	2368	720	208	2792	865	70	243	206	122	0	278
V/C Ratio(X)	0.63	0.89	0.37	1.64	0.82	0.10	0.73	0.27	0.78	0.79	0.00	0.65
Avail Cap(c_a), veh/h	132	2422	736	208	2792	865	151	675	572	151	0	628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.7	23.7	17.0	42.4	18.3	10.8	45.5	37.7	40.4	44.0	0.0	37.9
Incr Delay (d2), s/veh	4.0	4.3	0.3	308.7	2.1	0.0	5.2	0.6	6.1	15.3	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	13.5	3.5	22.5	12.3	0.8	1.3	1.4	3.8	2.7	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.7	28.1	17.3	351.1	20.5	10.8	50.7	38.3	46.5	59.3	0.0	40.4
LnGrp LOS	D	C	B	F	C	B	D	D	D	E	A	D
Approach Vol, veh/h		2403			2725			276			276	
Approach Delay, s/veh		27.2			61.5			45.4			47.0	
Approach LOS		C			E			D			D	

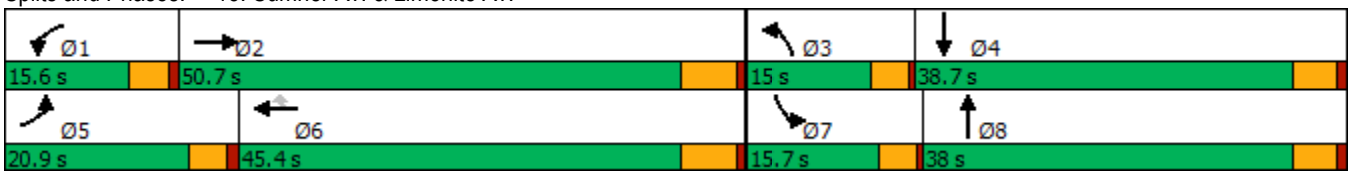
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	50.7	8.7	20.3	8.2	58.5	11.5	17.6
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	11.0	44.7	8.0	34.0	7.0	48.7	8.0	34.0
Max Q Clear Time (g_c+I1), s	13.0	37.4	4.7	11.1	4.0	37.2	7.0	11.2
Green Ext Time (p_c), s	0.0	6.3	0.0	0.9	0.0	9.7	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	45.5
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	449	1576	228	1850	78	77	263	161	557
Future Volume (vph)	449	1576	228	1850	78	77	263	161	557
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.9	50.7	15.6	45.4	45.4	15.0	38.0	15.7	38.7
Total Split (%)	17.4%	42.3%	13.0%	37.8%	37.8%	12.5%	31.7%	13.1%	32.3%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	16.4	45.6	10.3	39.5	39.5	8.6	28.7	11.7	33.8
Actuated g/C Ratio	0.14	0.39	0.09	0.34	0.34	0.07	0.25	0.10	0.29
v/c Ratio	0.95	0.79	0.77	1.00	0.13	0.60	0.49	0.93	1.07
Control Delay	80.8	34.7	69.2	59.9	1.1	71.4	28.2	103.4	81.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.8	34.7	69.2	59.9	1.1	71.4	28.2	103.4	81.2
LOS	F	C	E	E	A	E	C	F	F
Approach Delay		44.5		58.8			34.7		83.9
Approach LOS		D		E			C		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 57.2	Intersection LOS: E
Intersection Capacity Utilization 103.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	449	1576	89	228	1850	78	77	263	172	161	557	592
Future Volume (veh/h)	449	1576	89	228	1850	78	77	263	172	161	557	592
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	473	1659	47	240	1947	36	81	277	87	169	586	364
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	500	2203	62	298	1949	543	103	665	204	184	619	384
Arrive On Green	0.14	0.40	0.40	0.08	0.34	0.34	0.06	0.24	0.24	0.10	0.29	0.29
Sat Flow, veh/h	3510	5513	156	3510	5700	1588	1810	2716	835	1810	2138	1328
Grp Volume(v), veh/h	473	1143	563	240	1947	36	81	182	182	169	495	455
Grp Sat Flow(s),veh/h/ln	1755	1900	1870	1755	1900	1588	1810	1805	1746	1810	1805	1661
Q Serve(g_s), s	15.4	29.8	29.8	7.7	39.3	1.8	5.1	9.8	10.1	10.7	30.9	30.9
Cycle Q Clear(g_c), s	15.4	29.8	29.8	7.7	39.3	1.8	5.1	9.8	10.1	10.7	30.9	30.9
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.48	1.00		0.80
Lane Grp Cap(c), veh/h	500	1518	747	298	1949	543	103	442	427	184	522	481
V/C Ratio(X)	0.95	0.75	0.75	0.81	1.00	0.07	0.78	0.41	0.43	0.92	0.95	0.95
Avail Cap(c_a), veh/h	500	1518	747	338	1949	543	173	517	500	184	528	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	29.7	29.7	51.8	37.9	25.5	53.6	36.5	36.7	51.3	40.1	40.1
Incr Delay (d2), s/veh	27.1	2.2	4.3	10.4	20.1	0.1	4.8	0.5	0.5	43.4	26.3	27.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	13.1	13.3	3.7	20.7	0.7	2.4	4.2	4.2	6.9	16.9	15.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.0	31.9	34.1	62.2	58.0	25.6	58.5	37.0	37.2	94.7	66.4	67.8
LnGrp LOS	E	C	C	E	E	C	E	D	D	F	E	E
Approach Vol, veh/h		2179			2223			445			1119	
Approach Delay, s/veh		42.0			57.9			41.0			71.2	
Approach LOS		D			E			D			E	

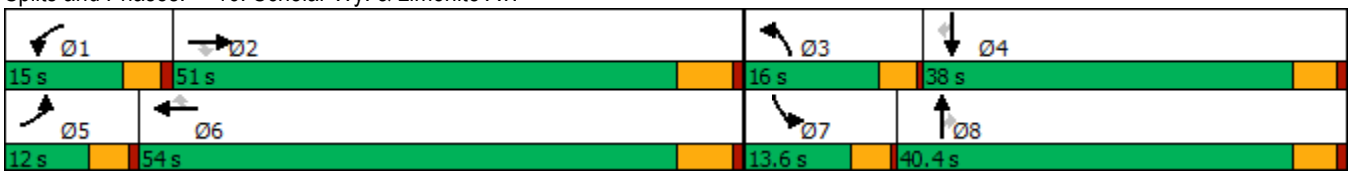
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	52.0	10.6	38.3	20.9	45.4	15.7	33.2
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	11.1	44.7	11.0	33.7	16.4	39.4	11.7	33.0
Max Q Clear Time (g_c+I1), s	9.7	31.8	7.1	32.9	17.4	41.3	12.7	12.1
Green Ext Time (p_c), s	0.0	8.2	0.0	0.4	0.0	0.0	0.0	1.5

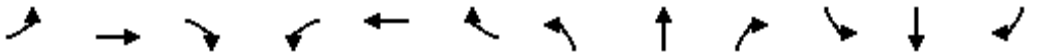
Intersection Summary	
HCM 6th Ctrl Delay	53.3
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	1414	177	183	1669	79	211	82	136	60	168	186
Future Volume (vph)	120	1414	177	183	1669	79	211	82	136	60	168	186
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	51.0	51.0	15.0	54.0	54.0	16.0	40.4	40.4	13.6	38.0	38.0
Total Split (%)	10.0%	42.5%	42.5%	12.5%	45.0%	45.0%	13.3%	33.7%	33.7%	11.3%	31.7%	31.7%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	7.5	45.2	45.2	10.6	48.2	48.2	12.1	25.6	25.6	7.2	19.0	19.0
Actuated g/C Ratio	0.07	0.42	0.42	0.10	0.45	0.45	0.11	0.24	0.24	0.07	0.18	0.18
v/c Ratio	0.99	0.92	0.25	1.08	1.02	0.11	1.09	0.19	0.29	0.52	0.28	0.70
Control Delay	128.7	40.4	8.3	137.5	56.9	3.8	133.8	34.2	6.9	64.4	37.9	53.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	128.7	40.4	8.3	137.5	56.9	3.8	133.8	34.2	6.9	64.4	37.9	53.8
LOS	F	D	A	F	E	A	F	C	A	E	D	D
Approach Delay		43.3			62.4			74.6			48.9	
Approach LOS		D			E			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 55.0	Intersection LOS: E
Intersection Capacity Utilization 90.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 16: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1414	177	183	1669	79	211	82	136	60	168	186
Future Volume (veh/h)	120	1414	177	183	1669	79	211	82	136	60	168	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	126	1488	41	193	1757	43	222	86	75	63	177	196
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	130	1638	683	182	1747	739	208	450	381	82	602	261
Arrive On Green	0.07	0.43	0.43	0.10	0.46	0.46	0.11	0.24	0.24	0.05	0.17	0.17
Sat Flow, veh/h	1810	3800	1585	1810	3800	1607	1810	1900	1610	1810	3610	1567
Grp Volume(v), veh/h	126	1488	41	193	1757	43	222	86	75	63	177	196
Grp Sat Flow(s),veh/h/ln	1810	1900	1585	1810	1900	1607	1810	1900	1610	1810	1805	1567
Q Serve(g_s), s	7.3	38.2	1.6	10.5	48.0	1.6	12.0	3.8	3.9	3.6	4.5	12.4
Cycle Q Clear(g_c), s	7.3	38.2	1.6	10.5	48.0	1.6	12.0	3.8	3.9	3.6	4.5	12.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	1638	683	182	1747	739	208	450	381	82	602	261
V/C Ratio(X)	0.97	0.91	0.06	1.06	1.01	0.06	1.07	0.19	0.20	0.77	0.29	0.75
Avail Cap(c_a), veh/h	130	1638	683	182	1747	739	208	644	546	166	1141	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	27.8	17.4	47.0	28.2	15.7	46.2	31.9	31.9	49.3	38.1	41.4
Incr Delay (d2), s/veh	68.9	7.9	0.0	83.7	22.9	0.0	81.4	0.2	0.2	5.7	0.2	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	17.3	0.6	8.7	24.8	0.6	10.0	1.7	1.5	1.7	2.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.3	35.6	17.4	130.6	51.1	15.7	127.6	32.0	32.1	55.0	38.3	44.7
LnGrp LOS	F	D	B	F	F	B	F	C	C	E	D	D
Approach Vol, veh/h		1655			1993			383			436	
Approach Delay, s/veh		41.4			58.1			87.5			43.6	
Approach LOS		D			E			F			D	

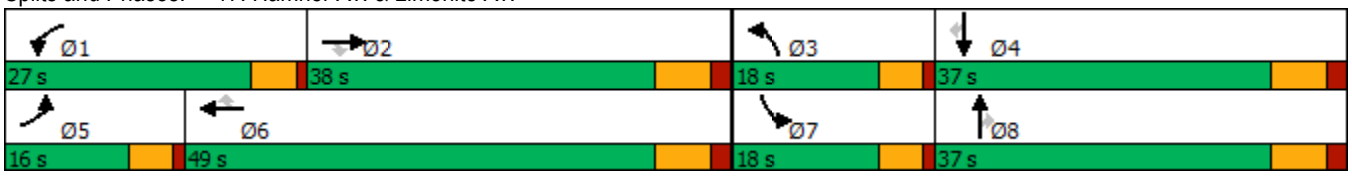
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	51.0	16.0	22.4	12.0	54.0	8.7	29.7
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	10.5	45.0	12.0	33.0	7.5	48.0	9.6	35.4
Max Q Clear Time (g_c+I1), s	12.5	40.2	14.0	14.4	9.3	50.0	5.6	5.9
Green Ext Time (p_c), s	0.0	3.5	0.0	1.3	0.0	0.0	0.0	0.5

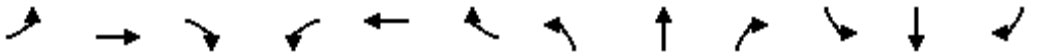
Intersection Summary	
HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	1144	147	555	1294	759	224	823	522	374	861	227
Future Volume (vph)	340	1144	147	555	1294	759	224	823	522	374	861	227
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	16.0	38.0	38.0	27.0	49.0	49.0	18.0	37.0	37.0	18.0	37.0	37.0
Total Split (%)	13.3%	31.7%	31.7%	22.5%	40.8%	40.8%	15.0%	30.8%	30.8%	15.0%	30.8%	30.8%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	11.0	32.1	32.1	20.9	42.0	42.0	11.1	29.4	29.4	13.0	31.3	31.3
Actuated g/C Ratio	0.09	0.27	0.27	0.18	0.35	0.35	0.09	0.25	0.25	0.11	0.26	0.26
v/c Ratio	1.06	0.77	0.28	0.91	1.00	1.07	0.69	0.60	0.87	0.98	0.59	0.41
Control Delay	117.4	44.7	4.9	67.3	63.3	77.4	63.5	41.9	34.5	94.7	40.7	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	117.4	44.7	4.9	67.3	63.3	77.4	63.5	41.9	34.5	94.7	40.7	8.8
LOS	F	D	A	E	E	E	E	D	C	F	D	A
Approach Delay		56.3			68.2			42.5			49.6	
Approach LOS		E			E			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 56.2	Intersection LOS: E
Intersection Capacity Utilization 95.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 17: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	1144	147	555	1294	759	224	823	522	374	861	227
Future Volume (veh/h)	340	1144	147	555	1294	759	224	823	522	374	861	227
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	351	1179	77	572	1334	393	231	848	264	386	888	118
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	338	1577	433	629	1357	574	291	1340	366	400	1511	420
Arrive On Green	0.09	0.28	0.28	0.17	0.36	0.36	0.08	0.24	0.24	0.11	0.27	0.27
Sat Flow, veh/h	3619	5700	1567	3619	3800	1609	3619	5700	1557	3619	5700	1586
Grp Volume(v), veh/h	351	1179	77	572	1334	393	231	848	264	386	888	118
Grp Sat Flow(s),veh/h/ln	1810	1900	1567	1810	1900	1609	1810	1900	1557	1810	1900	1586
Q Serve(g_s), s	11.0	22.2	4.4	18.2	40.9	24.5	7.4	15.7	18.4	12.5	16.0	7.0
Cycle Q Clear(g_c), s	11.0	22.2	4.4	18.2	40.9	24.5	7.4	15.7	18.4	12.5	16.0	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	1577	433	629	1357	574	291	1340	366	400	1511	420
V/C Ratio(X)	1.04	0.75	0.18	0.91	0.98	0.68	0.79	0.63	0.72	0.97	0.59	0.28
Avail Cap(c_a), veh/h	338	1577	433	677	1357	574	400	1453	397	400	1511	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	38.8	32.4	47.7	37.5	32.2	53.1	40.4	41.5	52.1	37.6	34.3
Incr Delay (d2), s/veh	58.9	2.4	0.4	15.0	20.6	4.4	5.0	1.3	7.7	35.7	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	10.3	1.7	9.3	21.8	9.8	3.5	7.3	7.6	7.5	7.3	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.3	41.2	32.8	62.7	58.0	36.5	58.1	41.7	49.1	87.8	38.6	35.1
LnGrp LOS	F	D	C	E	E	D	E	D	D	F	D	D
Approach Vol, veh/h		1607			2299			1343			1392	
Approach Delay, s/veh		56.3			55.5			46.0			51.9	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.4	39.6	14.5	38.2	16.0	49.0	18.0	34.6
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	22.0	31.0	13.0	30.0	11.0	42.0	13.0	30.0
Max Q Clear Time (g_c+I1), s	20.2	24.2	9.4	18.0	13.0	42.9	14.5	20.4
Green Ext Time (p_c), s	0.2	5.3	0.1	7.3	0.0	0.0	0.0	6.5

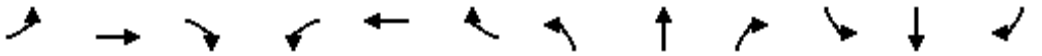
Intersection Summary	
HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1655	1090	2297	860	377	1	663
Future Volume (vph)	1655	1090	2297	860	377	1	663
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	22.5	22.5	22.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	4.5	4.5	4.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.7	73.7	73.7	73.7	32.4	32.4	32.4
Actuated g/C Ratio	0.63	0.63	0.63	0.63	0.28	0.28	0.28
v/c Ratio	0.52	0.80	0.72	0.69	0.41	0.41	0.84
Control Delay	12.7	6.1	16.5	5.7	36.5	36.6	48.7
Queue Delay	0.0	0.0	0.3	0.2	0.0	0.0	0.0
Total Delay	12.7	6.1	16.7	5.9	36.5	36.6	48.7
LOS	B	A	B	A	D	D	D
Approach Delay	10.1		13.8			44.3	
Approach LOS	B		B			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 16.9	Intersection LOS: B
Intersection Capacity Utilization 86.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰	↱↱
Traffic Volume (veh/h)	0	1655	1090	0	2297	860	0	0	0	377	1	663
Future Volume (veh/h)	0	1655	1090	0	2297	860	0	0	0	377	1	663
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	1706	1094	0	2368	887				390	0	420
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	3773	1155	0	3773	1171				629	0	559
Arrive On Green	0.00	0.73	0.73	0.00	0.73	0.73				0.17	0.00	0.17
Sat Flow, veh/h	0	5358	1588	0	5358	1610				3619	0	3220
Grp Volume(v), veh/h	0	1706	1094	0	2368	887				390	0	420
Grp Sat Flow(s),veh/h/ln	0	1729	1588	0	1729	1610				1810	0	1610
Q Serve(g_s), s	0.0	13.5	61.0	0.0	23.1	33.8				10.1	0.0	12.5
Cycle Q Clear(g_c), s	0.0	13.5	61.0	0.0	23.1	33.8				10.1	0.0	12.5
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3773	1155	0	3773	1171				629	0	559
V/C Ratio(X)	0.00	0.45	0.95	0.00	0.63	0.76				0.62	0.00	0.75
Avail Cap(c_a), veh/h	0	3773	1155	0	3773	1171				1307	0	1163
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.6	12.1	0.0	6.9	8.4				38.7	0.0	39.7
Incr Delay (d2), s/veh	0.0	0.4	16.5	0.0	0.8	4.6				1.0	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.0	21.3	0.0	6.9	10.5				4.4	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.0	28.5	0.0	7.7	13.0				39.7	0.0	41.7
LnGrp LOS	A	A	C	A	A	B				D	A	D
Approach Vol, veh/h		2800			3255						810	
Approach Delay, s/veh		14.8			9.1						40.7	
Approach LOS		B			A						D	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	79.0	22.0	79.0
Change Period (Y+Rc), s	5.5	4.5	5.5
Max Green Setting (Gmax), s	73.5	36.5	73.5
Max Q Clear Time (g_c+I1), s	63.0	14.5	35.8
Green Ext Time (p_c), s	7.9	3.0	24.2

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

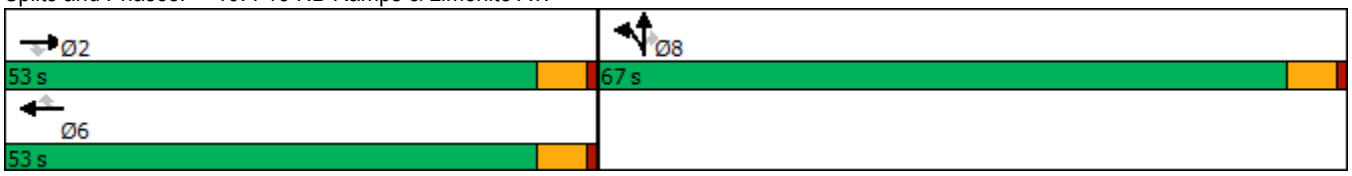
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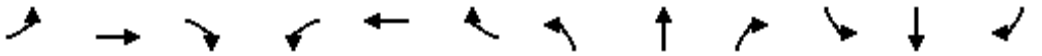
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	1716	316	2351	394	806	2	874
Future Volume (vph)	1716	316	2351	394	806	2	874
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	48.1	48.1	48.1	48.1	43.9	43.9	43.9
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.43	0.43	0.43
v/c Ratio	0.72	0.38	0.99	0.45	0.56	0.56	0.73
Control Delay	26.2	8.2	45.5	9.9	24.9	24.9	27.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.2	8.2	45.5	9.9	24.9	24.9	27.2
LOS	C	A	D	A	C	C	C
Approach Delay	23.4		40.4			26.1	
Approach LOS	C		D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.1	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 31.3	Intersection LOS: C
Intersection Capacity Utilization 77.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 19: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↰	↱↱			
Traffic Volume (veh/h)	0	1716	316	0	2351	394	806	2	874	0	0	0
Future Volume (veh/h)	0	1716	316	0	2351	394	806	2	874	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	1751	322	0	2399	397	823	0	589			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	2927	887	0	2927	909	1103	0	982			
Arrive On Green	0.00	0.56	0.56	0.00	0.56	0.56	0.30	0.00	0.30			
Sat Flow, veh/h	0	5358	1572	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	0	1751	322	0	2399	397	823	0	589			
Grp Sat Flow(s),veh/h/ln	0	1729	1572	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	18.7	9.4	0.0	31.5	12.0	17.2	0.0	13.1			
Cycle Q Clear(g_c), s	0.0	18.7	9.4	0.0	31.5	12.0	17.2	0.0	13.1			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2927	887	0	2927	909	1103	0	982			
V/C Ratio(X)	0.00	0.60	0.36	0.00	0.82	0.44	0.75	0.00	0.60			
Avail Cap(c_a), veh/h	0	2927	887	0	2927	909	2645	0	2353			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	12.1	10.0	0.0	14.9	10.6	26.3	0.0	24.9			
Incr Delay (d2), s/veh	0.0	0.9	1.2	0.0	2.7	1.5	1.0	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	6.5	3.1	0.0	11.3	4.1	6.9	0.0	4.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.0	11.2	0.0	17.6	12.1	27.3	0.0	25.5			
LnGrp LOS	A	B	B	A	B	B	C	A	C			
Approach Vol, veh/h		2073			2796			1412				
Approach Delay, s/veh		12.7			16.8			26.6				
Approach LOS		B			B			C				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		31.2				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		20.7				33.5		19.2				
Green Ext Time (p_c), s		11.6				10.9		6.4				

Intersection Summary												
HCM 6th Ctrl Delay			17.6									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 8.2:

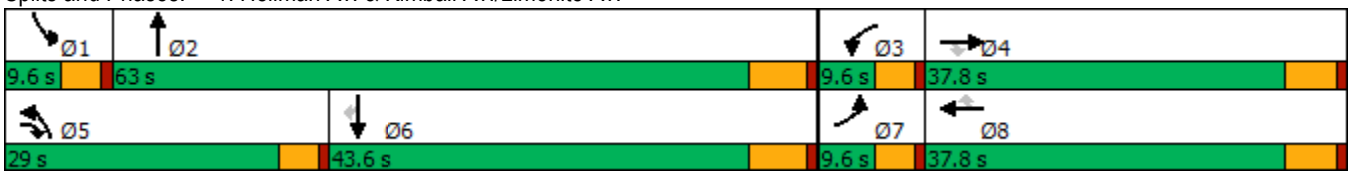
HORIZON YEAR WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	55	612	376	333	828	125	163	265	58	45	25
Future Volume (vph)	55	612	376	333	828	125	163	265	58	45	25
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	9.6	37.8	29.0	9.6	37.8	37.8	29.0	63.0	9.6	43.6	43.6
Total Split (%)	8.0%	31.5%	24.2%	8.0%	31.5%	31.5%	24.2%	52.5%	8.0%	36.3%	36.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	5.0	32.0	70.9	5.0	32.0	32.0	33.1	56.8	5.0	31.9	31.9
Actuated g/C Ratio	0.04	0.27	0.59	0.04	0.27	0.27	0.28	0.47	0.04	0.27	0.27
v/c Ratio	0.82	1.27	0.36	2.70	0.91	0.24	0.37	0.36	0.86	0.05	0.05
Control Delay	121.4	174.8	3.3	808.3	56.6	4.5	42.6	14.2	129.9	29.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	121.4	174.8	3.3	808.3	56.6	4.5	42.6	14.2	129.9	29.1	0.2
LOS	F	F	A	F	E	A	D	B	F	C	A
Approach Delay		110.1			246.2			20.5		69.4	
Approach LOS		F			F			C		E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.70	
Intersection Signal Delay: 142.9	Intersection LOS: F
Intersection Capacity Utilization 81.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	612	376	333	828	125	163	265	303	58	45	25
Future Volume (veh/h)	55	612	376	333	828	125	163	265	303	58	45	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	58	644	396	351	872	132	172	279	319	61	47	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	507	757	131	963	429	349	854	762	71	1125	502
Arrive On Green	0.04	0.27	0.27	0.04	0.27	0.27	0.20	0.47	0.47	0.04	0.31	0.31
Sat Flow, veh/h	1714	1900	1610	3141	3610	1610	1714	1805	1610	1714	3610	1610
Grp Volume(v), veh/h	58	644	396	351	872	132	172	279	319	61	47	26
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1570	1805	1610	1714	1805	1610	1714	1805	1610
Q Serve(g_s), s	4.0	32.0	20.7	5.0	28.0	7.9	10.7	11.6	15.6	4.2	1.1	1.4
Cycle Q Clear(g_c), s	4.0	32.0	20.7	5.0	28.0	7.9	10.7	11.6	15.6	4.2	1.1	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	507	757	131	963	429	349	854	762	71	1125	502
V/C Ratio(X)	0.81	1.27	0.52	2.68	0.91	0.31	0.49	0.33	0.42	0.85	0.04	0.05
Avail Cap(c_a), veh/h	71	507	757	131	963	429	349	854	762	71	1125	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.0	44.0	22.4	57.5	42.5	35.1	42.3	19.7	20.8	57.1	28.8	28.9
Incr Delay (d2), s/veh	46.1	136.8	0.7	778.2	12.0	0.4	4.9	1.0	1.7	57.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	33.7	7.5	16.1	13.6	3.1	4.8	4.8	5.8	2.9	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.1	180.8	23.0	835.7	54.5	35.5	47.3	20.7	22.4	114.6	28.8	28.9
LnGrp LOS	F	F	C	F	D	D	D	C	C	F	C	C
Approach Vol, veh/h		1098			1355			770			134	
Approach Delay, s/veh		119.8			255.0			27.4			67.9	
Approach LOS		F			F			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	63.0	9.6	37.8	29.0	43.6	9.6	37.8
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	56.8	5.0	32.0	24.4	37.4	5.0	32.0
Max Q Clear Time (g_c+I1), s	6.2	17.6	7.0	34.0	12.7	3.4	6.0	30.0
Green Ext Time (p_c), s	0.0	3.6	0.0	0.0	0.2	0.3	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	151.1
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	1198	6	0	1254	8	0	0	2	0	0	3
Future Vol, veh/h	0	1198	6	0	1254	8	0	0	2	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1302	7	0	1363	9	0	0	2	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	655	-	-	686
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	413	0	0	395
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	413	-	-	395
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.8	14.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	413	-	-	-	-	395
HCM Lane V/C Ratio	0.005	-	-	-	-	0.008
HCM Control Delay (s)	13.8	-	-	-	-	14.2
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0

Intersection	
Intersection Delay, s/veh	8.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1306	1436	12	8
Demand Flow Rate, veh/h	1306	1436	12	8
Vehicles Circulating, veh/h	54	11	1302	1416
Vehicles Exiting, veh/h	1370	1303	58	31
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.8	8.1	8.0	8.7
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	LT	TR	LTR	LTR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
Entry Flow, veh/h	614	692	675	761	12	8
Cap Entry Lane, veh/h	1284	1356	1336	1407	469	426
Entry HV Adj Factor	1.000	1.000	1.000	1.000	1.000	1.000
Flow Entry, veh/h	614	692	675	761	12	8
Cap Entry, veh/h	1284	1357	1336	1407	469	426
V/C Ratio	0.478	0.510	0.505	0.541	0.026	0.019
Control Delay, s/veh	7.7	7.9	7.9	8.2	8.0	8.7
LOS	A	A	A	A	A	A
95th %tile Queue, veh	3	3	3	3	0	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	1192	34	0	1312	27	0	0	11	0	0	9
Future Vol, veh/h	0	1192	34	0	1312	27	0	0	11	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1296	37	0	1426	29	0	0	12	0	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	667	-	-	728
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	406	0	0	370
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	406	-	-	370
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14.1	15
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	406	-	-	-	-	370
HCM Lane V/C Ratio	0.029	-	-	-	-	0.026
HCM Control Delay (s)	14.1	-	-	-	-	15
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	58	100	20	4	0
Future Vol, veh/h	0	58	100	20	4	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, %	0	0	0	0	0	0
Mvmt Flow	0	63	109	22	4	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	131	0	-	0	183	120
Stage 1	-	-	-	-	120	-
Stage 2	-	-	-	-	63	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1467	-	-	-	811	937
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	965	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1467	-	-	-	811	937
Mov Cap-2 Maneuver	-	-	-	-	811	-
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	965	-

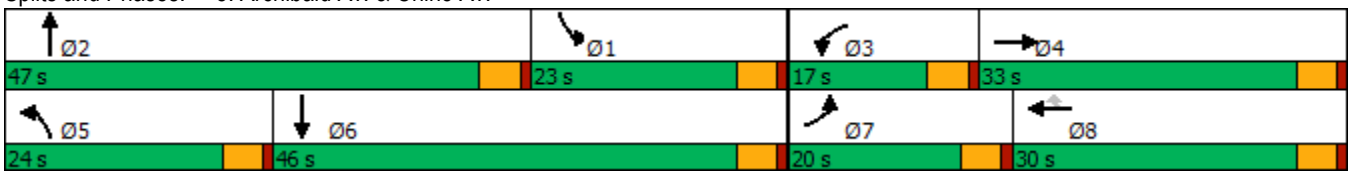
Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.5
HCM LOS			A

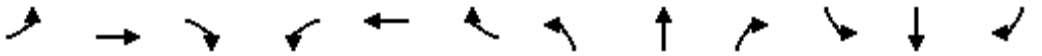
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1467	-	-	-	811
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	164	6	99	5	296	145	1908	182	1152
Future Volume (vph)	164	6	99	5	296	145	1908	182	1152
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.9	13.8	13.3	8.5	8.5	13.7	42.7	15.3	44.4
Actuated g/C Ratio	0.14	0.14	0.13	0.09	0.09	0.14	0.43	0.15	0.45
v/c Ratio	0.71	0.18	0.45	0.03	0.73	0.63	0.91	0.71	0.76
Control Delay	59.0	16.1	48.8	42.0	16.1	53.5	35.2	56.3	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	16.1	48.8	42.0	16.1	53.5	35.2	56.3	28.3
LOS	E	B	D	D	B	D	D	E	C
Approach Delay		49.5		24.5			36.5		32.1
Approach LOS		D		C			D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 34.5	Intersection LOS: C
Intersection Capacity Utilization 77.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	6	41	99	5	296	145	1908	66	182	1152	30
Future Volume (veh/h)	164	6	41	99	5	296	145	1908	66	182	1152	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	169	6	42	102	5	264	149	1967	65	188	1188	25
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	203	33	231	129	224	190	183	2249	74	223	1663	35
Arrive On Green	0.12	0.16	0.16	0.08	0.12	0.12	0.11	0.44	0.44	0.13	0.46	0.46
Sat Flow, veh/h	1714	205	1434	1714	1900	1610	1714	5153	170	1714	3615	76
Grp Volume(v), veh/h	169	0	48	102	5	264	149	1319	713	188	593	620
Grp Sat Flow(s),veh/h/ln	1714	0	1639	1714	1900	1610	1714	1729	1865	1714	1805	1886
Q Serve(g_s), s	9.0	0.0	2.4	5.5	0.2	8.2	7.9	32.4	32.6	10.0	24.7	24.7
Cycle Q Clear(g_c), s	9.0	0.0	2.4	5.5	0.2	8.2	7.9	32.4	32.6	10.0	24.7	24.7
Prop In Lane	1.00		0.88	1.00		1.00	1.00		0.09	1.00		0.04
Lane Grp Cap(c), veh/h	203	0	264	129	224	190	183	1509	814	223	830	868
V/C Ratio(X)	0.83	0.00	0.18	0.79	0.02	1.39	0.82	0.87	0.88	0.84	0.71	0.71
Avail Cap(c_a), veh/h	283	0	498	228	517	438	356	1570	847	338	830	868
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	0.0	33.8	42.5	36.4	22.6	40.8	24.0	24.0	39.7	20.3	20.3
Incr Delay (d2), s/veh	13.9	0.0	0.3	10.4	0.0	186.6	8.5	5.6	10.0	11.3	2.9	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	0.9	2.6	0.1	12.8	3.6	12.5	14.5	4.7	9.7	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.2	0.0	34.2	52.8	36.4	209.2	49.3	29.6	34.0	51.0	23.2	23.1
LnGrp LOS	D	A	C	D	D	F	D	C	C	D	C	C
Approach Vol, veh/h		217			371			2181			1401	
Approach Delay, s/veh		49.8			163.9			32.4			26.9	
Approach LOS		D			F			C			C	

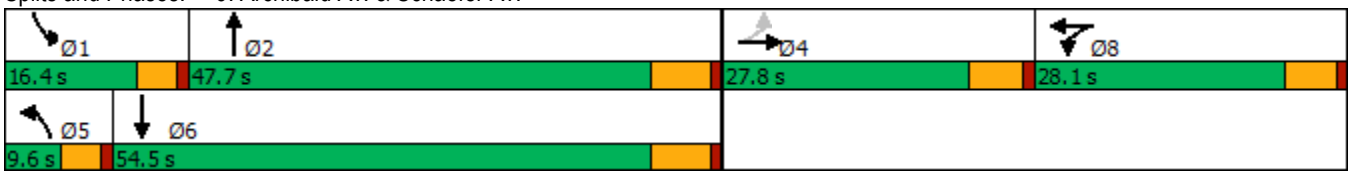
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	45.4	11.6	19.6	14.6	47.6	15.6	15.6
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	12.0	34.6	7.5	4.4	9.9	26.7	11.0	10.2
Green Ext Time (p_c), s	0.2	6.2	0.1	0.2	0.2	6.2	0.2	0.8

Intersection Summary	
HCM 6th Ctrl Delay	43.1
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	10	10	43	140	69	1557	22	974
Future Volume (vph)	10	10	43	140	69	1557	22	974
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	27.8	27.8	27.8	27.8	9.6	28.5	9.6	28.5
Total Split (s)	27.8	27.8	28.1	28.1	9.6	47.7	16.4	54.5
Total Split (%)	23.2%	23.2%	23.4%	23.4%	8.0%	39.8%	13.7%	45.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.8	5.8	5.8	4.6	6.5	4.6	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		12.6	23.4	23.4	5.2	44.4	6.3	38.4
Actuated g/C Ratio		0.13	0.25	0.25	0.05	0.47	0.07	0.40
v/c Ratio		0.32	0.11	1.03	0.77	0.67	0.21	0.85
Control Delay		41.5	36.6	81.6	96.1	23.9	54.0	32.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		41.5	36.6	81.6	96.1	23.9	54.0	32.4
LOS		D	D	F	F	C	D	C
Approach Delay		41.5		77.9		27.0		32.8
Approach LOS		D		E		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 37.0	Intersection LOS: D
Intersection Capacity Utilization 79.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	43	140	339	69	1557	10	22	974	191
Future Volume (veh/h)	10	10	10	43	140	339	69	1557	10	22	974	191
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	10	10	10	45	146	336	72	1622	10	23	1015	199
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	34	34	34	414	124	284	91	2287	14	41	1207	236
Arrive On Green	0.06	0.06	0.06	0.24	0.24	0.24	0.05	0.43	0.43	0.02	0.40	0.40
Sat Flow, veh/h	588	588	588	1714	511	1177	1714	5319	33	1714	3010	589
Grp Volume(v), veh/h	30	0	0	45	0	482	72	1054	578	23	608	606
Grp Sat Flow(s),veh/h/ln	1765	0	0	1714	0	1688	1714	1729	1894	1714	1805	1794
Q Serve(g_s), s	1.5	0.0	0.0	1.9	0.0	22.3	3.8	23.1	23.1	1.2	28.1	28.2
Cycle Q Clear(g_c), s	1.5	0.0	0.0	1.9	0.0	22.3	3.8	23.1	23.1	1.2	28.1	28.2
Prop In Lane	0.33		0.33	1.00		0.70	1.00		0.02	1.00		0.33
Lane Grp Cap(c), veh/h	103	0	0	414	0	408	91	1487	814	41	724	719
V/C Ratio(X)	0.29	0.00	0.00	0.11	0.00	1.18	0.79	0.71	0.71	0.56	0.84	0.84
Avail Cap(c_a), veh/h	421	0	0	414	0	408	93	1544	846	219	939	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	0.0	0.0	27.2	0.0	35.0	43.2	21.6	21.6	44.5	25.0	25.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.1	0.0	104.0	32.3	1.5	2.7	4.3	5.4	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	0.7	0.0	20.3	2.3	8.3	9.4	0.5	11.5	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	0.0	0.0	27.3	0.0	139.0	75.5	23.0	24.2	48.8	30.4	30.6
LnGrp LOS	D	A	A	C	A	F	E	C	C	D	C	C
Approach Vol, veh/h		30			527			1704			1237	
Approach Delay, s/veh		43.2			129.5			25.7			30.8	
Approach LOS		D			F			C			C	

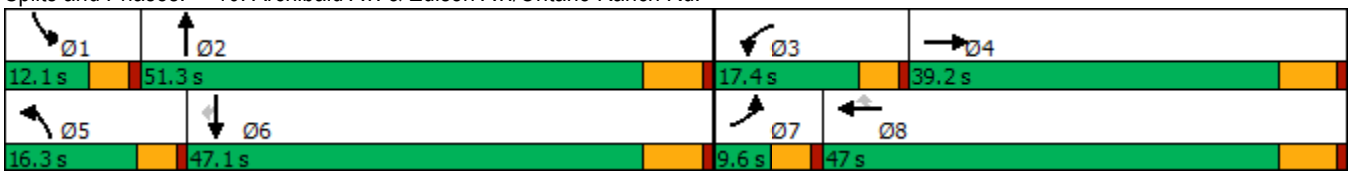
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	46.2		11.2	9.5	43.5		28.1				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	3.2	25.1		3.5	5.8	30.2		24.3				
Green Ext Time (p_c), s	0.0	8.8		0.1	0.0	6.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		43.3	
HCM 6th LOS		D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	455	866	377	616	1812	299	503	1285	522	79	704	272
Future Volume (vph)	455	866	377	616	1812	299	503	1285	522	79	704	272
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.0	33.0	119.8	12.8	40.8	40.8	11.7	44.8	119.8	7.3	40.4	40.4
Actuated g/C Ratio	0.04	0.28	1.00	0.11	0.34	0.34	0.10	0.37	1.00	0.06	0.34	0.34
v/c Ratio	3.57	0.89	0.24	1.88	2.86	0.49	3.09	0.97	0.33	0.78	0.59	0.43
Control Delay	1189.2	53.9	0.3	437.7	859.1	21.9	973.6	55.9	0.6	99.3	35.2	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1189.2	53.9	0.3	437.7	859.1	21.9	973.6	55.9	0.6	99.3	35.2	15.3
LOS	F	D	A	F	F	C	F	E	A	F	D	B
Approach Delay		346.0			672.1			243.1			34.9	
Approach LOS		F			F			F			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.57	
Intersection Signal Delay: 387.5	Intersection LOS: F
Intersection Capacity Utilization 177.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 10: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	455	866	377	616	1812	299	503	1285	522	79	704	272
Future Volume (veh/h)	455	866	377	616	1812	299	503	1285	522	79	704	272
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	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	464	884	0	629	1849	263	513	1311	0	81	718	245
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	131	997		336	649	550	168	1352		101	1212	541
Arrive On Green	0.04	0.28	0.00	0.11	0.34	0.34	0.10	0.37	0.00	0.06	0.34	0.34
Sat Flow, veh/h	3141	3610	1610	3141	1900	1610	1714	3610	1610	1714	3610	1610
Grp Volume(v), veh/h	464	884	0	629	1849	263	513	1311	0	81	718	245
Grp Sat Flow(s),veh/h/ln	1570	1805	1610	1570	1900	1610	1714	1805	1610	1714	1805	1610
Q Serve(g_s), s	5.0	28.1	0.0	12.8	40.8	15.4	11.7	42.6	0.0	5.6	19.7	14.2
Cycle Q Clear(g_c), s	5.0	28.1	0.0	12.8	40.8	15.4	11.7	42.6	0.0	5.6	19.7	14.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	131	997		336	649	550	168	1352		101	1212	541
V/C Ratio(X)	3.53	0.89		1.87	2.85	0.48	3.06	0.97		0.80	0.59	0.45
Avail Cap(c_a), veh/h	131	997		336	649	550	168	1353		108	1226	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.3	41.5	0.0	53.4	39.4	31.0	53.9	36.7	0.0	55.5	32.9	31.1
Incr Delay (d2), s/veh	1157.9	9.8	0.0	402.7	837.1	0.6	941.3	17.7	0.0	29.2	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.1	13.2	0.0	23.7	168.6	5.8	48.7	20.6	0.0	3.1	8.2	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1215.1	51.2	0.0	456.0	876.5	31.6	995.2	54.4	0.0	84.8	33.7	31.7
LnGrp LOS	F	D		F	F	C	F	D		F	C	C
Approach Vol, veh/h		1348	A		2741			1824	A		1044	
Approach Delay, s/veh		451.9			698.9			319.0			37.2	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	51.3	17.4	39.2	16.3	46.6	9.6	47.0
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	7.6	44.6	14.8	30.1	13.7	21.7	7.0	42.8
Green Ext Time (p_c), s	0.0	0.1	0.0	1.5	0.0	4.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	452.1
HCM 6th LOS	F

Notes

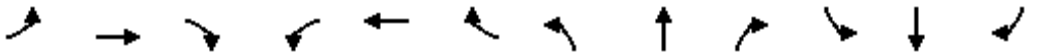
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	47	30	123	276	162	237	1987	84	60	1345
Future Volume (vph)	47	30	123	276	162	237	1987	84	60	1345
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Prot	NA
Protected Phases	7	4	3	8			2		1	6
Permitted Phases					8	2		2		
Detector Phase	7	4	3	8	8	2	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	30.6	23.2	9.5	14.5	14.5	32.5	32.5	32.5	9.6	24.5
Total Split (s)	30.6	35.6	9.5	14.5	14.5	65.3	65.3	65.3	9.6	74.9
Total Split (%)	25.5%	29.7%	7.9%	12.1%	12.1%	54.4%	54.4%	54.4%	8.0%	62.4%
Yellow Time (s)	3.6	4.2	3.5	3.5	3.5	5.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.2	4.5	4.5	4.5	6.5	6.5	6.5	4.6	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	Max	Max	Max	None	Max
Act Effct Green (s)	10.3	14.9	6.2	10.1	10.1	59.3	59.3	59.3	5.0	69.0
Actuated g/C Ratio	0.10	0.14	0.06	0.10	0.10	0.58	0.58	0.58	0.05	0.67
v/c Ratio	0.34	0.25	0.70	1.76	0.53	2.10	1.02	0.10	0.77	0.68
Control Delay	48.8	24.2	70.3	392.4	15.1	542.0	47.7	12.5	101.3	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	24.2	70.3	392.4	15.1	542.0	47.7	12.5	101.3	13.7
LOS	D	C	E	F	B	F	D	B	F	B
Approach Delay		34.5		223.8			97.1			17.1
Approach LOS		C		F			F			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.10	
Intersection Signal Delay: 83.5	Intersection LOS: F
Intersection Capacity Utilization 97.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	30	36	123	276	162	237	1987	84	60	1345	169
Future Volume (veh/h)	47	30	36	123	276	162	237	1987	84	60	1345	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1728	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	50	32	38	131	294	115	252	2114	89	64	1431	180
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	62	79	94	163	212	180	203	2142	936	81	2218	276
Arrive On Green	0.04	0.10	0.10	0.05	0.11	0.11	0.59	0.59	0.59	0.05	0.69	0.69
Sat Flow, veh/h	1646	791	940	3238	1900	1610	303	3610	1577	1714	3230	403
Grp Volume(v), veh/h	50	0	70	131	294	115	252	2114	89	64	794	817
Grp Sat Flow(s),veh/h/ln	1646	0	1731	1619	1900	1610	303	1805	1577	1714	1805	1828
Q Serve(g_s), s	3.0	0.0	3.8	4.0	11.1	6.8	43.2	57.2	2.4	3.7	24.5	25.2
Cycle Q Clear(g_c), s	3.0	0.0	3.8	4.0	11.1	6.8	59.1	57.2	2.4	3.7	24.5	25.2
Prop In Lane	1.00		0.54	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	62	0	174	163	212	180	203	2142	936	81	1240	1255
V/C Ratio(X)	0.80	0.00	0.40	0.81	1.39	0.64	1.24	0.99	0.10	0.79	0.64	0.65
Avail Cap(c_a), veh/h	430	0	528	163	212	180	203	2142	936	86	1240	1255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	0.0	42.0	46.8	44.2	42.3	35.9	19.9	8.7	47.0	8.7	8.8
Incr Delay (d2), s/veh	8.5	0.0	1.5	23.3	200.1	7.4	142.1	16.6	0.2	32.6	2.5	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.7	2.1	16.9	3.0	12.8	23.5	0.8	2.2	7.4	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	0.0	43.5	70.1	244.3	49.7	178.0	36.5	8.9	79.6	11.3	11.5
LnGrp LOS	E	A	D	E	F	D	F	D	A	E	B	B
Approach Vol, veh/h		120			540			2455			1675	
Approach Delay, s/veh		48.7			160.6			50.0			14.0	
Approach LOS		D			F			D			B	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	9.3	65.6	9.5	15.2		74.9	8.4	16.3				
Change Period (Y+Rc), s	4.6	6.5	4.5	5.2		6.5	4.6	* 5.2				
Max Green Setting (Gmax), s	5.0	58.8	5.0	30.4		68.4	26.0	* 10				
Max Q Clear Time (g_c+I1), s	5.7	61.1	6.0	5.8		27.2	5.0	13.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3		14.1	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

Notes

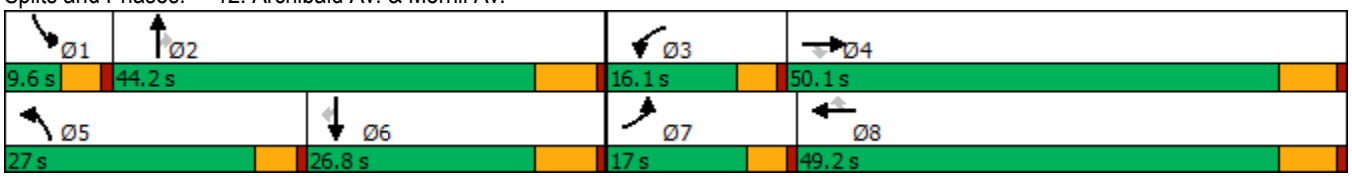
User approved volume balancing among the lanes for turning movement.

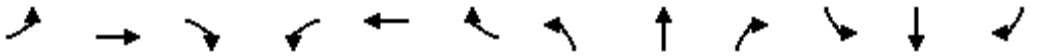
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	347	28	536	199	97	158	734	1492	89	48	1147	603
Future Volume (vph)	347	28	536	199	97	158	734	1492	89	48	1147	603
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	17.0	50.1	50.1	16.1	49.2	49.2	27.0	44.2	44.2	9.6	26.8	26.8
Total Split (%)	14.2%	41.8%	41.8%	13.4%	41.0%	41.0%	22.5%	36.8%	36.8%	8.0%	22.3%	22.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.6	20.2	20.2	11.7	19.3	19.3	22.7	42.5	42.5	5.1	20.6	20.6
Actuated g/C Ratio	0.13	0.21	0.21	0.12	0.20	0.20	0.23	0.44	0.44	0.05	0.21	0.21
v/c Ratio	1.63	0.07	0.84	1.00	0.27	0.37	1.90	0.98	0.12	0.30	1.55	1.29
Control Delay	331.6	28.6	21.8	109.6	32.8	7.5	439.0	47.7	3.7	53.6	283.4	168.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	331.6	28.6	21.8	109.6	32.8	7.5	439.0	47.7	3.7	53.6	283.4	168.7
LOS	F	C	C	F	C	A	F	D	A	D	F	F
Approach Delay		140.0			57.7			170.1			238.8	
Approach LOS		F			E			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.90	
Intersection Signal Delay: 178.3	Intersection LOS: F
Intersection Capacity Utilization 116.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	28	536	199	97	158	734	1492	89	48	1147	603
Future Volume (veh/h)	347	28	536	199	97	158	734	1492	89	48	1147	603
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	358	29	498	205	100	68	757	1538	73	49	1182	556
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	187	625	530	174	610	517	339	1234	550	109	646	288
Arrive On Green	0.11	0.33	0.33	0.10	0.32	0.32	0.20	0.34	0.34	0.03	0.18	0.18
Sat Flow, veh/h	1714	1900	1610	1714	1900	1610	1714	3610	1610	3141	3610	1610
Grp Volume(v), veh/h	358	29	498	205	100	68	757	1538	73	49	1182	556
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	1900	1610	1714	1805	1610	1570	1805	1610
Q Serve(g_s), s	12.4	1.2	34.1	11.5	4.3	3.4	22.4	38.8	3.5	1.7	20.3	20.3
Cycle Q Clear(g_c), s	12.4	1.2	34.1	11.5	4.3	3.4	22.4	38.8	3.5	1.7	20.3	20.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	625	530	174	610	517	339	1234	550	109	646	288
V/C Ratio(X)	1.91	0.05	0.94	1.18	0.16	0.13	2.24	1.25	0.13	0.45	1.83	1.93
Avail Cap(c_a), veh/h	187	735	623	174	720	610	339	1234	550	138	646	288
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	25.9	37.0	51.0	27.6	27.3	45.5	37.3	25.7	53.7	46.6	46.6
Incr Delay (d2), s/veh	428.9	0.0	20.6	124.8	0.1	0.1	565.7	117.9	0.1	1.1	379.3	430.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.4	0.5	16.0	10.9	1.9	1.3	62.2	35.9	1.4	0.7	42.6	42.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	479.4	26.0	57.6	175.8	27.7	27.4	611.2	155.2	25.8	54.8	425.9	477.4
LnGrp LOS	F	C	E	F	C	C	F	F	C	D	F	F
Approach Vol, veh/h		885			373			2368			1787	
Approach Delay, s/veh		227.2			109.0			297.0			431.8	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	45.3	16.1	43.5	27.0	26.8	17.0	42.6
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	5.0	37.7	11.5	43.9	22.4	20.3	12.4	43.0
Max Q Clear Time (g_c+I1), s	3.7	40.8	13.5	36.1	24.4	22.3	14.4	6.3
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	317.1
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	2461	1874	8
Future Vol, veh/h	0	3	0	2461	1874	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	2675	2037	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1023	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	237	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	237	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.4	0	0
HCM LOS	C		

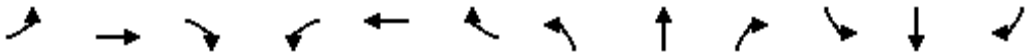
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	237	-	-
HCM Lane V/C Ratio	-	0.014	-	-
HCM Control Delay (s)	-	20.4	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	296	789	118	355	894	750	147	1415	432	424	1155
Future Volume (vph)	296	789	118	355	894	750	147	1415	432	424	1155
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Perm	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1		2	3	1	6
Permitted Phases			4			8	2		2		
Detector Phase	7	4	4	3	8	1	2	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	11.0	46.3	46.3	9.5	11.0	11.0
Total Split (s)	13.0	35.3	35.3	14.0	36.3	12.0	58.7	58.7	14.0	12.0	70.7
Total Split (%)	10.8%	29.4%	29.4%	11.7%	30.3%	10.0%	48.9%	48.9%	11.7%	10.0%	58.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	4.0	4.3	4.3	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	5.0	5.3	5.3	4.5	5.0	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	Min	None	None	Min
Act Effct Green (s)	8.5	30.8	30.8	9.5	31.0	38.3	53.4	53.4	63.7	7.0	65.7
Actuated g/C Ratio	0.07	0.26	0.26	0.08	0.26	0.32	0.44	0.44	0.53	0.06	0.55
v/c Ratio	1.24	0.89	0.25	2.61	1.00	1.40	2.07	1.74	0.51	4.21	0.78
Control Delay	183.8	55.7	10.2	764.9	73.9	217.1	546.4	365.5	13.6	1480.5	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	183.8	55.7	10.2	764.9	73.9	217.1	546.4	365.5	13.6	1480.5	24.5
LOS	F	E	B	F	E	F	F	F	B	F	C
Approach Delay		82.7			250.4			302.6			353.6
Approach LOS		F			F			F			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 4.21	
Intersection Signal Delay: 264.0	Intersection LOS: F
Intersection Capacity Utilization 155.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	789	118	355	894	750	147	1415	432	424	1155	298
Future Volume (veh/h)	296	789	118	355	894	750	147	1415	432	424	1155	298
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	308	822	123	370	931	662	153	1474	351	442	1203	310
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	249	927	413	143	933	510	132	846	827	106	1553	395
Arrive On Green	0.07	0.26	0.26	0.08	0.26	0.26	0.44	0.44	0.44	0.06	0.54	0.54
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	351	1900	1573	1810	2850	725
Grp Volume(v), veh/h	308	822	123	370	931	662	153	1474	351	442	756	757
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	351	1900	1573	1810	1805	1770
Q Serve(g_s), s	8.5	26.3	7.4	9.5	30.9	27.2	24.6	53.4	16.4	7.0	39.3	40.8
Cycle Q Clear(g_c), s	8.5	26.3	7.4	9.5	30.9	27.2	53.4	53.4	16.4	7.0	39.3	40.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	249	927	413	143	933	510	132	846	827	106	984	964
V/C Ratio(X)	1.24	0.89	0.30	2.58	1.00	1.30	1.16	1.74	0.42	4.19	0.77	0.79
Avail Cap(c_a), veh/h	249	927	413	143	933	510	132	846	827	106	988	969
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	42.9	35.9	55.3	44.5	22.0	53.3	33.3	17.5	56.5	21.4	21.7
Incr Delay (d2), s/veh	136.9	10.4	0.4	732.2	29.0	148.2	127.8	339.4	0.4	1456.4	3.3	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	12.6	2.9	33.3	16.9	30.3	8.6	102.1	5.5	45.8	15.5	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	192.6	53.4	36.3	787.5	73.5	170.2	181.1	372.7	17.9	1512.9	24.7	25.6
LnGrp LOS	F	D	D	F	E	F	F	F	B	F	C	C
Approach Vol, veh/h		1253			1963			1978			1955	
Approach Delay, s/veh		85.9			240.7			294.9			361.5	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	12.0	58.7	14.0	35.3		70.7	13.0	36.3
Change Period (Y+Rc), s	5.0	5.3	4.5	4.5		* 5.3	4.5	5.3
Max Green Setting (Gmax), s	7.0	53.4	9.5	30.8		* 66	8.5	31.0
Max Q Clear Time (g_c+I1), s	9.0	55.4	11.5	28.3		42.8	10.5	32.9
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3		6.2	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		261.6
HCM 6th LOS		F

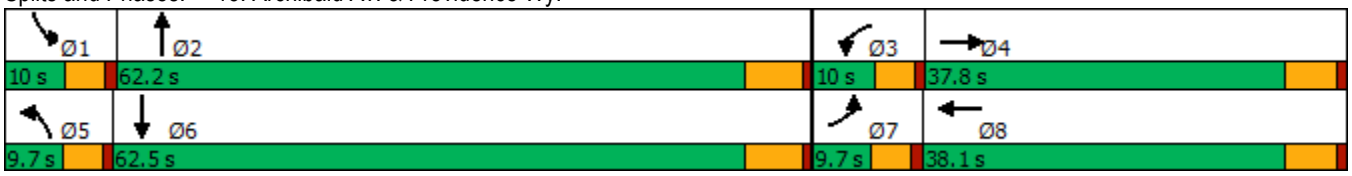
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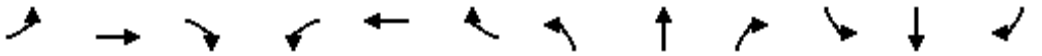
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	49	0	73	0	37	1873	82	1463
Future Volume (vph)	49	0	73	0	37	1873	82	1463
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	9.7	37.8	10.0	38.1	9.7	62.2	10.0	62.5
Total Split (%)	8.1%	31.5%	8.3%	31.8%	8.1%	51.8%	8.3%	52.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.1	13.9	13.2	14.0	5.1	59.4	5.4	63.7
Actuated g/C Ratio	0.05	0.13	0.13	0.14	0.05	0.58	0.05	0.62
v/c Ratio	0.60	0.04	0.34	0.25	0.45	1.04	0.95	0.76
Control Delay	76.3	0.2	49.9	4.2	65.9	55.7	129.0	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.3	0.2	49.9	4.2	65.9	55.7	129.0	20.4
LOS	E	A	D	A	E	E	F	C
Approach Delay		60.4		27.2		55.9		25.8
Approach LOS		E		C		E		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 42.2	Intersection LOS: D
Intersection Capacity Utilization 84.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	0	13	73	0	72	37	1873	103	82	1463	84
Future Volume (veh/h)	49	0	13	73	0	72	37	1873	103	82	1463	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	53	0	9	79	0	39	40	2036	57	89	1590	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	91	0	155	100	0	163	61	2063	57	100	2128	71
Arrive On Green	0.05	0.00	0.10	0.06	0.00	0.10	0.03	0.58	0.58	0.06	0.60	0.60
Sat Flow, veh/h	1810	0	1610	1810	0	1610	1810	3587	100	1810	3565	119
Grp Volume(v), veh/h	53	0	9	79	0	39	40	1020	1073	89	803	840
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1610	1810	1805	1882	1810	1805	1879
Q Serve(g_s), s	2.8	0.0	0.5	4.2	0.0	2.2	2.1	53.7	54.9	4.8	31.4	31.8
Cycle Q Clear(g_c), s	2.8	0.0	0.5	4.2	0.0	2.2	2.1	53.7	54.9	4.8	31.4	31.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		0.06
Lane Grp Cap(c), veh/h	91	0	155	100	0	163	61	1038	1083	100	1077	1121
V/C Ratio(X)	0.58	0.00	0.06	0.79	0.00	0.24	0.65	0.98	0.99	0.89	0.75	0.75
Avail Cap(c_a), veh/h	95	0	529	100	0	534	95	1038	1083	100	1077	1121
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	0.0	40.0	45.4	0.0	40.3	46.5	20.2	20.4	45.7	14.3	14.3
Incr Delay (d2), s/veh	5.1	0.0	0.2	30.6	0.0	0.7	4.3	23.5	25.2	54.0	2.9	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.2	2.7	0.0	0.9	1.0	24.8	26.8	3.5	11.1	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.3	0.0	40.2	76.0	0.0	41.0	50.7	43.7	45.6	99.6	17.1	17.2
LnGrp LOS	D	A	D	E	A	D	D	D	D	F	B	B
Approach Vol, veh/h		62			118			2133			1732	
Approach Delay, s/veh		48.9			64.4			44.8			21.4	
Approach LOS		D			E			D			C	

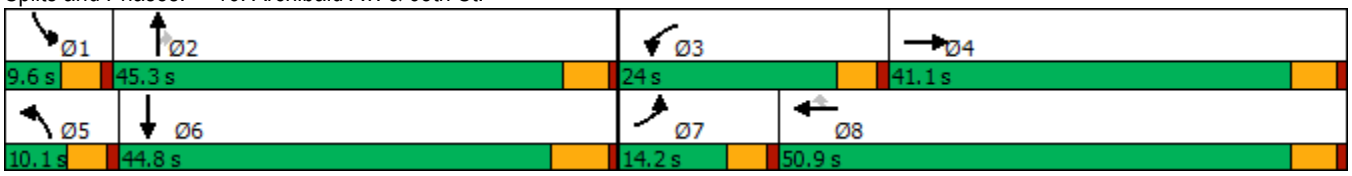
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	62.2	10.0	15.1	7.9	64.3	9.5	15.7
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.4	56.0	5.4	32.0	5.1	56.3	5.1	32.3
Max Q Clear Time (g_c+I1), s	6.8	56.9	6.2	2.5	4.1	33.8	4.8	4.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	11.6	0.0	0.1

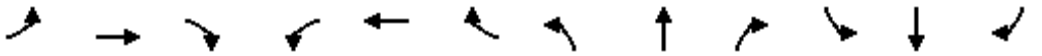
Intersection Summary	
HCM 6th Ctrl Delay	35.4
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	155	89	264	40	135	20	1723	161	102	1385
Future Volume (vph)	155	89	264	40	135	20	1723	161	102	1385
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	9.7	14.4	19.6	24.3	24.3	5.3	40.6	40.6	5.0	45.4
Actuated g/C Ratio	0.10	0.15	0.20	0.24	0.24	0.05	0.41	0.41	0.05	0.46
v/c Ratio	0.95	0.31	0.81	0.09	0.31	0.23	1.27	0.24	1.21	0.67
Control Delay	103.8	21.9	57.7	28.0	10.0	54.1	154.4	6.8	202.8	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.8	21.9	57.7	28.0	10.0	54.1	154.4	6.8	202.8	25.0
LOS	F	C	E	C	B	D	F	A	F	C
Approach Delay		62.5		40.3			140.9			36.8
Approach LOS		E		D			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 86.2	Intersection LOS: F
Intersection Capacity Utilization 93.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	89	68	264	40	135	20	1723	161	102	1385	61
Future Volume (veh/h)	155	89	68	264	40	135	20	1723	161	102	1385	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	168	97	39	287	43	107	22	1873	139	111	1505	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	187	293	112	322	360	301	42	1562	688	97	2376	90
Arrive On Green	0.10	0.11	0.11	0.18	0.19	0.19	0.02	0.43	0.43	0.05	0.46	0.46
Sat Flow, veh/h	1810	2550	974	1810	1900	1589	1810	3610	1589	1810	5129	194
Grp Volume(v), veh/h	168	67	69	287	43	107	22	1873	139	111	1015	547
Grp Sat Flow(s),veh/h/ln	1810	1805	1719	1810	1900	1589	1810	1805	1589	1810	1729	1865
Q Serve(g_s), s	8.5	3.2	3.4	14.4	1.7	5.4	1.1	40.2	5.1	5.0	20.7	20.7
Cycle Q Clear(g_c), s	8.5	3.2	3.4	14.4	1.7	5.4	1.1	40.2	5.1	5.0	20.7	20.7
Prop In Lane	1.00		0.57	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	187	207	197	322	360	301	42	1562	688	97	1602	864
V/C Ratio(X)	0.90	0.32	0.35	0.89	0.12	0.36	0.52	1.20	0.20	1.14	0.63	0.63
Avail Cap(c_a), veh/h	187	699	666	378	937	783	107	1562	688	97	1602	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	37.8	37.9	37.3	31.2	32.7	44.9	26.3	16.4	43.9	18.9	18.9
Incr Delay (d2), s/veh	37.9	0.9	1.0	18.6	0.1	0.7	3.7	96.0	0.7	133.7	1.9	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	1.4	1.5	7.8	0.8	2.1	0.5	36.4	1.8	5.7	7.7	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.0	38.7	39.0	55.9	31.4	33.4	48.5	122.4	17.0	177.7	20.9	22.5
LnGrp LOS	E	D	D	E	C	C	D	F	B	F	C	C
Approach Vol, veh/h		304			437			2034			1673	
Approach Delay, s/veh		61.0			48.0			114.4			31.8	
Approach LOS		E			D			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	46.4	21.1	15.8	6.8	49.2	14.2	22.7
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	7.0	42.2	16.4	5.4	3.1	22.7	10.5	7.4
Green Ext Time (p_c), s	0.0	0.0	0.1	0.7	0.0	8.6	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	73.1
HCM 6th LOS	E

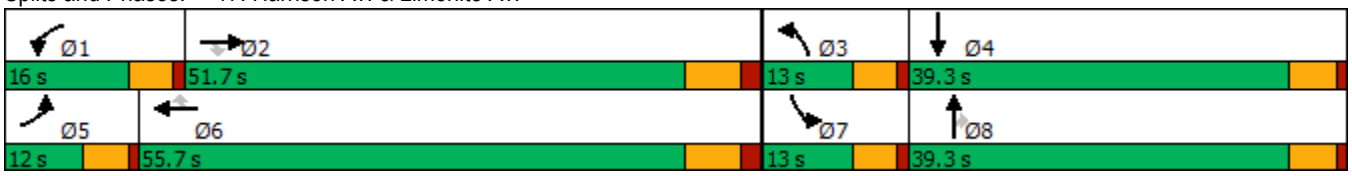
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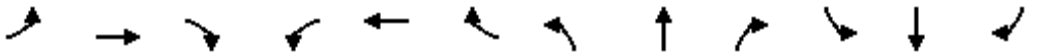
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	66	1939	51	185	1730	74	129	121	250	134	136
Future Volume (vph)	66	1939	51	185	1730	74	129	121	250	134	136
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	51.7	51.7	16.0	55.7	55.7	13.0	39.3	39.3	13.0	39.3
Total Split (%)	10.0%	43.1%	43.1%	13.3%	46.4%	46.4%	10.8%	32.8%	32.8%	10.8%	32.8%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.6	44.9	44.9	11.1	51.6	51.6	8.0	19.9	19.9	8.0	19.9
Actuated g/C Ratio	0.06	0.42	0.42	0.10	0.49	0.49	0.08	0.19	0.19	0.08	0.19
v/c Ratio	0.63	0.94	0.07	1.05	0.73	0.09	1.01	0.36	0.65	1.05	0.72
Control Delay	75.4	40.2	0.2	127.8	26.0	1.8	129.9	39.7	26.3	140.3	46.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.4	40.2	0.2	127.8	26.0	1.8	129.9	39.7	26.3	140.3	46.5
LOS	E	D	A	F	C	A	F	D	C	F	D
Approach Delay		40.4			34.6			56.2			80.0
Approach LOS		D			C			E			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 42.7	Intersection LOS: D
Intersection Capacity Utilization 87.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 17: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	1939	51	185	1730	74	129	121	250	134	136	106
Future Volume (veh/h)	66	1939	51	185	1730	74	129	121	250	134	136	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	70	2063	51	197	1840	77	137	129	173	143	145	96
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	90	2239	695	195	2538	788	142	313	261	142	176	116
Arrive On Green	0.05	0.43	0.43	0.11	0.49	0.49	0.08	0.16	0.16	0.08	0.16	0.16
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	1900	1586	1810	1067	706
Grp Volume(v), veh/h	70	2063	51	197	1840	77	137	129	173	143	0	241
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	1900	1586	1810	0	1773
Q Serve(g_s), s	3.9	38.4	1.9	11.0	28.7	2.6	7.7	6.2	10.5	8.0	0.0	13.4
Cycle Q Clear(g_c), s	3.9	38.4	1.9	11.0	28.7	2.6	7.7	6.2	10.5	8.0	0.0	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	90	2239	695	195	2538	788	142	313	261	142	0	292
V/C Ratio(X)	0.78	0.92	0.07	1.01	0.73	0.10	0.97	0.41	0.66	1.01	0.00	0.83
Avail Cap(c_a), veh/h	124	2267	704	195	2538	788	142	632	527	142	0	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.0	27.4	17.1	45.6	20.7	14.0	47.0	38.3	40.1	47.1	0.0	41.3
Incr Delay (d2), s/veh	12.3	6.8	0.0	67.8	1.1	0.1	65.4	0.9	2.9	78.5	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	15.5	0.7	8.4	10.5	0.9	5.9	2.9	4.1	6.6	0.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.3	34.2	17.1	113.4	21.7	14.1	112.4	39.2	42.9	125.6	0.0	47.2
LnGrp LOS	E	C	B	F	C	B	F	D	D	F	A	D
Approach Vol, veh/h		2184			2114			439			384	
Approach Delay, s/veh		34.7			30.0			63.5			76.4	
Approach LOS		C			C			E			E	

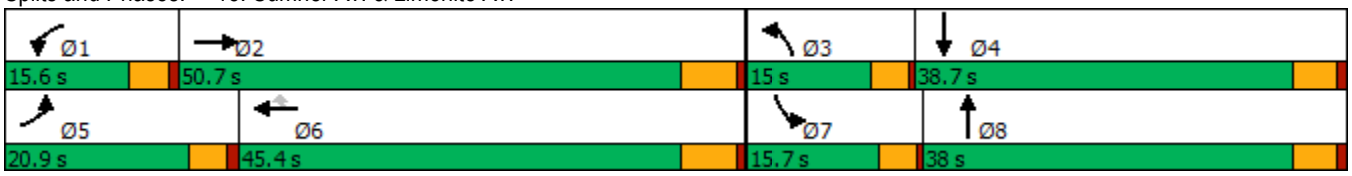
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	51.1	13.0	22.1	10.1	57.0	13.0	22.1
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	11.0	44.7	8.0	34.0	7.0	48.7	8.0	34.0
Max Q Clear Time (g_c+I1), s	13.0	40.4	9.7	15.4	5.9	30.7	10.0	12.5
Green Ext Time (p_c), s	0.0	3.8	0.0	1.2	0.0	11.7	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	38.3
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	522	1524	103	1480	55	143	491	98	307
Future Volume (vph)	522	1524	103	1480	55	143	491	98	307
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.9	50.7	15.6	45.4	45.4	15.0	38.0	15.7	38.7
Total Split (%)	17.4%	42.3%	13.0%	37.8%	37.8%	12.5%	31.7%	13.1%	32.3%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	16.5	47.3	7.4	38.2	38.2	10.9	26.3	9.4	24.8
Actuated g/C Ratio	0.15	0.43	0.07	0.35	0.35	0.10	0.24	0.09	0.23
v/c Ratio	1.06	0.76	0.47	0.87	0.09	0.85	0.82	0.68	0.70
Control Delay	101.2	30.5	57.7	41.1	0.3	88.8	46.2	72.1	30.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.2	30.5	57.7	41.1	0.3	88.8	46.2	72.1	30.7
LOS	F	C	E	D	A	F	D	E	C
Approach Delay		48.1		40.7			53.8		36.5
Approach LOS		D		D			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110.2	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 45.1	Intersection LOS: D
Intersection Capacity Utilization 85.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	522	1524	54	103	1480	55	143	491	165	98	307	289
Future Volume (veh/h)	522	1524	54	103	1480	55	143	491	165	98	307	289
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	555	1621	48	110	1574	41	152	522	115	104	327	154
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	566	2441	72	171	1862	578	182	634	139	131	448	207
Arrive On Green	0.16	0.47	0.47	0.05	0.36	0.36	0.10	0.22	0.22	0.07	0.19	0.19
Sat Flow, veh/h	3510	5175	153	3510	5187	1610	1810	2942	645	1810	2399	1107
Grp Volume(v), veh/h	555	1083	586	110	1574	41	152	319	318	104	244	237
Grp Sat Flow(s),veh/h/ln	1755	1729	1870	1755	1729	1610	1810	1805	1783	1810	1805	1701
Q Serve(g_s), s	16.0	24.5	24.5	3.1	28.4	1.7	8.4	17.1	17.3	5.7	12.9	13.4
Cycle Q Clear(g_c), s	16.0	24.5	24.5	3.1	28.4	1.7	8.4	17.1	17.3	5.7	12.9	13.4
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.36	1.00		0.65
Lane Grp Cap(c), veh/h	566	1631	882	171	1862	578	182	389	384	131	337	318
V/C Ratio(X)	0.98	0.66	0.66	0.64	0.85	0.07	0.83	0.82	0.83	0.79	0.72	0.74
Avail Cap(c_a), veh/h	566	1631	882	383	2011	624	196	586	579	208	599	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	20.6	20.7	47.5	30.0	21.4	44.9	38.0	38.1	46.4	38.9	39.0
Incr Delay (d2), s/veh	32.4	1.0	1.9	1.5	3.3	0.1	22.3	4.7	5.1	4.1	2.2	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	9.0	9.9	1.3	11.3	0.6	4.8	7.7	7.7	2.6	5.7	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.9	21.7	22.5	49.0	33.3	21.5	67.2	42.7	43.2	50.4	41.1	41.6
LnGrp LOS	E	C	C	D	C	C	E	D	D	D	D	D
Approach Vol, veh/h		2224			1725			789			585	
Approach Delay, s/veh		35.2			34.0			47.6			42.9	
Approach LOS		D			C			D			D	

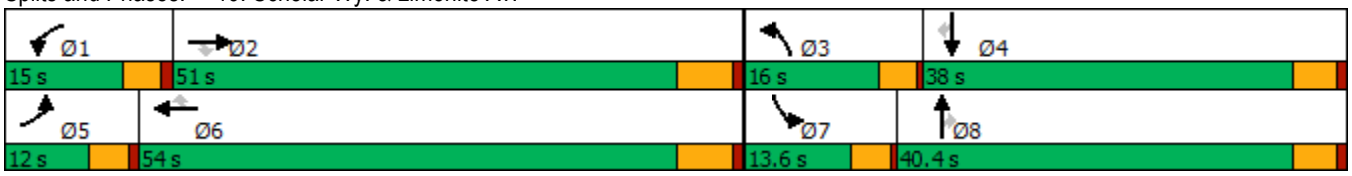
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	53.9	14.2	24.0	20.9	42.5	11.4	26.9
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	11.1	44.7	11.0	33.7	16.4	39.4	11.7	33.0
Max Q Clear Time (g_c+I1), s	5.1	26.5	10.4	15.4	18.0	30.4	7.7	19.3
Green Ext Time (p_c), s	0.0	10.0	0.0	2.0	0.0	6.1	0.0	2.4

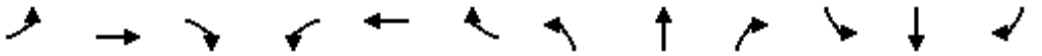
Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1636	73	74	1347	40	102	198	140	61	229	73
Future Volume (vph)	75	1636	73	74	1347	40	102	198	140	61	229	73
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	51.0	51.0	15.0	54.0	54.0	16.0	40.4	40.4	13.6	38.0	38.0
Total Split (%)	10.0%	42.5%	42.5%	12.5%	45.0%	45.0%	13.3%	33.7%	33.7%	11.3%	31.7%	31.7%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	7.1	47.4	47.4	7.9	48.4	48.4	9.3	19.8	19.8	7.1	15.4	15.4
Actuated g/C Ratio	0.07	0.49	0.49	0.08	0.50	0.50	0.10	0.20	0.20	0.07	0.16	0.16
v/c Ratio	0.62	0.99	0.10	0.54	0.80	0.05	0.63	0.55	0.34	0.49	0.43	0.31
Control Delay	69.1	47.6	3.6	61.3	27.7	0.1	62.6	42.2	7.7	60.5	39.6	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.1	47.6	3.6	61.3	27.7	0.1	62.6	42.2	7.7	60.5	39.6	40.5
LOS	E	D	A	E	C	A	E	D	A	E	D	D
Approach Delay		46.7			28.6			36.0			43.3	
Approach LOS		D			C			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 38.7	Intersection LOS: D
Intersection Capacity Utilization 82.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 19: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1636	73	74	1347	40	102	198	140	61	229	73
Future Volume (veh/h)	75	1636	73	74	1347	40	102	198	140	61	229	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	80	1740	58	79	1433	32	109	211	104	65	244	78
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	103	1842	820	102	1840	820	139	310	259	84	480	205
Arrive On Green	0.06	0.51	0.51	0.06	0.51	0.51	0.08	0.16	0.16	0.05	0.13	0.13
Sat Flow, veh/h	1810	3610	1607	1810	3610	1609	1810	1900	1589	1810	3610	1542
Grp Volume(v), veh/h	80	1740	58	79	1433	32	109	211	104	65	244	78
Grp Sat Flow(s),veh/h/ln	1810	1805	1607	1810	1805	1609	1810	1900	1589	1810	1805	1542
Q Serve(g_s), s	3.8	39.7	1.6	3.8	28.1	0.9	5.2	9.1	5.1	3.1	5.5	4.0
Cycle Q Clear(g_c), s	3.8	39.7	1.6	3.8	28.1	0.9	5.2	9.1	5.1	3.1	5.5	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	103	1842	820	102	1840	820	139	310	259	84	480	205
V/C Ratio(X)	0.78	0.94	0.07	0.77	0.78	0.04	0.79	0.68	0.40	0.77	0.51	0.38
Avail Cap(c_a), veh/h	156	1864	830	218	1988	886	249	772	645	199	1367	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	20.2	10.8	40.6	17.4	10.7	39.5	34.3	32.7	41.1	35.1	34.5
Incr Delay (d2), s/veh	6.0	10.5	0.0	4.6	1.9	0.0	3.7	2.0	0.7	5.5	0.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	16.2	0.5	1.7	10.1	0.3	2.4	4.2	2.0	1.5	2.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	30.7	10.9	45.2	19.3	10.7	43.2	36.3	33.4	46.6	35.7	35.4
LnGrp LOS	D	C	B	D	B	B	D	D	C	D	D	D
Approach Vol, veh/h		1878			1544			424			387	
Approach Delay, s/veh		30.8			20.4			37.4			37.5	
Approach LOS		C			C			D			D	

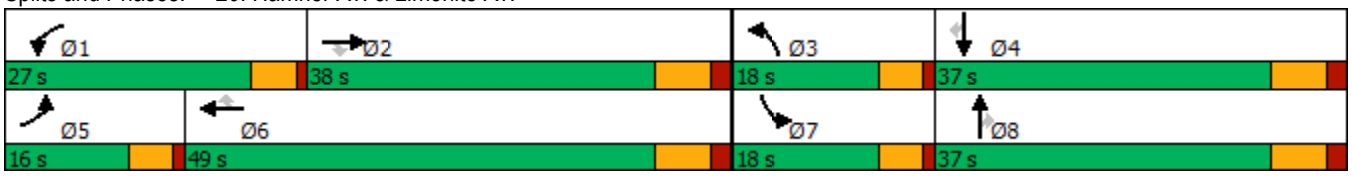
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	50.5	10.7	16.6	9.5	50.4	8.0	19.2
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	10.5	45.0	12.0	33.0	7.5	48.0	9.6	35.4
Max Q Clear Time (g_c+I1), s	5.8	41.7	7.2	7.5	5.8	30.1	5.1	11.1
Green Ext Time (p_c), s	0.0	2.7	0.0	1.4	0.0	9.3	0.0	1.2

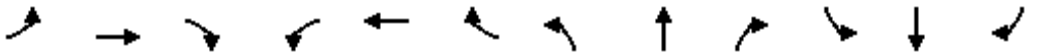
Intersection Summary	
HCM 6th Ctrl Delay	28.3
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	1460	124	443	1078	484	163	672	640	299	456	120
Future Volume (vph)	184	1460	124	443	1078	484	163	672	640	299	456	120
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	16.0	38.0	38.0	27.0	49.0	49.0	18.0	37.0	37.0	18.0	37.0	37.0
Total Split (%)	13.3%	31.7%	31.7%	22.5%	40.8%	40.8%	15.0%	30.8%	30.8%	15.0%	30.8%	30.8%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	9.7	32.7	32.7	19.0	42.0	42.0	9.7	30.0	30.0	12.5	32.9	32.9
Actuated g/C Ratio	0.08	0.28	0.28	0.16	0.36	0.36	0.08	0.25	0.25	0.11	0.28	0.28
v/c Ratio	0.68	1.01	0.24	0.83	0.87	0.70	0.60	0.50	1.10	0.85	0.31	0.23
Control Delay	64.7	67.5	3.2	61.0	44.0	20.2	61.2	39.4	90.3	73.1	35.0	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	67.5	3.2	61.0	44.0	20.2	61.2	39.4	90.3	73.1	35.0	2.9
LOS	E	E	A	E	D	C	E	D	F	E	D	A
Approach Delay		62.7			42.0			63.9			43.6	
Approach LOS		E			D			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 53.5	Intersection LOS: D
Intersection Capacity Utilization 92.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 20: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	1460	124	443	1078	484	163	672	640	299	456	120
Future Volume (veh/h)	184	1460	124	443	1078	484	163	672	640	299	456	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	200	1587	69	482	1172	263	177	730	348	325	496	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	261	1588	442	546	1358	568	239	1446	402	384	1675	467
Arrive On Green	0.07	0.28	0.28	0.15	0.36	0.36	0.07	0.25	0.25	0.11	0.29	0.29
Sat Flow, veh/h	3619	5700	1587	3619	3800	1590	3619	5700	1584	3619	5700	1590
Grp Volume(v), veh/h	200	1587	69	482	1172	263	177	730	348	325	496	66
Grp Sat Flow(s),veh/h/ln	1810	1900	1587	1810	1900	1590	1810	1900	1584	1810	1900	1590
Q Serve(g_s), s	6.2	31.7	3.7	14.9	32.7	14.5	5.5	12.5	24.0	10.1	7.7	3.5
Cycle Q Clear(g_c), s	6.2	31.7	3.7	14.9	32.7	14.5	5.5	12.5	24.0	10.1	7.7	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	1588	442	546	1358	568	239	1446	402	384	1675	467
V/C Ratio(X)	0.76	1.00	0.16	0.88	0.86	0.46	0.74	0.50	0.87	0.85	0.30	0.14
Avail Cap(c_a), veh/h	349	1588	442	698	1400	586	413	1500	417	413	1675	467
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	41.1	31.0	47.4	34.0	28.2	52.3	36.4	40.7	50.0	31.1	29.7
Incr Delay (d2), s/veh	4.6	22.4	0.3	9.1	6.3	1.3	1.7	0.6	18.2	13.2	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	17.4	1.4	7.2	15.4	5.5	2.5	5.7	11.0	5.1	3.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	63.5	31.4	56.5	40.3	29.5	54.0	37.0	58.9	63.2	31.4	30.0
LnGrp LOS	E	E	C	E	D	C	D	D	E	E	C	C
Approach Vol, veh/h		1856			1917			1255			887	
Approach Delay, s/veh		61.6			42.9			45.5			42.9	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.2	38.8	12.5	40.5	13.2	47.7	17.1	35.9
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	22.0	31.0	13.0	30.0	11.0	42.0	13.0	30.0
Max Q Clear Time (g_c+I1), s	16.9	33.7	7.5	9.7	8.2	34.7	12.1	26.0
Green Ext Time (p_c), s	0.3	0.0	0.1	5.8	0.1	6.1	0.1	2.9

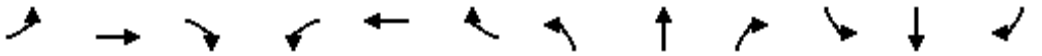
Intersection Summary	
HCM 6th Ctrl Delay	49.3
HCM 6th LOS	D

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	2016	1067	1796	970	432	0	437
Future Volume (vph)	2016	1067	1796	970	432	0	437
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	36.5	36.5	23.5	23.5	23.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.7	73.7	73.7	73.7	21.4	21.4	21.4
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.20	0.20	0.20
v/c Ratio	0.58	0.78	0.51	0.70	0.64	0.65	0.77
Control Delay	9.7	5.7	8.9	3.6	47.6	47.8	46.1
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	9.7	5.7	8.9	3.7	47.6	47.8	46.1
LOS	A	A	A	A	D	D	D
Approach Delay	8.3		7.1			46.9	
Approach LOS	A		A			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 87.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 21: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰	↱↱
Traffic Volume (veh/h)	0	2016	1067	0	1796	970	0	0	0	432	0	437
Future Volume (veh/h)	0	2016	1067	0	1796	970	0	0	0	432	0	437
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	2078	1063	0	1852	1000				445	0	243
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	3826	1173	0	3826	1188				550	0	488
Arrive On Green	0.00	0.74	0.74	0.00	0.74	0.74				0.15	0.00	0.15
Sat Flow, veh/h	0	5358	1590	0	5358	1610				3619	0	3214
Grp Volume(v), veh/h	0	2078	1063	0	1852	1000				445	0	243
Grp Sat Flow(s),veh/h/ln	0	1729	1590	0	1729	1610				1810	0	1607
Q Serve(g_s), s	0.0	17.5	52.7	0.0	14.5	42.8				11.8	0.0	6.9
Cycle Q Clear(g_c), s	0.0	17.5	52.7	0.0	14.5	42.8				11.8	0.0	6.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3826	1173	0	3826	1188				550	0	488
V/C Ratio(X)	0.00	0.54	0.91	0.00	0.48	0.84				0.81	0.00	0.50
Avail Cap(c_a), veh/h	0	3826	1173	0	3826	1188				1289	0	1145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.7	10.3	0.0	5.3	9.0				40.9	0.0	38.8
Incr Delay (d2), s/veh	0.0	0.6	11.6	0.0	0.4	7.3				1.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.0	17.1	0.0	4.2	13.4				5.1	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.3	22.0	0.0	5.8	16.4				42.0	0.0	39.1
LnGrp LOS	A	A	C	A	A	B				D	A	D
Approach Vol, veh/h		3141			2852						688	
Approach Delay, s/veh		11.6			9.5						40.9	
Approach LOS		B			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		20.6		79.0						
Change Period (Y+Rc), s		5.5		5.5		5.5						
Max Green Setting (Gmax), s		73.5		35.5		73.5						
Max Q Clear Time (g_c+I1), s		54.7		13.8		44.8						
Green Ext Time (p_c), s		13.9		1.3		16.1						

Intersection Summary												
HCM 6th Ctrl Delay			13.7									
HCM 6th LOS			B									

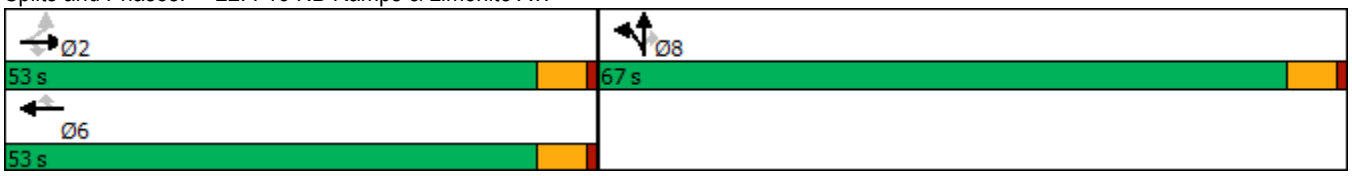
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations								
Traffic Volume (vph)	6	1831	611	1869	374	897	0	531
Future Volume (vph)	6	1831	611	1869	374	897	0	531
Turn Type	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases		2		6		8	8	
Permitted Phases	2		2		6			8
Detector Phase	2	2	2	6	6	8	8	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	None	None	None
Act Effct Green (s)		48.2	48.2	48.2	48.2	35.5	35.5	35.5
Actuated g/C Ratio		0.51	0.51	0.51	0.51	0.37	0.37	0.37
v/c Ratio		0.76	0.62	0.72	0.41	0.71	0.71	0.50
Control Delay		23.5	9.8	22.1	7.8	31.2	31.3	22.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		23.5	9.8	22.1	7.8	31.2	31.3	22.7
LOS		C	A	C	A	C	C	C
Approach Delay		20.1		19.7			28.1	
Approach LOS		C		B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 21.8	Intersection LOS: C
Intersection Capacity Utilization 97.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 22: I-15 NB Ramps & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	⇃	↱↱			
Traffic Volume (veh/h)	6	1831	611	0	1869	374	897	0	531	0	0	0
Future Volume (veh/h)	6	1831	611	0	1869	374	897	0	531	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	6	1868	623	0	1907	349	915	0	344			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	44	2773	891	0	2873	892	1150	0	1024			
Arrive On Green	0.55	0.55	0.55	0.00	0.55	0.55	0.32	0.00	0.32			
Sat Flow, veh/h	4	5007	1609	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	701	1173	623	0	1907	349	915	0	344			
Grp Sat Flow(s),veh/h/ln	1864	1573	1609	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	22.7	24.2	0.0	22.2	10.6	19.8	0.0	7.0			
Cycle Q Clear(g_c), s	22.4	22.7	24.2	0.0	22.2	10.6	19.8	0.0	7.0			
Prop In Lane	0.01		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	1075	1743	891	0	2873	892	1150	0	1024			
V/C Ratio(X)	0.65	0.67	0.70	0.00	0.66	0.39	0.80	0.00	0.34			
Avail Cap(c_a), veh/h	1075	1743	891	0	2873	892	2595	0	2309			
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	1.00	0.00	1.00			
Uniform Delay (d), s/veh	13.5	13.6	13.9	0.0	13.5	10.9	26.7	0.0	22.3			
Incr Delay (d2), s/veh	3.1	2.1	4.5	0.0	1.2	1.3	1.3	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.3	7.5	8.8	0.0	7.9	3.7	8.0	0.0	2.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.6	15.7	18.5	0.0	14.7	12.2	28.0	0.0	22.5			
LnGrp LOS	B	B	B	A	B	B	C	A	C			
Approach Vol, veh/h		2497			2256			1259				
Approach Delay, s/veh		16.6			14.3			26.5				
Approach LOS		B			B			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		32.8				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		26.2				24.2		21.8				
Green Ext Time (p_c), s		11.6				12.1		5.5				

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

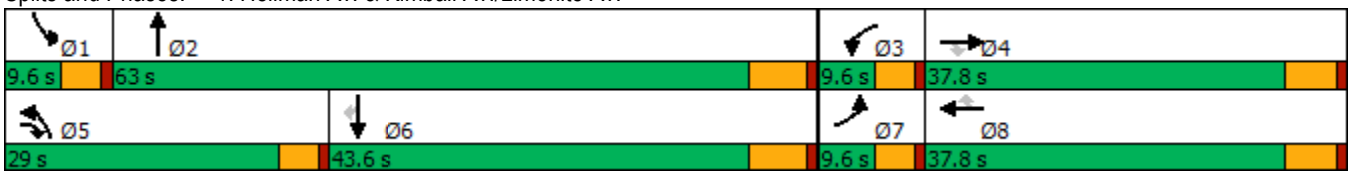
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	30	971	258	489	822	83	326	93	130	98	148
Future Volume (vph)	30	971	258	489	822	83	326	93	130	98	148
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	9.6	37.8	29.0	9.6	37.8	37.8	29.0	63.0	9.6	43.6	43.6
Total Split (%)	8.0%	31.5%	24.2%	8.0%	31.5%	31.5%	24.2%	52.5%	8.0%	36.3%	36.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	5.0	32.0	62.2	5.0	35.8	35.8	24.4	56.8	5.0	37.4	37.4
Actuated g/C Ratio	0.04	0.27	0.52	0.04	0.30	0.30	0.20	0.47	0.04	0.31	0.31
v/c Ratio	0.45	2.02	0.30	3.96	0.80	0.15	0.99	0.35	1.93	0.09	0.26
Control Delay	76.1	491.6	7.6	1365.9	46.4	0.5	93.6	15.4	496.0	29.6	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.1	491.6	7.6	1365.9	46.4	0.5	93.6	15.4	496.0	29.6	6.4
LOS	E	F	A	F	D	A	F	B	F	C	A
Approach Delay		382.3			506.9			45.4		181.8	
Approach LOS		F			F			D		F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.96	
Intersection Signal Delay: 333.7	Intersection LOS: F
Intersection Capacity Utilization 111.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	971	258	489	822	83	326	93	432	130	98	148
Future Volume (veh/h)	30	971	258	489	822	83	326	93	432	130	98	148
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	32	1022	272	515	865	87	343	98	455	137	103	156
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	507	757	131	1014	452	349	854	762	71	1125	502
Arrive On Green	0.03	0.27	0.27	0.04	0.28	0.28	0.20	0.47	0.47	0.04	0.31	0.31
Sat Flow, veh/h	1714	1900	1610	3141	3610	1610	1714	1805	1610	1714	3610	1610
Grp Volume(v), veh/h	32	1022	272	515	865	87	343	98	455	137	103	156
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1570	1805	1610	1714	1805	1610	1714	1805	1610
Q Serve(g_s), s	2.2	32.0	12.9	5.0	27.2	4.9	23.9	3.6	24.9	5.0	2.4	8.9
Cycle Q Clear(g_c), s	2.2	32.0	12.9	5.0	27.2	4.9	23.9	3.6	24.9	5.0	2.4	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	507	757	131	1014	452	349	854	762	71	1125	502
V/C Ratio(X)	0.68	2.02	0.36	3.94	0.85	0.19	0.98	0.11	0.60	1.92	0.09	0.31
Avail Cap(c_a), veh/h	71	507	757	131	1014	452	349	854	762	71	1125	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.8	44.0	20.3	57.5	40.8	32.8	47.6	17.6	23.2	57.5	29.3	31.5
Incr Delay (d2), s/veh	6.4	464.6	0.3	1339.0	7.1	0.2	44.4	0.3	3.4	460.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	79.8	4.7	26.3	12.6	1.9	14.1	1.5	9.5	11.2	1.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	508.6	20.6	1396.5	47.9	33.0	92.0	17.9	26.6	517.8	29.3	31.8
LnGrp LOS	E	F	C	F	D	C	F	B	C	F	C	C
Approach Vol, veh/h		1326			1467			896			396	
Approach Delay, s/veh		397.8			520.5			50.7			199.3	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	63.0	9.6	37.8	29.0	43.6	7.9	39.5
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.0	56.8	5.0	32.0	24.4	37.4	5.0	32.0
Max Q Clear Time (g_c+I1), s	7.0	26.9	7.0	34.0	25.9	10.9	4.2	29.2
Green Ext Time (p_c), s	0.0	3.5	0.0	0.0	0.0	1.0	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	346.5
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	1178	2	0	1459	3	0	0	6	0	0	12
Future Vol, veh/h	0	1178	2	0	1459	3	0	0	6	0	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1280	2	0	1586	3	0	0	7	0	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	641	-	-	795
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	422	0	0	335
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	422	-	-	335
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.7	16.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	422	-	-	-	-	335
HCM Lane V/C Ratio	0.015	-	-	-	-	0.039
HCM Control Delay (s)	13.7	-	-	-	-	16.2
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1286	1621	44	30
Demand Flow Rate, veh/h	1286	1621	44	30
Vehicles Circulating, veh/h	59	11	1301	1620
Vehicles Exiting, veh/h	1591	1334	44	12
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.8	9.3	8.9	11.4
Approach LOS	A	A	A	B

Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	LT	TR	LTR	LTR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
Entry Flow, veh/h	604	682	762	859	44	30
Cap Entry Lane, veh/h	1279	1351	1336	1407	470	358
Entry HV Adj Factor	1.001	0.999	1.000	1.000	1.000	1.000
Flow Entry, veh/h	604	682	762	859	44	30
Cap Entry, veh/h	1279	1350	1336	1407	470	358
V/C Ratio	0.472	0.505	0.570	0.611	0.094	0.084
Control Delay, s/veh	7.7	7.9	9.1	9.5	8.9	11.4
LOS	A	A	A	A	A	B
95th %tile Queue, veh	3	3	4	4	0	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	1244	15	0	1459	11	0	0	40	0	0	31
Future Vol, veh/h	0	1244	15	0	1459	11	0	0	40	0	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1352	16	0	1586	12	0	0	43	0	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	684	-	-	799
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	396	0	0	333
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	396	-	-	333
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	15.2	17
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	396	-	-	-	-	333
HCM Lane V/C Ratio	0.11	-	-	-	-	0.101
HCM Control Delay (s)	15.2	-	-	-	-	17
HCM Lane LOS	C	-	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	297	78	8	14	0
Future Vol, veh/h	0	297	78	8	14	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, %	0	0	0	0	0	0
Mvmt Flow	0	323	85	9	15	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	94	0	-	0	413	90
Stage 1	-	-	-	-	90	-
Stage 2	-	-	-	-	323	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1513	-	-	-	599	973
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	738	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1513	-	-	-	599	973
Mov Cap-2 Maneuver	-	-	-	-	599	-
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	738	-

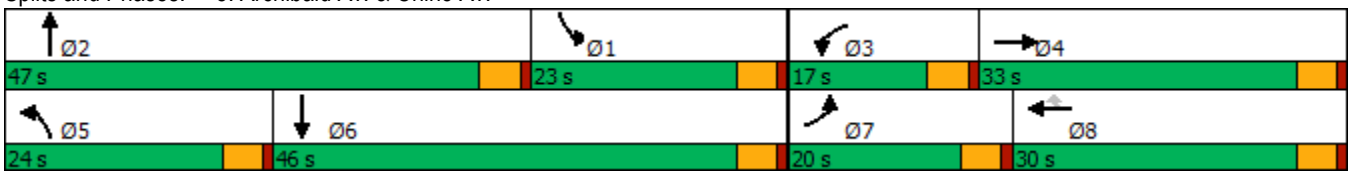
Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.2
HCM LOS			B

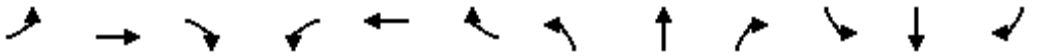
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1513	-	-	-	599
HCM Lane V/C Ratio	-	-	-	-	0.025
HCM Control Delay (s)	0	-	-	-	11.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBL	EBT	WBL	WBR	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	2	84	164	57	1299	173	2003
Future Volume (vph)	25	2	84	164	57	1299	173	2003
Turn Type	Prot	NA	Prot	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3		5	2	1	6
Permitted Phases				8				
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	20.0	33.0	17.0	30.0	24.0	47.0	23.0	46.0
Total Split (%)	16.7%	27.5%	14.2%	25.0%	20.0%	39.2%	19.2%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.1	7.8	9.6	10.4	8.6	31.1	20.0	45.4
Actuated g/C Ratio	0.09	0.10	0.12	0.13	0.11	0.39	0.25	0.57
v/c Ratio	0.17	0.11	0.43	0.29	0.32	0.74	0.42	1.03
Control Delay	43.6	20.5	44.9	1.2	43.4	24.1	35.1	50.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	20.5	44.9	1.2	43.4	24.1	35.1	50.4
LOS	D	C	D	A	D	C	D	D
Approach Delay		33.8				24.9		49.2
Approach LOS		C				C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 80.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 37.9	Intersection LOS: D
Intersection Capacity Utilization 83.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	2	16	84	0	164	57	1299	111	173	2003	17
Future Volume (veh/h)	25	2	16	84	0	164	57	1299	111	173	2003	17
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	26	2	17	88	0	132	59	1353	113	180	2086	13
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	48	11	98	113	198	168	82	1911	160	383	2087	13
Arrive On Green	0.03	0.07	0.07	0.07	0.00	0.10	0.05	0.39	0.39	0.22	0.57	0.57
Sat Flow, veh/h	1714	172	1464	1714	1900	1610	1714	4877	407	1714	3678	23
Grp Volume(v), veh/h	26	0	19	88	0	132	59	959	507	180	1023	1076
Grp Sat Flow(s),veh/h/ln	1714	0	1636	1714	1900	1610	1714	1729	1827	1714	1805	1896
Q Serve(g_s), s	1.1	0.0	0.8	3.7	0.0	3.6	2.5	17.0	17.0	6.6	41.2	41.4
Cycle Q Clear(g_c), s	1.1	0.0	0.8	3.7	0.0	3.6	2.5	17.0	17.0	6.6	41.2	41.4
Prop In Lane	1.00		0.89	1.00		1.00	1.00		0.22	1.00		0.01
Lane Grp Cap(c), veh/h	48	0	109	113	198	168	82	1355	716	383	1024	1076
V/C Ratio(X)	0.54	0.00	0.17	0.78	0.00	0.79	0.72	0.71	0.71	0.47	1.00	1.00
Avail Cap(c_a), veh/h	362	0	637	291	662	561	456	2010	1062	432	1024	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	32.1	33.6	0.0	11.8	34.3	18.7	18.7	24.6	15.7	15.8
Incr Delay (d2), s/veh	9.1	0.0	0.8	11.0	0.0	7.8	11.2	0.7	1.3	0.9	27.7	27.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.3	1.8	0.0	2.4	1.2	5.6	6.1	2.5	19.6	20.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	0.0	32.9	44.5	0.0	19.7	45.5	19.4	20.0	25.5	43.4	43.3
LnGrp LOS	D	A	C	D	A	B	D	B	B	C	D	F
Approach Vol, veh/h		45			220			1525			2279	
Approach Delay, s/veh		39.4			29.6			20.6			42.0	
Approach LOS		D			C			C			D	

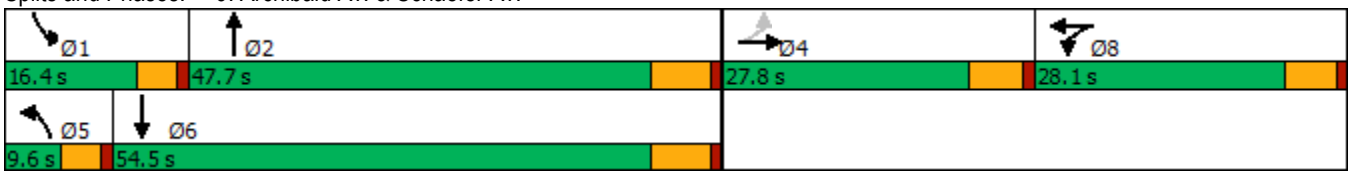
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.9	33.2	9.4	9.5	8.1	46.0	6.6	12.2
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	12.4	28.4	19.4	41.4	15.4	25.4
Max Q Clear Time (g_c+I1), s	8.6	19.0	5.7	2.8	4.5	43.4	3.1	5.6
Green Ext Time (p_c), s	0.3	9.6	0.1	0.0	0.1	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	33.2
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	351	268	23	10	10	1210	322	1434
Future Volume (vph)	351	268	23	10	10	1210	322	1434
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	27.8	27.8	27.8	27.8	9.6	28.5	9.6	28.5
Total Split (s)	27.8	27.8	28.1	28.1	9.6	47.7	16.4	54.5
Total Split (%)	23.2%	23.2%	23.4%	23.4%	8.0%	39.8%	13.7%	45.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.8	5.8	5.8	4.6	6.5	4.6	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		22.3	12.2	12.2	5.1	35.7	12.0	50.7
Actuated g/C Ratio		0.22	0.12	0.12	0.05	0.35	0.12	0.50
v/c Ratio		13.07	0.12	0.30	0.13	0.74	1.69	0.85
Control Delay		5486.5	43.3	16.8	55.0	32.5	358.4	29.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		5486.5	43.3	16.8	55.0	32.5	358.4	29.8
LOS		F	D	B	D	C	F	C
Approach Delay		5486.5		23.0		32.7		89.1
Approach LOS		F		C		C		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.3	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 13.07	
Intersection Signal Delay: 1093.9	Intersection LOS: F
Intersection Capacity Utilization 106.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	351	268	126	23	10	64	10	1210	74	322	1434	29
Future Volume (veh/h)	351	268	126	23	10	64	10	1210	74	322	1434	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	369	282	133	24	11	51	11	1274	77	339	1509	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	185	141	67	154	26	123	23	1752	106	200	1644	34
Arrive On Green	0.22	0.22	0.22	0.09	0.09	0.09	0.01	0.35	0.35	0.12	0.45	0.45
Sat Flow, veh/h	848	648	306	1714	294	1361	1714	4994	302	1714	3617	74
Grp Volume(v), veh/h	784	0	0	24	0	62	11	882	469	339	752	788
Grp Sat Flow(s),veh/h/ln	1803	0	0	1714	0	1655	1714	1729	1838	1714	1805	1887
Q Serve(g_s), s	22.0	0.0	0.0	1.3	0.0	3.6	0.6	22.5	22.5	11.8	39.4	39.5
Cycle Q Clear(g_c), s	22.0	0.0	0.0	1.3	0.0	3.6	0.6	22.5	22.5	11.8	39.4	39.5
Prop In Lane	0.47		0.17	1.00		0.82	1.00		0.16	1.00		0.04
Lane Grp Cap(c), veh/h	392	0	0	154	0	149	23	1213	645	200	820	857
V/C Ratio(X)	2.00	0.00	0.00	0.16	0.00	0.42	0.49	0.73	0.73	1.69	0.92	0.92
Avail Cap(c_a), veh/h	392	0	0	378	0	365	85	1410	749	200	857	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	0.0	0.0	42.4	0.0	43.5	49.5	28.6	28.6	44.6	25.8	25.8
Incr Delay (d2), s/veh	458.1	0.0	0.0	0.5	0.0	1.8	6.0	1.6	3.0	332.8	14.2	14.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	59.2	0.0	0.0	0.6	0.0	1.5	0.3	8.7	9.5	23.2	17.8	18.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	497.7	0.0	0.0	42.9	0.0	45.3	55.5	30.2	31.6	377.4	39.9	39.8
LnGrp LOS	F	A	A	D	A	D	E	C	C	F	D	D
Approach Vol, veh/h		784			86			1362			1879	
Approach Delay, s/veh		497.7			44.6			30.9			100.8	
Approach LOS		F			D			C			F	

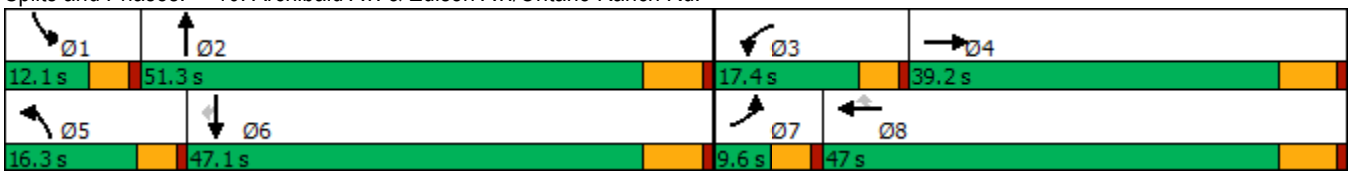
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.4	42.0		27.8	5.9	52.4		14.9				
Change Period (Y+Rc), s	4.6	6.5		5.8	4.6	6.5		5.8				
Max Green Setting (Gmax), s	11.8	41.2		22.0	5.0	48.0		22.3				
Max Q Clear Time (g_c+I1), s	13.8	24.5		24.0	2.6	41.5		5.6				
Green Ext Time (p_c), s	0.0	7.4		0.0	0.0	4.4		0.3				

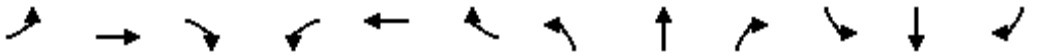
Intersection Summary			
HCM 6th Ctrl Delay		152.1	
HCM 6th LOS		F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	402	2005	592	423	1342	157	399	925	543	278	1074	431
Future Volume (vph)	402	2005	592	423	1342	157	399	925	543	278	1074	431
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.2		17.4	47.0	47.0	16.3	51.3		12.1	47.1	47.1
Total Split (%)	8.0%	32.7%		14.5%	39.2%	39.2%	13.6%	42.8%		10.1%	39.3%	39.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	5.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.0	33.0	119.3	12.8	40.8	40.8	11.7	44.1	119.3	7.5	39.9	39.9
Actuated g/C Ratio	0.04	0.28	1.00	0.11	0.34	0.34	0.10	0.37	1.00	0.06	0.33	0.33
v/c Ratio	3.16	2.07	0.38	1.30	2.13	0.26	2.46	0.72	0.35	2.68	0.92	0.70
Control Delay	1012.7	510.5	0.7	196.5	537.2	10.6	698.5	35.8	0.6	807.0	50.9	28.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1012.7	510.5	0.7	196.5	537.2	10.6	698.5	35.8	0.6	807.0	50.9	28.8
LOS	F	F	A	F	F	B	F	D	A	F	D	C
Approach Delay		477.2			419.2			167.1			163.6	
Approach LOS		F			F			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.16	
Intersection Signal Delay: 331.4	Intersection LOS: F
Intersection Capacity Utilization 154.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 10: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	402	2005	592	423	1342	157	399	925	543	278	1074	431
Future Volume (veh/h)	402	2005	592	423	1342	157	399	925	543	278	1074	431
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	414	2067	0	436	1384	128	411	954	0	287	1107	428
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	132	1001		338	652	552	169	1328		108	1201	523
Arrive On Green	0.04	0.28	0.00	0.11	0.34	0.34	0.10	0.37	0.00	0.06	0.33	0.33
Sat Flow, veh/h	3141	3610	1610	3141	1900	1610	1714	3610	1610	1714	3610	1572
Grp Volume(v), veh/h	414	2067	0	436	1384	128	411	954	0	287	1107	428
Grp Sat Flow(s),veh/h/ln	1570	1805	1610	1570	1900	1610	1714	1805	1610	1714	1805	1572
Q Serve(g_s), s	5.0	33.0	0.0	12.8	40.8	6.8	11.7	27.0	0.0	7.5	35.1	29.7
Cycle Q Clear(g_c), s	5.0	33.0	0.0	12.8	40.8	6.8	11.7	27.0	0.0	7.5	35.1	29.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	132	1001		338	652	552	169	1328		108	1201	523
V/C Ratio(X)	3.14	2.06		1.29	2.12	0.23	2.44	0.72		2.66	0.92	0.82
Avail Cap(c_a), veh/h	132	1001		338	652	552	169	1359		108	1232	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.0	43.0	0.0	53.1	39.1	27.9	53.6	32.3	0.0	55.7	38.2	36.4
Incr Delay (d2), s/veh	981.0	482.4	0.0	151.1	511.0	0.2	664.7	1.8	0.0	770.9	11.3	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.9	81.0	0.0	12.0	110.3	2.5	35.9	11.3	0.0	26.2	16.3	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1038.0	525.4	0.0	204.2	550.1	28.1	718.4	34.1	0.0	826.7	49.5	45.9
LnGrp LOS	F	F		F	F	C	F	C		F	D	D
Approach Vol, veh/h		2481	A		1948			1365	A		1822	
Approach Delay, s/veh		610.9			438.4			240.1			171.1	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	50.3	17.4	39.2	16.3	46.1	9.6	47.0
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	7.5	44.8	12.8	33.0	11.7	40.6	5.0	40.8
Max Q Clear Time (g_c+I1), s	9.5	29.0	14.8	35.0	13.7	37.1	7.0	42.8
Green Ext Time (p_c), s	0.0	5.2	0.0	0.0	0.0	2.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	395.1
HCM 6th LOS	F

Notes

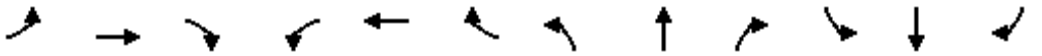
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	207	369	107	74	73	89	1543	161	184	1638
Future Volume (vph)	207	369	107	74	73	89	1543	161	184	1638
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Prot	NA
Protected Phases	7	4	3	8			2		1	6
Permitted Phases					8	2		2		
Detector Phase	7	4	3	8	8	2	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	30.6	23.2	9.5	14.5	14.5	32.5	32.5	32.5	9.6	24.5
Total Split (s)	30.6	35.6	9.5	14.5	14.5	65.3	65.3	65.3	9.6	74.9
Total Split (%)	25.5%	29.7%	7.9%	12.1%	12.1%	54.4%	54.4%	54.4%	8.0%	62.4%
Yellow Time (s)	3.6	4.2	3.5	3.5	3.5	5.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.2	4.5	4.5	4.5	6.5	6.5	6.5	4.6	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	Max	Max	Max	None	Max
Act Effct Green (s)	19.2	30.4	5.0	16.8	16.8	58.8	58.8	58.8	5.0	68.4
Actuated g/C Ratio	0.16	0.25	0.04	0.14	0.14	0.49	0.49	0.49	0.04	0.57
v/c Ratio	0.78	1.50	0.85	0.33	0.19	1.56	0.90	0.21	2.68	0.88
Control Delay	67.0	268.0	103.3	51.5	1.2	346.1	36.2	18.3	814.8	28.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	268.0	103.3	51.5	1.2	346.1	36.2	18.3	814.8	28.4
LOS	E	F	F	D	A	F	D	B	F	C
Approach Delay		220.8		60.4			50.0			103.7
Approach LOS		F		E			D			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.68	
Intersection Signal Delay: 102.8	Intersection LOS: F
Intersection Capacity Utilization 118.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	369	305	107	74	73	89	1543	161	184	1638	102
Future Volume (veh/h)	207	369	305	107	74	73	89	1543	161	184	1638	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	213	380	314	110	76	56	92	1591	165	190	1689	105
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	240	244	201	135	293	248	99	1769	789	71	1969	121
Arrive On Green	0.14	0.25	0.25	0.04	0.15	0.15	0.49	0.49	0.49	0.04	0.57	0.57
Sat Flow, veh/h	1714	962	795	3238	1900	1610	253	3610	1610	1714	3454	213
Grp Volume(v), veh/h	213	0	694	110	76	56	92	1591	165	190	877	917
Grp Sat Flow(s),veh/h/ln	1714	0	1757	1619	1900	1610	253	1805	1610	1714	1805	1862
Q Serve(g_s), s	14.6	0.0	30.4	4.0	4.2	3.7	18.3	48.2	7.0	5.0	48.7	50.1
Cycle Q Clear(g_c), s	14.6	0.0	30.4	4.0	4.2	3.7	58.8	48.2	7.0	5.0	48.7	50.1
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	240	0	445	135	293	248	99	1769	789	71	1029	1061
V/C Ratio(X)	0.89	0.00	1.56	0.82	0.26	0.23	0.93	0.90	0.21	2.66	0.85	0.86
Avail Cap(c_a), veh/h	371	0	445	135	293	248	99	1769	789	71	1029	1061
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	44.8	57.0	44.7	44.5	56.2	27.9	17.4	57.5	21.6	21.9
Incr Delay (d2), s/veh	10.4	0.0	262.5	28.9	0.5	0.5	73.8	7.8	0.6	785.4	8.9	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	45.4	2.2	2.0	1.5	4.7	20.4	2.7	17.7	20.1	21.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	0.0	307.3	85.9	45.2	45.0	130.0	35.7	18.0	842.9	30.5	31.3
LnGrp LOS	E	A	F	F	D	D	F	D	B	F	C	C
Approach Vol, veh/h		907			242			1848			1984	
Approach Delay, s/veh		249.5			63.6			38.8			108.6	
Approach LOS		F			E			D			F	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	9.6	65.3	9.5	35.6		74.9	21.4	23.7				
Change Period (Y+Rc), s	4.6	6.5	4.5	5.2		6.5	4.6	* 5.2				
Max Green Setting (Gmax), s	5.0	58.8	5.0	30.4		68.4	26.0	* 10				
Max Q Clear Time (g_c+I1), s	7.0	60.8	6.0	32.4		52.1	16.6	6.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0		10.4	0.2	0.1				

Intersection Summary			
HCM 6th Ctrl Delay		106.2	
HCM 6th LOS		F	

Notes

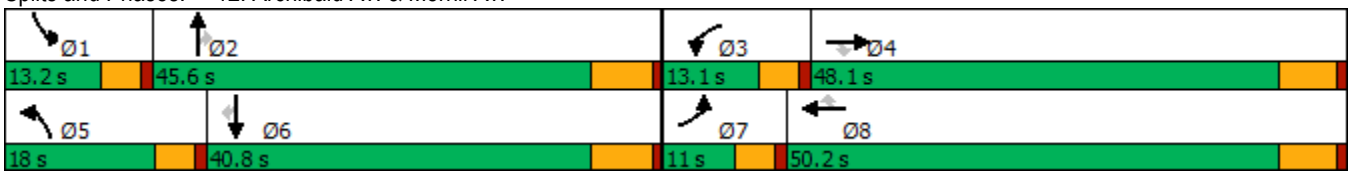
User approved volume balancing among the lanes for turning movement.

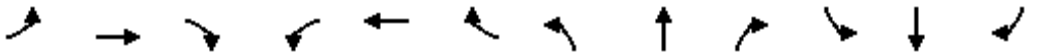
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	642	100	862	145	64	67	379	2207	401	88	1670	330
Future Volume (vph)	642	100	862	145	64	67	379	2207	401	88	1670	330
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	16.2	16.2	9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	16.5
Total Split (s)	11.0	48.1	48.1	13.1	50.2	50.2	18.0	45.6	45.6	13.2	40.8	40.8
Total Split (%)	9.2%	40.1%	40.1%	10.9%	41.8%	41.8%	15.0%	38.0%	38.0%	11.0%	34.0%	34.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	16.4	41.9	41.9	8.5	37.2	37.2	13.4	40.2	40.2	7.5	34.3	34.3
Actuated g/C Ratio	0.14	0.35	0.35	0.07	0.31	0.31	0.11	0.34	0.34	0.06	0.29	0.29
v/c Ratio	2.83	0.16	1.28	1.23	0.11	0.11	2.06	1.88	0.58	0.47	1.67	0.59
Control Delay	854.0	27.7	162.9	202.8	26.3	0.4	521.4	425.7	15.3	62.0	335.7	24.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	854.0	27.7	162.9	202.8	26.3	0.4	521.4	425.7	15.3	62.0	335.7	24.3
LOS	F	C	F	F	C	A	F	F	B	E	F	C
Approach Delay		431.1			112.6			382.8			274.9	
Approach LOS		F			F			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.83	
Intersection Signal Delay: 350.8	Intersection LOS: F
Intersection Capacity Utilization 127.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	642	100	862	145	64	67	379	2207	401	88	1670	330
Future Volume (veh/h)	642	100	862	145	64	67	379	2207	401	88	1670	330
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	662	103	704	149	66	30	391	2275	399	91	1722	282
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	91	663	562	121	697	590	191	1279	570	136	1032	460
Arrive On Green	0.05	0.35	0.35	0.07	0.37	0.37	0.11	0.35	0.35	0.04	0.29	0.29
Sat Flow, veh/h	1714	1900	1610	1714	1900	1610	1714	3610	1610	3141	3610	1610
Grp Volume(v), veh/h	662	103	704	149	66	30	391	2275	399	91	1722	282
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	1900	1610	1714	1805	1610	1570	1805	1610
Q Serve(g_s), s	6.4	4.5	41.9	8.5	2.7	1.4	13.4	42.5	25.5	3.4	34.3	18.2
Cycle Q Clear(g_c), s	6.4	4.5	41.9	8.5	2.7	1.4	13.4	42.5	25.5	3.4	34.3	18.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	663	562	121	697	590	191	1279	570	136	1032	460
V/C Ratio(X)	7.24	0.16	1.25	1.23	0.09	0.05	2.04	1.78	0.70	0.67	1.67	0.61
Avail Cap(c_a), veh/h	91	663	562	121	697	590	191	1279	570	225	1032	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.8	26.9	39.1	55.8	24.9	24.5	53.3	38.7	33.3	56.6	42.9	37.1
Incr Delay (d2), s/veh	2830.9	0.1	127.6	155.0	0.1	0.0	486.9	353.8	3.8	2.1	305.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	74.6	2.0	36.0	8.9	1.2	0.6	31.4	80.2	10.4	1.3	58.1	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2887.7	27.0	166.7	210.7	25.0	24.6	540.2	392.5	37.0	58.7	348.1	39.5
LnGrp LOS	F	C	F	F	C	C	F	F	D	E	F	D
Approach Vol, veh/h		1469			245			3065			2095	
Approach Delay, s/veh		1383.1			137.9			365.1			294.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	49.0	13.1	48.1	18.0	40.8	11.0	50.2
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	8.6	39.1	8.5	41.9	13.4	34.3	6.4	44.0
Max Q Clear Time (g_c+I1), s	5.4	44.5	10.5	43.9	15.4	36.3	8.4	4.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	552.9
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	9	0	3087	2673	3
Future Vol, veh/h	0	9	0	3087	2673	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	10	0	3355	2905	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1454	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.7	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	132	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	132	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

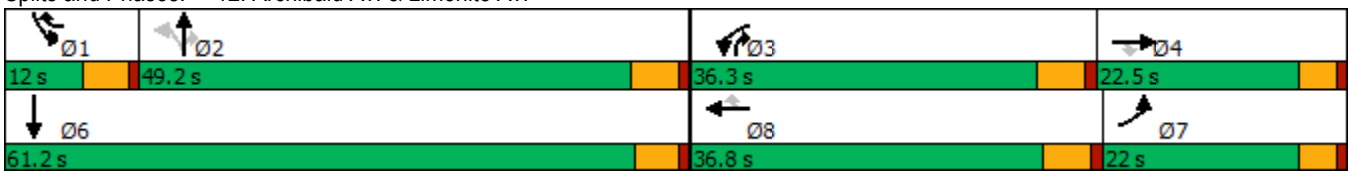
Approach	EB	NB	SB
HCM Control Delay, s	34.4	0	0
HCM LOS	D		

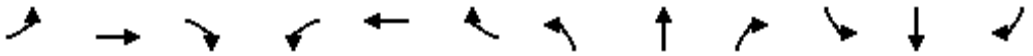
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	132	-	-
HCM Lane V/C Ratio	-	0.074	-	-
HCM Control Delay (s)	-	34.4	-	-
HCM Lane LOS	-	D	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	369	780	134	469	996	956	135	1762	446	433	1784
Future Volume (vph)	369	780	134	469	996	956	135	1762	446	433	1784
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Perm	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1		2	3	1	6
Permitted Phases			4			8	2		2		
Detector Phase	7	4	4	3	8	1	2	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	36.3	36.3	11.0	46.3	46.3	36.3	11.0	11.0
Total Split (s)	22.0	22.5	22.5	36.3	36.8	12.0	49.2	49.2	36.3	12.0	61.2
Total Split (%)	18.3%	18.8%	18.8%	30.3%	30.7%	10.0%	41.0%	41.0%	30.3%	10.0%	51.0%
Yellow Time (s)	3.5	3.5	3.5	4.3	4.3	4.0	4.3	4.3	4.3	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	5.3	5.3	5.0	5.3	5.3	5.3	5.0	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	Min	None	None	Min
Act Effct Green (s)	17.5	18.0	18.0	31.0	31.5	38.8	43.9	43.9	74.9	7.0	56.2
Actuated g/C Ratio	0.15	0.15	0.15	0.26	0.26	0.32	0.37	0.37	0.62	0.06	0.47
v/c Ratio	0.75	1.50	0.41	1.05	1.10	1.77	2.24	2.64	0.46	4.30	1.33
Control Delay	59.4	271.7	16.2	98.6	100.8	375.4	627.1	761.8	9.7	1518.7	181.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	271.7	16.2	98.6	100.8	375.4	627.1	761.8	9.7	1518.7	181.6
LOS	E	F	B	F	F	F	F	F	A	F	F
Approach Delay		184.0			208.8			610.8			408.2
Approach LOS		F			F			F			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 4.30	
Intersection Signal Delay: 373.8	Intersection LOS: F
Intersection Capacity Utilization 181.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	780	134	469	996	956	135	1762	446	433	1784	338
Future Volume (veh/h)	369	780	134	469	996	956	135	1762	446	433	1784	338
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	384	812	140	489	1038	877	141	1835	384	451	1858	352
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	511	540	241	466	945	515	60	698	994	105	1423	261
Arrive On Green	0.15	0.15	0.15	0.26	0.26	0.26	0.37	0.37	0.37	0.06	0.47	0.47
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	178	1900	1576	1810	3046	559
Grp Volume(v), veh/h	384	812	140	489	1038	877	141	1835	384	451	1077	1133
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	178	1900	1576	1810	1805	1799
Q Serve(g_s), s	12.6	18.0	9.7	31.0	31.5	26.7	0.0	44.2	14.5	7.0	56.2	56.2
Cycle Q Clear(g_c), s	12.6	18.0	9.7	31.0	31.5	26.7	44.2	44.2	14.5	7.0	56.2	56.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	511	540	241	466	945	515	60	698	994	105	843	841
V/C Ratio(X)	0.75	1.50	0.58	1.05	1.10	1.70	2.36	2.63	0.39	4.28	1.28	1.35
Avail Cap(c_a), veh/h	511	540	241	466	945	515	60	698	994	105	843	841
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	51.1	47.6	44.7	44.4	22.2	60.2	38.1	11.2	56.7	32.0	32.1
Incr Delay (d2), s/veh	6.2	236.0	3.5	55.0	59.9	324.1	658.6	737.0	0.3	1499.5	133.7	164.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	25.6	4.0	20.3	21.2	55.4	12.7	162.1	4.5	46.9	53.2	60.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	287.2	51.1	99.7	104.3	346.4	718.7	775.1	11.5	1556.1	165.8	196.6
LnGrp LOS	E	F	D	F	F	F	F	F	B	F	F	F
Approach Vol, veh/h		1336			2404			2360			2661	
Approach Delay, s/veh		195.9			191.6			647.4			414.6	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	12.0	49.5	36.3	22.5		61.5	22.0	36.8
Change Period (Y+Rc), s	5.0	5.3	5.3	4.5		* 5.3	4.5	5.3
Max Green Setting (Gmax), s	7.0	43.9	31.0	18.0		* 56	17.5	31.5
Max Q Clear Time (g_c+I1), s	9.0	46.2	33.0	20.0		58.2	14.6	33.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0		0.0	0.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	382.8
HCM 6th LOS	F

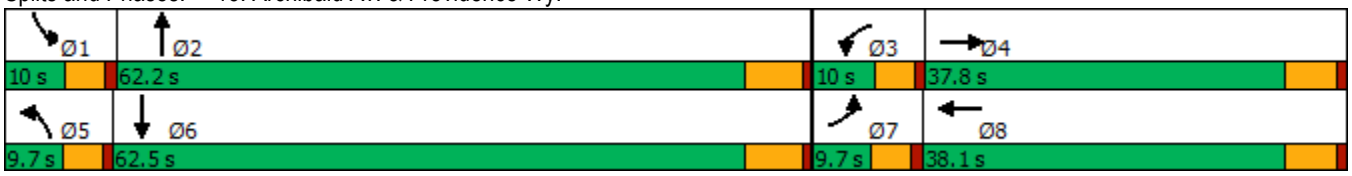
Notes

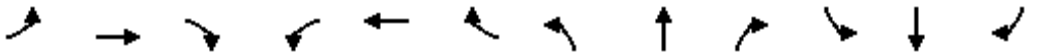
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	274	0	93	0	28	1842	111	2218
Future Volume (vph)	274	0	93	0	28	1842	111	2218
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	37.8	9.6	37.8	9.6	28.2	9.6	28.2
Total Split (s)	9.7	37.8	10.0	38.1	9.7	62.2	10.0	62.5
Total Split (%)	8.1%	31.5%	8.3%	31.8%	8.1%	51.8%	8.3%	52.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.1	16.1	12.2	16.4	5.1	56.3	5.4	60.7
Actuated g/C Ratio	0.05	0.15	0.12	0.16	0.05	0.54	0.05	0.58
v/c Ratio	3.35	0.12	0.47	0.70	0.34	1.09	1.28	1.17
Control Delay	1103.9	0.7	57.5	32.4	62.0	73.6	227.4	107.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1103.9	0.7	57.5	32.4	62.0	73.6	227.4	107.0
LOS	F	A	E	C	E	E	F	F
Approach Delay		972.1		39.7		73.4		112.6
Approach LOS		F		D		E		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.35	
Intersection Signal Delay: 146.0	Intersection LOS: F
Intersection Capacity Utilization 114.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: Archibald Av. & Providence Wy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	274	0	37	93	0	227	28	1842	108	111	2218	59
Future Volume (veh/h)	274	0	37	93	0	227	28	1842	108	111	2218	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	295	0	25	100	0	125	30	1981	58	119	2385	34
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	94	0	162	100	0	169	52	2045	60	100	2177	31
Arrive On Green	0.05	0.00	0.10	0.06	0.00	0.11	0.03	0.57	0.57	0.06	0.60	0.60
Sat Flow, veh/h	1810	0	1587	1810	0	1610	1810	3582	104	1810	3643	52
Grp Volume(v), veh/h	295	0	25	100	0	125	30	993	1046	119	1178	1241
Grp Sat Flow(s),veh/h/ln	1810	0	1587	1810	0	1610	1810	1805	1881	1810	1805	1889
Q Serve(g_s), s	5.1	0.0	1.4	5.4	0.0	7.4	1.6	51.4	52.6	5.4	58.5	58.5
Cycle Q Clear(g_c), s	5.1	0.0	1.4	5.4	0.0	7.4	1.6	51.4	52.6	5.4	58.5	58.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	94	0	162	100	0	169	52	1030	1074	100	1079	1129
V/C Ratio(X)	3.13	0.00	0.15	1.00	0.00	0.74	0.58	0.96	0.97	1.19	1.09	1.10
Avail Cap(c_a), veh/h	94	0	519	100	0	531	94	1033	1076	100	1079	1129
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	0.0	40.1	46.2	0.0	42.5	47.0	20.0	20.3	46.2	19.7	19.7
Incr Delay (d2), s/veh	985.1	0.0	0.4	90.5	0.0	6.1	3.8	19.8	21.2	150.6	56.3	58.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.0	0.0	0.5	4.8	0.0	3.1	0.7	23.1	24.9	6.5	36.0	38.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1031.5	0.0	40.5	136.7	0.0	48.6	50.8	39.8	41.5	196.8	76.0	77.7
LnGrp LOS	F	A	D	F	A	D	D	D	D	F	F	F
Approach Vol, veh/h		320			225			2069			2538	
Approach Delay, s/veh		954.1			87.8			40.8			82.5	
Approach LOS		F			F			D			F	

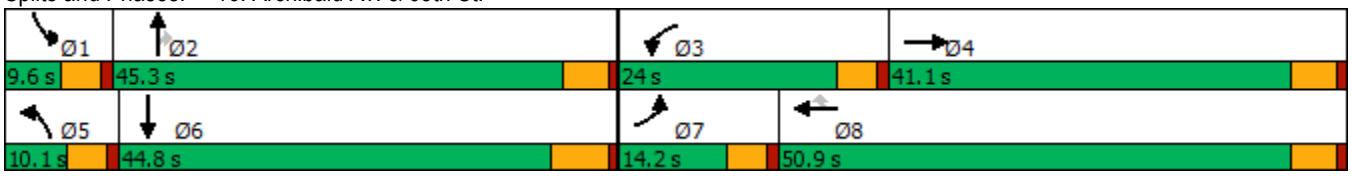
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	62.1	10.0	15.8	7.4	64.7	9.7	16.1
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	5.4	56.0	5.4	32.0	5.1	56.3	5.1	32.3
Max Q Clear Time (g_c+I1), s	7.4	54.6	7.4	3.4	3.6	60.5	7.1	9.4
Green Ext Time (p_c), s	0.0	1.3	0.0	0.1	0.0	0.0	0.0	0.6

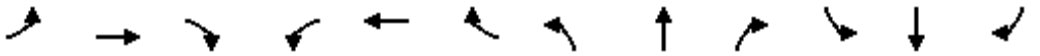
Intersection Summary	
HCM 6th Ctrl Delay	120.1
HCM 6th LOS	F

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	111	39	228	98	159	61	1708	258	223	1903
Future Volume (vph)	111	39	228	98	159	61	1708	258	223	1903
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.1	9.6	40.1	40.1	9.6	29.1	29.1	9.6	29.2
Total Split (s)	14.2	41.1	24.0	50.9	50.9	10.1	45.3	45.3	9.6	44.8
Total Split (%)	11.8%	34.3%	20.0%	42.4%	42.4%	8.4%	37.8%	37.8%	8.0%	37.3%
Yellow Time (s)	3.6	4.1	3.6	4.1	4.1	3.6	4.1	4.1	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.6	5.1	5.1	4.6	5.1	5.1	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	9.2	14.3	19.2	20.7	20.7	5.6	40.9	40.9	5.1	41.6
Actuated g/C Ratio	0.10	0.15	0.20	0.22	0.22	0.06	0.43	0.43	0.05	0.44
v/c Ratio	0.67	0.16	0.66	0.25	0.37	0.61	1.17	0.36	2.45	1.00
Control Delay	64.1	19.3	48.2	30.8	10.4	72.2	109.8	11.8	708.3	49.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.1	19.3	48.2	30.8	10.4	72.2	109.8	11.8	708.3	49.2
LOS	E	B	D	C	B	E	F	B	F	D
Approach Delay		45.0		32.3			96.2			111.8
Approach LOS		D		C			F			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.45	
Intersection Signal Delay: 95.4	Intersection LOS: F
Intersection Capacity Utilization 91.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: Archibald Av. & 65th St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	39	44	228	98	159	61	1708	258	223	1903	221
Future Volume (veh/h)	111	39	44	228	98	159	61	1708	258	223	1903	221
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	117	41	23	240	103	148	64	1798	218	235	2003	217
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	147	264	135	277	355	301	83	1616	712	101	2177	234
Arrive On Green	0.08	0.12	0.12	0.15	0.19	0.19	0.05	0.45	0.45	0.06	0.46	0.46
Sat Flow, veh/h	1810	2293	1177	1810	1900	1610	1810	3610	1590	1810	4756	510
Grp Volume(v), veh/h	117	31	33	240	103	148	64	1798	218	235	1451	769
Grp Sat Flow(s),veh/h/ln	1810	1805	1665	1810	1900	1610	1810	1805	1590	1810	1729	1808
Q Serve(g_s), s	5.7	1.4	1.6	11.6	4.2	7.4	3.1	40.2	7.9	5.0	35.2	36.0
Cycle Q Clear(g_c), s	5.7	1.4	1.6	11.6	4.2	7.4	3.1	40.2	7.9	5.0	35.2	36.0
Prop In Lane	1.00		0.71	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	147	208	192	277	355	301	83	1616	712	101	1583	828
V/C Ratio(X)	0.79	0.15	0.17	0.87	0.29	0.49	0.77	1.11	0.31	2.33	0.92	0.93
Avail Cap(c_a), veh/h	193	724	668	391	969	821	111	1616	712	101	1583	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	35.8	35.9	37.1	31.4	32.7	42.4	24.8	15.9	42.4	22.7	23.0
Incr Delay (d2), s/veh	11.5	0.3	0.4	10.3	0.4	1.2	14.6	59.9	1.1	629.3	9.9	18.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.6	0.6	5.7	1.9	2.9	1.7	28.7	2.9	19.7	14.3	17.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	36.1	36.3	47.4	31.8	33.9	56.9	84.7	17.0	671.7	32.7	41.1
LnGrp LOS	D	D	D	D	C	C	E	F	B	F	C	D
Approach Vol, veh/h		181			491			2080			2455	
Approach Delay, s/veh		46.4			40.1			76.8			96.5	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	46.4	18.4	15.4	8.7	47.3	11.9	21.9
Change Period (Y+Rc), s	4.6	* 6.2	4.6	5.1	4.6	6.2	4.6	5.1
Max Green Setting (Gmax), s	5.0	* 40	19.4	36.0	5.5	38.6	9.6	45.8
Max Q Clear Time (g_c+I1), s	7.0	42.2	13.6	3.6	5.1	38.0	7.7	9.4
Green Ext Time (p_c), s	0.0	0.0	0.2	0.3	0.0	0.5	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	81.5
HCM 6th LOS	F

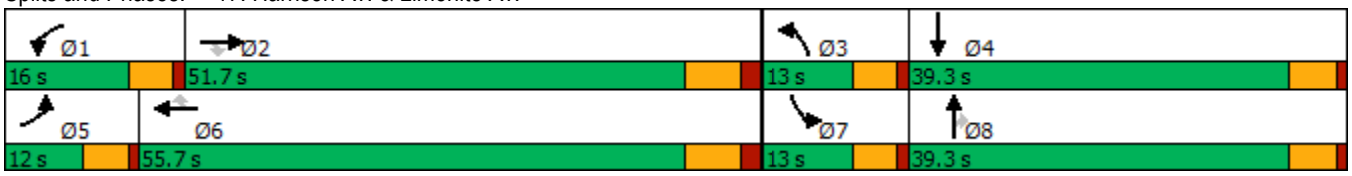
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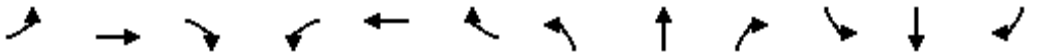
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	70	1990	255	314	2136	80	47	60	214	88	104
Future Volume (vph)	70	1990	255	314	2136	80	47	60	214	88	104
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0
Minimum Split (s)	10.0	29.0	29.0	10.0	29.0	29.0	10.0	39.3	39.3	10.0	39.3
Total Split (s)	12.0	51.7	51.7	16.0	55.7	55.7	13.0	39.3	39.3	13.0	39.3
Total Split (%)	10.0%	43.1%	43.1%	13.3%	46.4%	46.4%	10.8%	32.8%	32.8%	10.8%	32.8%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.3	4.3	4.0	4.3
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	5.3	5.3	5.0	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	6.0	45.1	45.1	11.1	54.6	54.6	6.6	15.4	15.4	7.7	18.8
Actuated g/C Ratio	0.06	0.44	0.44	0.11	0.54	0.54	0.06	0.15	0.15	0.08	0.18
v/c Ratio	0.36	0.94	0.35	1.74	0.83	0.10	0.44	0.23	0.63	0.71	0.56
Control Delay	59.0	37.9	8.9	381.3	26.3	2.4	60.6	38.0	22.2	75.4	38.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	37.9	8.9	381.3	26.3	2.4	60.6	38.0	22.2	75.4	38.6
LOS	E	D	A	F	C	A	E	D	C	E	D
Approach Delay		35.0			69.6			30.7			50.6
Approach LOS		D			E			C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.74	
Intersection Signal Delay: 51.7	Intersection LOS: D
Intersection Capacity Utilization 89.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 17: Harrison Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1990	255	314	2136	80	47	60	214	88	104	78
Future Volume (veh/h)	70	1990	255	314	2136	80	47	60	214	88	104	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	2163	267	341	2322	84	51	65	160	96	113	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	60	2378	723	207	2799	867	70	243	206	122	174	103
Arrive On Green	0.03	0.46	0.46	0.11	0.54	0.54	0.04	0.13	0.13	0.07	0.16	0.16
Sat Flow, veh/h	1810	5187	1577	1810	5187	1607	1810	1900	1610	1810	1111	659
Grp Volume(v), veh/h	38	2163	267	341	2322	84	51	65	160	96	0	180
Grp Sat Flow(s),veh/h/ln	1810	1729	1577	1810	1729	1607	1810	1900	1610	1810	0	1769
Q Serve(g_s), s	2.0	37.3	10.6	11.0	35.9	2.4	2.7	3.0	9.3	5.0	0.0	9.2
Cycle Q Clear(g_c), s	2.0	37.3	10.6	11.0	35.9	2.4	2.7	3.0	9.3	5.0	0.0	9.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	60	2378	723	207	2799	867	70	243	206	122	0	277
V/C Ratio(X)	0.63	0.91	0.37	1.65	0.83	0.10	0.73	0.27	0.78	0.79	0.00	0.65
Avail Cap(c_a), veh/h	132	2409	732	207	2799	867	150	671	569	150	0	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.9	24.2	17.0	42.6	18.5	10.8	45.8	37.9	40.6	44.2	0.0	38.1
Incr Delay (d2), s/veh	4.1	5.6	0.3	312.6	2.2	0.0	5.3	0.6	6.2	15.6	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	14.5	3.6	22.6	12.5	0.8	1.3	1.4	3.9	2.7	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	29.8	17.3	355.2	20.7	10.8	51.1	38.5	46.8	59.8	0.0	40.6
LnGrp LOS	D	C	B	F	C	B	D	D	D	E	A	D
Approach Vol, veh/h		2468			2747			276			276	
Approach Delay, s/veh		28.8			61.9			45.6			47.3	
Approach LOS		C			E			D			D	

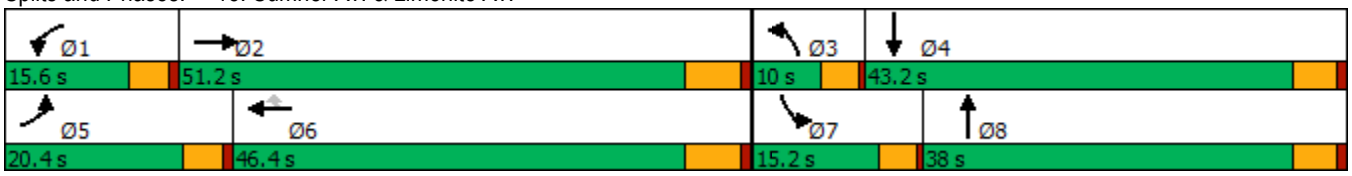
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	51.1	8.7	20.4	8.2	58.9	11.5	17.6
Change Period (Y+Rc), s	5.0	7.0	5.0	5.3	5.0	7.0	5.0	5.3
Max Green Setting (Gmax), s	11.0	44.7	8.0	34.0	7.0	48.7	8.0	34.0
Max Q Clear Time (g_c+I1), s	13.0	39.3	4.7	11.2	4.0	37.9	7.0	11.3
Green Ext Time (p_c), s	0.0	4.9	0.0	0.9	0.0	9.3	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	46.2
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	450	1633	228	1869	78	77	263	161	557
Future Volume (vph)	450	1633	228	1869	78	77	263	161	557
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	1	6		3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Minimum Split (s)	9.5	32.0	9.5	29.0	29.0	9.5	38.0	9.5	38.0
Total Split (s)	20.4	51.2	15.6	46.4	46.4	10.0	38.0	15.2	43.2
Total Split (%)	17.0%	42.7%	13.0%	38.7%	38.7%	8.3%	31.7%	12.7%	36.0%
Yellow Time (s)	3.5	5.0	3.5	5.0	5.0	3.5	4.0	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	4.5	6.0	6.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None
Act Effct Green (s)	15.9	45.8	10.5	40.4	40.4	6.0	33.0	11.2	38.2
Actuated g/C Ratio	0.13	0.38	0.09	0.34	0.34	0.05	0.28	0.09	0.32
v/c Ratio	1.02	0.84	0.78	1.03	0.13	0.90	0.45	1.01	0.99
Control Delay	98.6	38.1	71.6	66.6	0.4	127.4	27.3	125.5	57.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.6	38.1	71.6	66.6	0.4	127.4	27.3	125.5	57.8
LOS	F	D	E	E	A	F	C	F	E
Approach Delay		50.7		64.7			42.3		66.1
Approach LOS		D		E			D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 58.2	Intersection LOS: E
Intersection Capacity Utilization 103.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 18: Sumner Av. & Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	1633	90	228	1869	78	77	263	172	161	557	592
Future Volume (veh/h)	450	1633	90	228	1869	78	77	263	172	161	557	592
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	474	1719	48	240	1967	36	81	277	87	169	586	364
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	477	2189	61	297	1969	549	93	695	214	173	642	399
Arrive On Green	0.14	0.40	0.40	0.08	0.35	0.35	0.05	0.26	0.26	0.10	0.30	0.30
Sat Flow, veh/h	3510	5516	154	3510	5700	1588	1810	2716	835	1810	2138	1328
Grp Volume(v), veh/h	474	1184	583	240	1967	36	81	182	182	169	495	455
Grp Sat Flow(s),veh/h/ln	1755	1900	1870	1755	1900	1588	1810	1805	1746	1810	1805	1661
Q Serve(g_s), s	15.8	31.9	32.0	7.9	40.3	1.8	5.2	9.8	10.1	10.9	30.9	30.9
Cycle Q Clear(g_c), s	15.8	31.9	32.0	7.9	40.3	1.8	5.2	9.8	10.1	10.9	30.9	30.9
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.48	1.00		0.80
Lane Grp Cap(c), veh/h	477	1508	742	297	1969	549	93	462	447	173	542	499
V/C Ratio(X)	0.99	0.79	0.79	0.81	1.00	0.07	0.87	0.39	0.41	0.98	0.91	0.91
Avail Cap(c_a), veh/h	477	1508	742	333	1969	549	93	509	493	173	590	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	30.9	30.9	52.6	38.2	25.6	55.1	36.0	36.1	52.7	39.4	39.4
Incr Delay (d2), s/veh	39.2	2.8	5.6	11.0	20.0	0.0	52.8	0.4	0.4	60.6	17.5	18.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	14.2	14.5	3.8	21.1	0.7	3.7	4.2	4.2	7.7	15.7	14.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.7	33.7	36.5	63.6	58.2	25.7	107.9	36.4	36.6	113.3	56.9	58.0
LnGrp LOS	F	C	D	E	E	C	F	D	D	F	E	E
Approach Vol, veh/h		2241			2243			445			1119	
Approach Delay, s/veh		46.3			58.3			49.5			65.9	
Approach LOS		D			E			D			E	

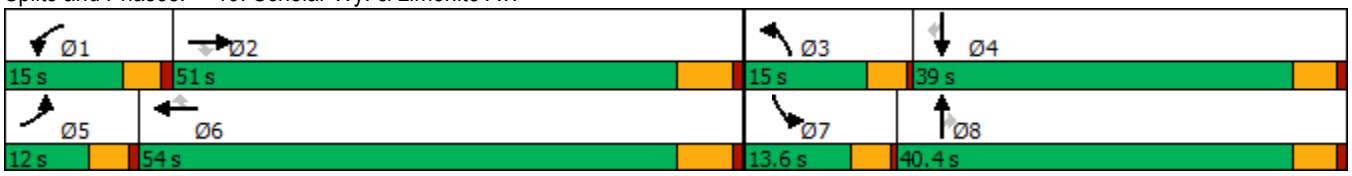
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	52.4	10.0	40.1	20.4	46.4	15.2	34.9
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	11.1	45.2	6.0	38.2	15.9	40.4	11.2	33.0
Max Q Clear Time (g_c+I1), s	9.9	34.0	7.2	32.9	17.8	42.3	12.9	12.1
Green Ext Time (p_c), s	0.0	7.6	0.0	2.2	0.0	0.0	0.0	1.5

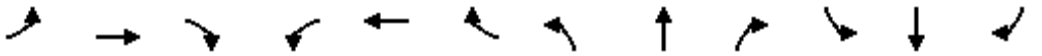
Intersection Summary	
HCM 6th Ctrl Delay	54.6
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	1467	178	183	1687	79	211	82	136	60	168	187
Future Volume (vph)	122	1467	178	183	1687	79	211	82	136	60	168	187
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	32.0	32.0	9.5	29.0	29.0	9.5	38.0	38.0	9.5	38.0	38.0
Total Split (s)	12.0	51.0	51.0	15.0	54.0	54.0	15.0	40.4	40.4	13.6	39.0	39.0
Total Split (%)	10.0%	42.5%	42.5%	12.5%	45.0%	45.0%	12.5%	33.7%	33.7%	11.3%	32.5%	32.5%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	7.5	45.2	45.2	10.5	48.2	48.2	11.1	24.6	24.6	7.2	18.9	18.9
Actuated g/C Ratio	0.07	0.43	0.43	0.10	0.46	0.46	0.11	0.23	0.23	0.07	0.18	0.18
v/c Ratio	1.00	0.95	0.25	1.07	1.02	0.11	1.17	0.19	0.29	0.51	0.27	0.70
Control Delay	130.0	43.0	8.6	133.5	56.5	3.7	163.1	34.6	7.1	63.7	37.4	53.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	130.0	43.0	8.6	133.5	56.5	3.7	163.1	34.6	7.1	63.7	37.4	53.2
LOS	F	D	A	F	E	A	F	C	A	E	D	D
Approach Delay		45.5			61.6			89.1			48.3	
Approach LOS		D			E			F			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 105.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 56.8	Intersection LOS: E
Intersection Capacity Utilization 90.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 19: Scholar Wy. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	1467	178	183	1687	79	211	82	136	60	168	187
Future Volume (veh/h)	122	1467	178	183	1687	79	211	82	136	60	168	187
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	128	1544	42	193	1776	43	222	86	75	63	177	197
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	131	1655	690	184	1765	746	193	436	369	82	606	263
Arrive On Green	0.07	0.44	0.44	0.10	0.46	0.46	0.11	0.23	0.23	0.05	0.17	0.17
Sat Flow, veh/h	1810	3800	1585	1810	3800	1607	1810	1900	1610	1810	3610	1567
Grp Volume(v), veh/h	128	1544	42	193	1776	43	222	86	75	63	177	197
Grp Sat Flow(s),veh/h/ln	1810	1900	1585	1810	1900	1607	1810	1900	1610	1810	1805	1567
Q Serve(g_s), s	7.3	39.9	1.6	10.5	48.0	1.5	11.0	3.8	3.9	3.6	4.4	12.4
Cycle Q Clear(g_c), s	7.3	39.9	1.6	10.5	48.0	1.5	11.0	3.8	3.9	3.6	4.4	12.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	131	1655	690	184	1765	746	193	436	369	82	606	263
V/C Ratio(X)	0.97	0.93	0.06	1.05	1.01	0.06	1.15	0.20	0.20	0.77	0.29	0.75
Avail Cap(c_a), veh/h	131	1655	690	184	1765	746	193	651	552	168	1188	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	27.7	16.9	46.4	27.7	15.2	46.2	32.2	32.2	48.8	37.6	40.9
Incr Delay (d2), s/veh	70.3	10.2	0.0	80.1	23.0	0.0	112.0	0.2	0.2	5.7	0.2	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	18.5	0.6	8.6	24.7	0.5	10.8	1.7	1.5	1.7	1.9	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.1	37.9	17.0	126.6	50.6	15.3	158.2	32.3	32.4	54.5	37.8	44.1
LnGrp LOS	F	D	B	F	F	B	F	C	C	D	D	D
Approach Vol, veh/h		1714			2012			383			437	
Approach Delay, s/veh		43.4			57.2			105.3			43.1	
Approach LOS		D			E			F			D	

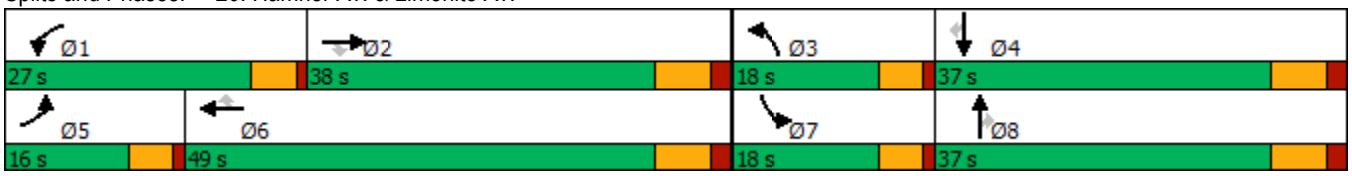
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	51.0	15.0	22.4	12.0	54.0	8.7	28.7
Change Period (Y+Rc), s	4.5	6.0	4.0	5.0	4.5	6.0	4.0	5.0
Max Green Setting (Gmax), s	10.5	45.0	11.0	34.0	7.5	48.0	9.6	35.4
Max Q Clear Time (g_c+I1), s	12.5	41.9	13.0	14.4	9.3	50.0	5.6	5.9
Green Ext Time (p_c), s	0.0	2.4	0.0	1.3	0.0	0.0	0.0	0.5

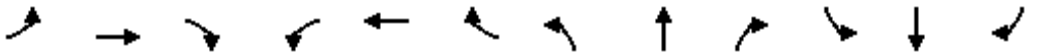
Intersection Summary	
HCM 6th Ctrl Delay	54.7
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	342	1190	152	555	1310	759	226	823	522	374	861	228
Future Volume (vph)	342	1190	152	555	1310	759	226	823	522	374	861	228
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	16.0	38.0	38.0	27.0	49.0	49.0	18.0	37.0	37.0	18.0	37.0	37.0
Total Split (%)	13.3%	31.7%	31.7%	22.5%	40.8%	40.8%	15.0%	30.8%	30.8%	15.0%	30.8%	30.8%
Yellow Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	11.0	32.1	32.1	20.9	42.0	42.0	11.1	29.4	29.4	13.0	31.3	31.3
Actuated g/C Ratio	0.09	0.27	0.27	0.18	0.35	0.35	0.09	0.25	0.25	0.11	0.26	0.26
v/c Ratio	1.06	0.80	0.29	0.91	1.01	1.07	0.69	0.60	0.87	0.98	0.59	0.41
Control Delay	119.0	45.8	5.4	67.3	66.2	77.4	63.6	41.9	34.7	94.7	40.7	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.0	45.8	5.4	67.3	66.2	77.4	63.6	41.9	34.7	94.7	40.7	8.9
LOS	F	D	A	E	E	E	E	D	C	F	D	A
Approach Delay		57.0			69.7			42.6			49.6	
Approach LOS		E			E			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 57.0	Intersection LOS: E
Intersection Capacity Utilization 96.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 20: Hamner Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1190	152	555	1310	759	226	823	522	374	861	228
Future Volume (veh/h)	342	1190	152	555	1310	759	226	823	522	374	861	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	353	1227	82	572	1351	393	233	848	264	386	888	119
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	338	1577	433	629	1357	574	293	1340	366	400	1508	419
Arrive On Green	0.09	0.28	0.28	0.17	0.36	0.36	0.08	0.24	0.24	0.11	0.26	0.26
Sat Flow, veh/h	3619	5700	1567	3619	3800	1609	3619	5700	1557	3619	5700	1586
Grp Volume(v), veh/h	353	1227	82	572	1351	393	233	848	264	386	888	119
Grp Sat Flow(s),veh/h/ln	1810	1900	1567	1810	1900	1609	1810	1900	1557	1810	1900	1586
Q Serve(g_s), s	11.0	23.3	4.7	18.2	41.7	24.5	7.4	15.7	18.4	12.5	16.0	7.0
Cycle Q Clear(g_c), s	11.0	23.3	4.7	18.2	41.7	24.5	7.4	15.7	18.4	12.5	16.0	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	1577	433	629	1357	574	293	1340	366	400	1508	419
V/C Ratio(X)	1.04	0.78	0.19	0.91	1.00	0.68	0.79	0.63	0.72	0.97	0.59	0.28
Avail Cap(c_a), veh/h	338	1577	433	677	1357	574	400	1453	397	400	1508	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	39.2	32.5	47.7	37.7	32.2	53.1	40.4	41.5	52.1	37.7	34.4
Incr Delay (d2), s/veh	60.6	3.0	0.4	15.0	23.4	4.4	5.2	1.3	7.7	35.7	1.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	10.9	1.8	9.3	22.7	9.8	3.5	7.3	7.6	7.5	7.3	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.0	42.2	32.9	62.7	61.2	36.5	58.3	41.7	49.1	87.8	38.6	35.2
LnGrp LOS	F	D	C	E	E	D	E	D	D	F	D	D
Approach Vol, veh/h		1662			2316			1345			1393	
Approach Delay, s/veh		57.0			57.4			46.0			52.0	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.4	39.6	14.5	38.1	16.0	49.0	18.0	34.6
Change Period (Y+Rc), s	5.0	7.0	5.0	7.0	5.0	7.0	5.0	7.0
Max Green Setting (Gmax), s	22.0	31.0	13.0	30.0	11.0	42.0	13.0	30.0
Max Q Clear Time (g_c+I1), s	20.2	25.3	9.4	18.0	13.0	43.7	14.5	20.4
Green Ext Time (p_c), s	0.2	4.6	0.1	7.3	0.0	0.0	0.0	6.5

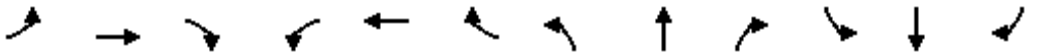
Intersection Summary	
HCM 6th Ctrl Delay	53.9
HCM 6th LOS	D

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1683	1108	2305	860	377	1	670
Future Volume (vph)	1683	1108	2305	860	377	1	670
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		4	4	
Permitted Phases		2		6			4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	22.5	22.5	22.5
Total Split (s)	79.0	79.0	79.0	79.0	41.0	41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	34.2%	34.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	4.5	4.5	4.5
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	None	None	None
Act Effct Green (s)	73.6	73.6	73.6	73.6	32.8	32.8	32.8
Actuated g/C Ratio	0.63	0.63	0.63	0.63	0.28	0.28	0.28
v/c Ratio	0.53	0.81	0.72	0.69	0.40	0.40	0.85
Control Delay	13.0	6.7	16.7	5.8	36.4	36.4	48.7
Queue Delay	0.0	0.0	0.3	0.2	0.0	0.0	0.0
Total Delay	13.0	6.7	17.0	6.0	36.4	36.4	48.7
LOS	B	A	B	A	D	D	D
Approach Delay	10.5		14.0			44.3	
Approach LOS	B		B			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.4	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 87.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 21: I-15 SB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰	↰	↱↱
Traffic Volume (veh/h)	0	1683	1108	0	2305	860	0	0	0	377	1	670
Future Volume (veh/h)	0	1683	1108	0	2305	860	0	0	0	377	1	670
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		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	0	1900	1900	0	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	0	1735	1112	0	2376	887				390	0	427
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	3763	1152	0	3763	1168				636	0	566
Arrive On Green	0.00	0.73	0.73	0.00	0.73	0.73				0.18	0.00	0.18
Sat Flow, veh/h	0	5358	1588	0	5358	1610				3619	0	3220
Grp Volume(v), veh/h	0	1735	1112	0	2376	887				390	0	427
Grp Sat Flow(s),veh/h/ln	0	1729	1588	0	1729	1610				1810	0	1610
Q Serve(g_s), s	0.0	14.0	64.9	0.0	23.5	34.1				10.1	0.0	12.8
Cycle Q Clear(g_c), s	0.0	14.0	64.9	0.0	23.5	34.1				10.1	0.0	12.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3763	1152	0	3763	1168				636	0	566
V/C Ratio(X)	0.00	0.46	0.97	0.00	0.63	0.76				0.61	0.00	0.75
Avail Cap(c_a), veh/h	0	3763	1152	0	3763	1168				1304	0	1160
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.7	12.7	0.0	7.0	8.5				38.6	0.0	39.7
Incr Delay (d2), s/veh	0.0	0.4	19.4	0.0	0.8	4.7				1.0	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	23.4	0.0	7.1	10.7				4.4	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.1	32.1	0.0	7.9	13.2				39.5	0.0	41.7
LnGrp LOS	A	A	C	A	A	B				D	A	D
Approach Vol, veh/h		2847			3263						817	
Approach Delay, s/veh		16.3			9.3						40.7	
Approach LOS		B			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		79.0		22.3		79.0						
Change Period (Y+Rc), s		5.5		4.5		5.5						
Max Green Setting (Gmax), s		73.5		36.5		73.5						
Max Q Clear Time (g_c+I1), s		66.9		14.8		36.1						
Green Ext Time (p_c), s		5.4		3.1		24.1						

Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									

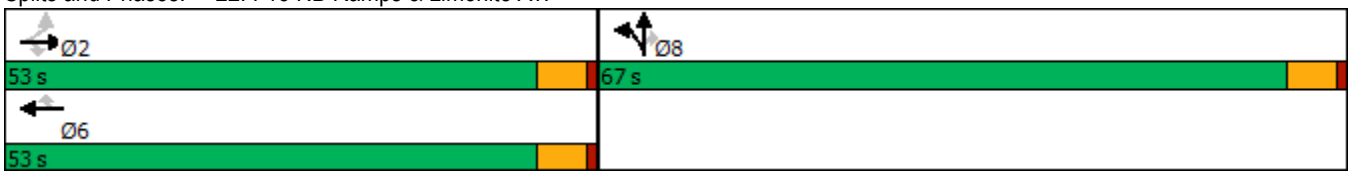
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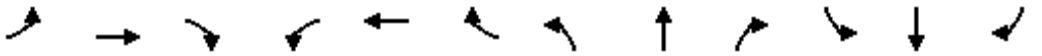
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations								
Traffic Volume (vph)	22	1722	316	2353	394	812	2	874
Future Volume (vph)	22	1722	316	2353	394	812	2	874
Turn Type	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases		2		6		8	8	
Permitted Phases	2		2		6			8
Detector Phase	2	2	2	6	6	8	8	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	10.5	10.5	34.5	34.5	10.5	10.5	10.5
Total Split (s)	53.0	53.0	53.0	53.0	53.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	None	None	None
Act Effct Green (s)		48.1	48.1	48.1	48.1	43.9	43.9	43.9
Actuated g/C Ratio		0.47	0.47	0.47	0.47	0.43	0.43	0.43
v/c Ratio		0.98	0.38	0.99	0.45	0.57	0.57	0.73
Control Delay		46.4	8.4	45.7	9.9	25.0	25.1	27.2
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		46.4	8.4	45.7	9.9	25.0	25.1	27.2
LOS		D	A	D	A	C	C	C
Approach Delay		40.6		40.6			26.2	
Approach LOS		D		D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.1	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 36.8	Intersection LOS: D
Intersection Capacity Utilization 94.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 22: I-15 NB Ramps & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↰	↱↱			
Traffic Volume (veh/h)	22	1722	316	0	2353	394	812	2	874	0	0	0
Future Volume (veh/h)	22	1722	316	0	2353	394	812	2	874	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	22	1757	322	0	2401	397	830	0	589			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	53	2541	885	0	2919	906	1110	0	988			
Arrive On Green	0.56	0.56	0.56	0.00	0.56	0.56	0.31	0.00	0.31			
Sat Flow, veh/h	14	4514	1572	0	5358	1610	3619	0	3220			
Grp Volume(v), veh/h	552	1227	322	0	2401	397	830	0	589			
Grp Sat Flow(s),veh/h/ln	1382	1573	1572	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	6.4	23.6	9.5	0.0	31.8	12.1	17.4	0.0	13.1			
Cycle Q Clear(g_c), s	38.2	23.6	9.5	0.0	31.8	12.1	17.4	0.0	13.1			
Prop In Lane	0.04		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	822	1771	885	0	2919	906	1110	0	988			
V/C Ratio(X)	0.67	0.69	0.36	0.00	0.82	0.44	0.75	0.00	0.60			
Avail Cap(c_a), veh/h	822	1771	885	0	2919	906	2637	0	2347			
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	1.00	0.00	1.00			
Uniform Delay (d), s/veh	11.9	13.2	10.1	0.0	15.0	10.7	26.3	0.0	24.8			
Incr Delay (d2), s/veh	4.4	2.3	1.2	0.0	2.8	1.5	1.0	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	6.5	7.7	3.2	0.0	11.4	4.1	7.0	0.0	4.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.2	15.5	11.3	0.0	17.8	12.2	27.3	0.0	25.4			
LnGrp LOS	B	B	B	A	B	B	C	A	C			
Approach Vol, veh/h		2101			2798			1419				
Approach Delay, s/veh		15.0			17.0			26.5				
Approach LOS		B			B			C				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.0				53.0		31.4				
Change Period (Y+Rc), s		5.5				5.5		5.5				
Max Green Setting (Gmax), s		47.5				47.5		61.5				
Max Q Clear Time (g_c+I1), s		40.2				33.8		19.4				
Green Ext Time (p_c), s		5.3				10.7		6.5				

Intersection Summary												
HCM 6th Ctrl Delay			18.5									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 8.3:

HORIZON YEAR WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		2040 WP
				CALC LC	DATE	06/13/19
Jurisdiction: **City of Eastvale**				CHK CH	DATE	06/13/19
Major Street: **Providence Way**				Critical Approach Speed (Major)		45 mph
Minor Street: **Driveway 5**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **2,757** vpd Minor Street Future ADT = **140** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……... [√]

or

In built up area of isolated community of < 10,000 population …….. [ ]

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **2,757** / *1* **140**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **2,757** / *1* **140**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A **8%** B **16%**				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 8.4:

HORIZON YEAR WITHOUT PROJECT CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	2070	1095	1830	1000	222	223	431
v/c Ratio	0.57	0.77	0.50	0.70	0.67	0.67	0.75
Control Delay	9.2	5.5	8.4	3.5	49.3	49.4	45.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	9.2	5.5	8.4	3.6	49.3	49.4	45.6
Queue Length 50th (ft)	219	16	179	0	146	147	144
Queue Length 95th (ft)	339	88	280	43	229	231	203
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3635	1418	3635	1431	580	580	971
Starvation Cap Reductn	0	0	0	45	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.77	0.50	0.72	0.38	0.38	0.44

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1866	623	1902	382	449	450	542
v/c Ratio	0.70	0.62	0.72	0.40	0.71	0.71	0.51
Control Delay	21.0	9.4	21.3	7.5	31.4	31.5	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	9.4	21.3	7.5	31.4	31.5	23.0
Queue Length 50th (ft)	289	69	299	41	233	234	132
Queue Length 95th (ft)	491	249	505	138	338	340	179
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	2660	1009	2660	947	1139	1139	1895
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.62	0.72	0.40	0.39	0.40	0.29

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1706	1124	2368	887	194	196	684
v/c Ratio	0.52	0.80	0.72	0.69	0.41	0.41	0.84
Control Delay	12.7	6.1	16.5	5.7	36.5	36.6	48.7
Queue Delay	0.0	0.0	0.3	0.2	0.0	0.0	0.0
Total Delay	12.7	6.1	16.7	5.9	36.5	36.6	48.7
Queue Length 50th (ft)	257	10	441	54	124	125	265
Queue Length 95th (ft)	301	63	507	175	194	197	346
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3291	1407	3291	1285	540	542	911
Starvation Cap Reductn	0	0	296	49	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.80	0.79	0.72	0.36	0.36	0.75

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1751	322	2399	402	411	413	892
v/c Ratio	0.72	0.38	0.99	0.45	0.56	0.56	0.73
Control Delay	26.2	8.2	45.5	9.9	24.9	24.9	27.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.2	8.2	45.5	9.9	24.9	24.9	27.2
Queue Length 50th (ft)	327	35	552	57	207	208	261
Queue Length 95th (ft)	513	123	#902	173	298	298	334
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200					400
Base Capacity (vph)	2419	854	2419	886	1035	1038	1725
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.38	0.99	0.45	0.40	0.40	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 8.5:

HORIZON YEAR WITH PROJECT CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	2078	1100	1852	1000	222	223	451
v/c Ratio	0.58	0.78	0.51	0.70	0.64	0.65	0.77
Control Delay	9.7	5.7	8.9	3.6	47.6	47.8	46.1
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	9.7	5.7	8.9	3.7	47.6	47.8	46.1
Queue Length 50th (ft)	229	18	190	0	146	147	153
Queue Length 95th (ft)	353	103	294	44	228	230	214
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3603	1414	3603	1427	575	575	961
Starvation Cap Reductn	0	0	0	45	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.78	0.51	0.72	0.39	0.39	0.47

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1874	623	1907	382	457	458	542
v/c Ratio	0.76	0.62	0.72	0.41	0.71	0.71	0.50
Control Delay	23.5	9.8	22.1	7.8	31.2	31.3	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	9.8	22.1	7.8	31.2	31.3	22.7
Queue Length 50th (ft)	309	71	304	42	238	240	132
Queue Length 95th (ft)	#540	258	521	143	345	346	178
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	2450	1003	2635	940	1128	1128	1877
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.62	0.72	0.41	0.41	0.41	0.29

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1735	1142	2376	887	194	196	691
v/c Ratio	0.53	0.81	0.72	0.69	0.40	0.40	0.85
Control Delay	13.0	6.7	16.7	5.8	36.4	36.4	48.7
Queue Delay	0.0	0.0	0.3	0.2	0.0	0.0	0.0
Total Delay	13.0	6.7	17.0	6.0	36.4	36.4	48.7
Queue Length 50th (ft)	266	16	448	56	124	125	269
Queue Length 95th (ft)	308	83	510	178	194	197	350
Internal Link Dist (ft)	2412		735			968	
Turn Bay Length (ft)		200		200			400
Base Capacity (vph)	3280	1406	3280	1282	538	540	908
Starvation Cap Reductn	0	0	294	49	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.81	0.80	0.72	0.36	0.36	0.76

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1779	322	2401	402	414	417	892
v/c Ratio	0.98	0.38	0.99	0.45	0.57	0.57	0.73
Control Delay	46.4	8.4	45.7	9.9	25.0	25.1	27.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	8.4	45.7	9.9	25.0	25.1	27.2
Queue Length 50th (ft)	406	36	553	57	209	211	261
Queue Length 95th (ft)	#693	124	#904	173	300	303	334
Internal Link Dist (ft)	735		1069			1143	
Turn Bay Length (ft)		200					400
Base Capacity (vph)	1812	852	2419	886	1035	1038	1725
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.38	0.99	0.45	0.40	0.40	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 8.6:

HORIZON YEAR WITHOUT PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/19/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	6765	7146	0.95	56.2	40.1	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.935	5869	988	7200	2100	0.94	0.47	31.1	59.2	62.9	35.5	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	4570	7146	0.81	18.2	83.8	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.935	5578	1128	7200	1900	0.96	0.59	24.4	51.4	76.2	34.8	F

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	5492	7146	0.97	23.6	77.7	F

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.962	6654	1200	7200	2100	1.13	0.57	39.8	39.3	55.7	40.5	F

Segment 7: Basic

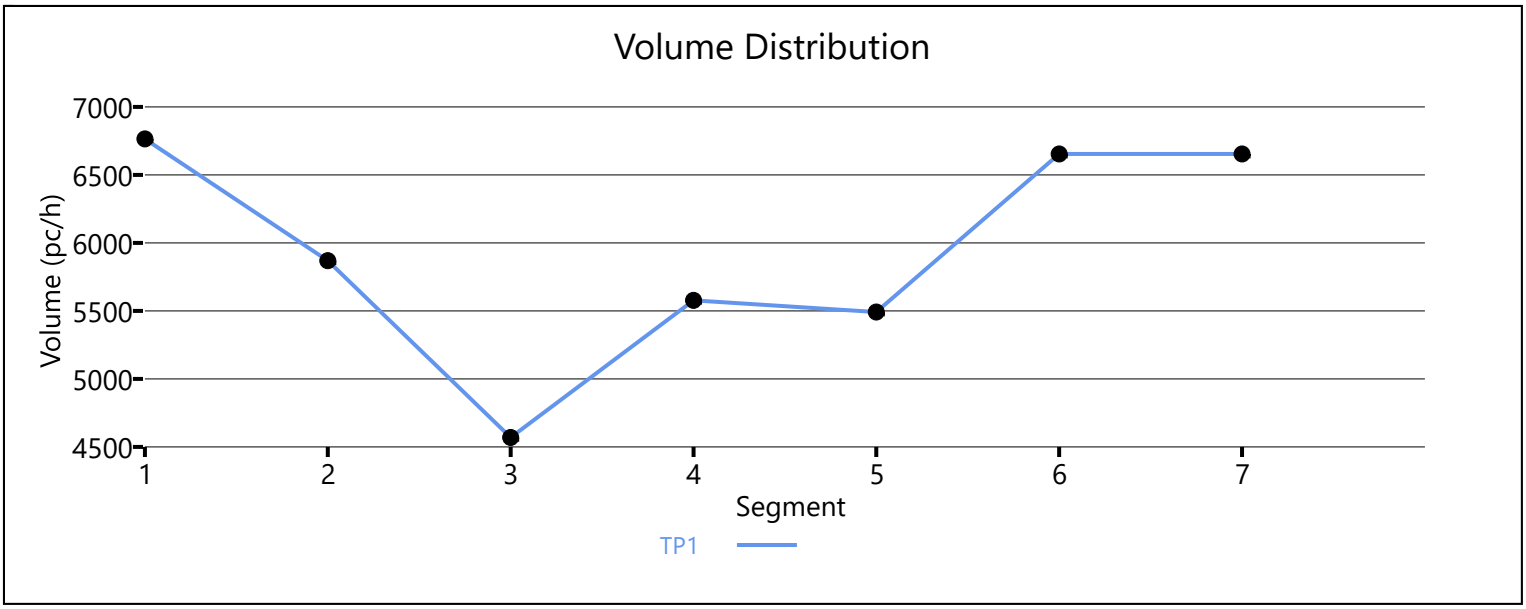
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	6654	7146	1.13	58.0	38.2	F

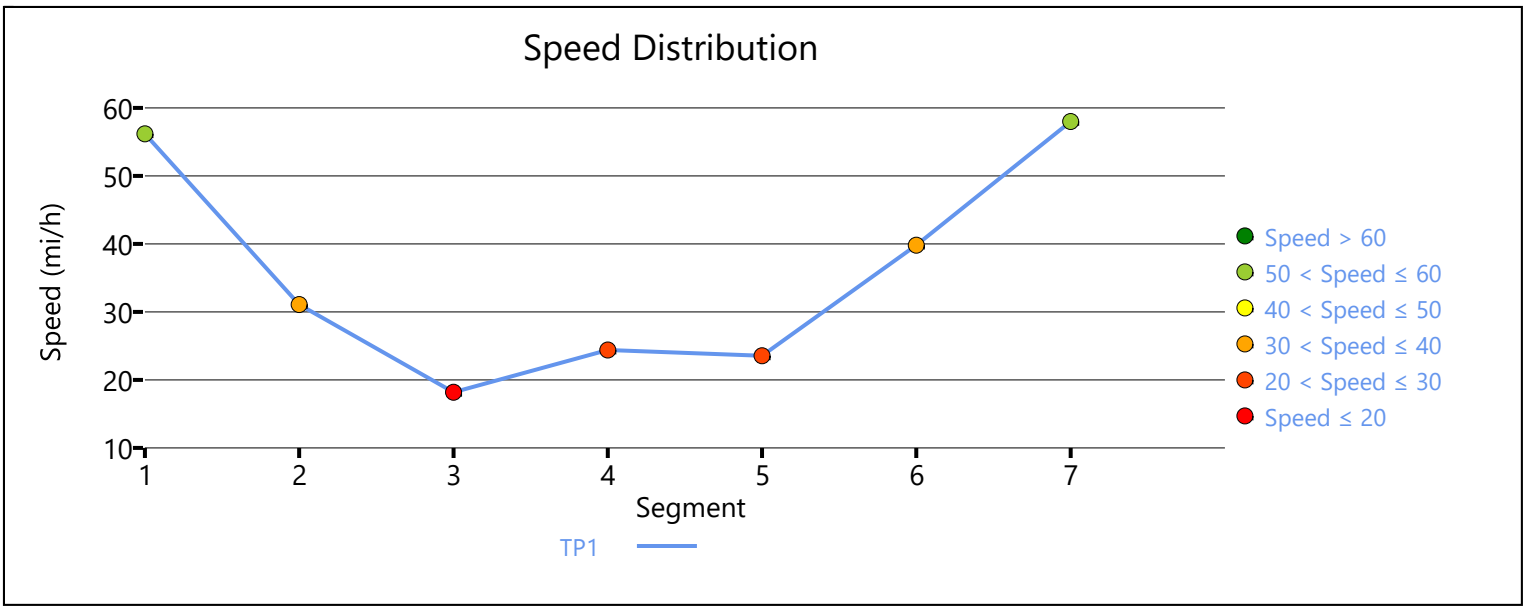
Facility Time Period Results

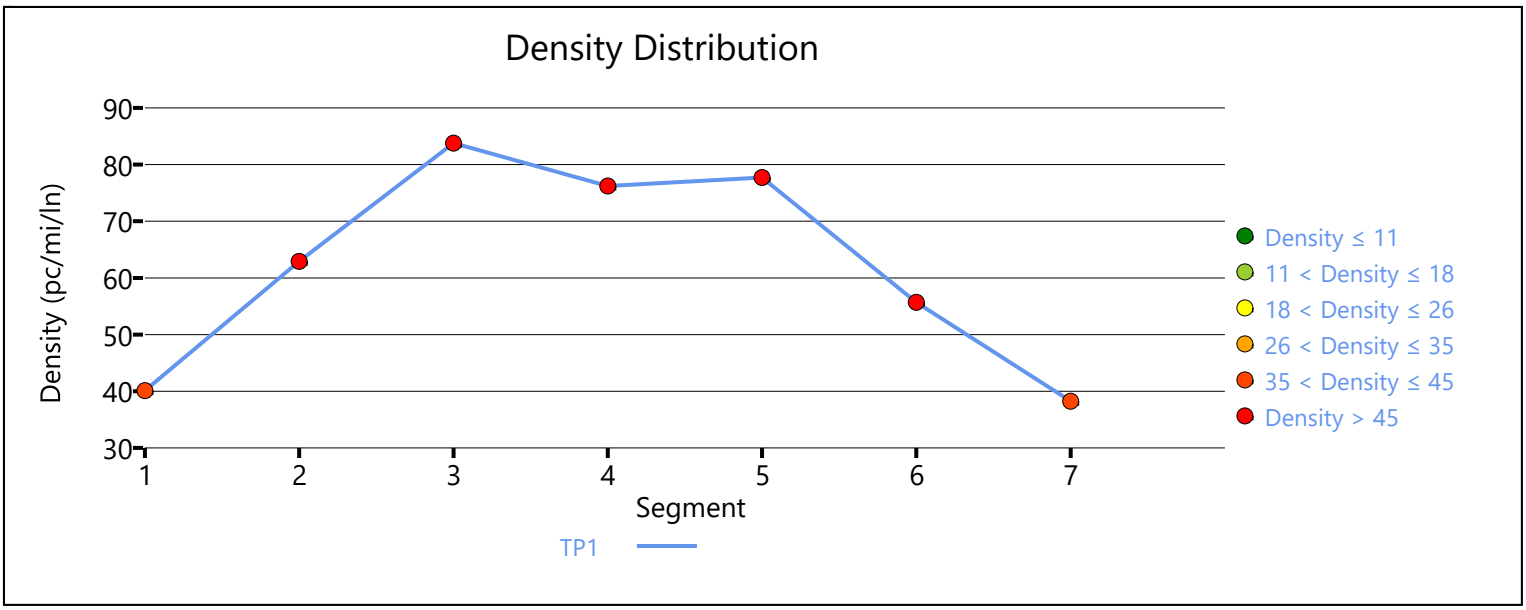
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	29.5	65.7	60.3	3.8	F

Facility Overall Results

Space Mean Speed, mi/h	29.5	Density, veh/mi/ln	60.3
Average Travel Time, min	3.8	Density, pc/mi/ln	65.7







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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/19/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	6183	7146	0.87	60.5	34.1	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.962	6183	1595	7200	2100	0.86	0.76	62.0	57.6	33.2	35.1	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4560	7146	0.64	67.4	22.6	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	5244	684	7200	1900	0.73	0.36	61.0	59.0	28.7	25.8	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5237	7146	0.73	65.4	26.7	D

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.980	5652	415	7200	2100	0.78	0.20	61.7	60.2	30.5	25.4	C

Segment 7: Basic

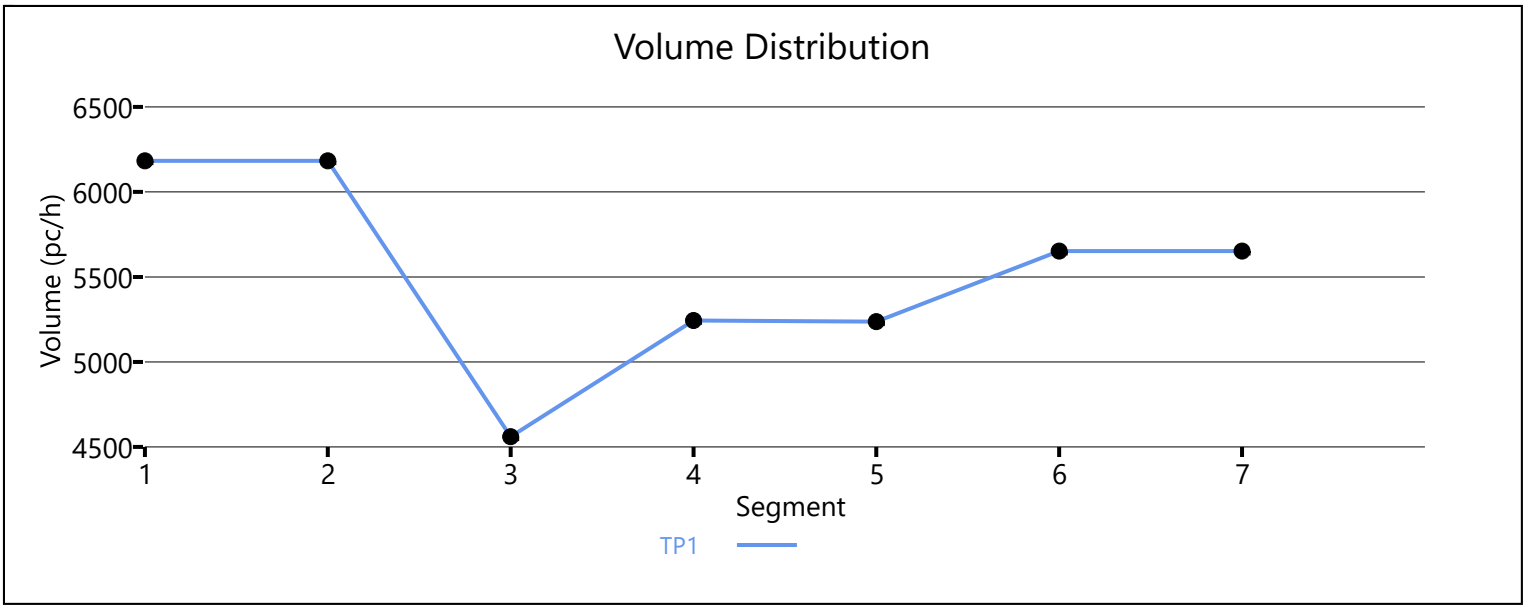
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5652	7146	0.79	63.6	29.6	D

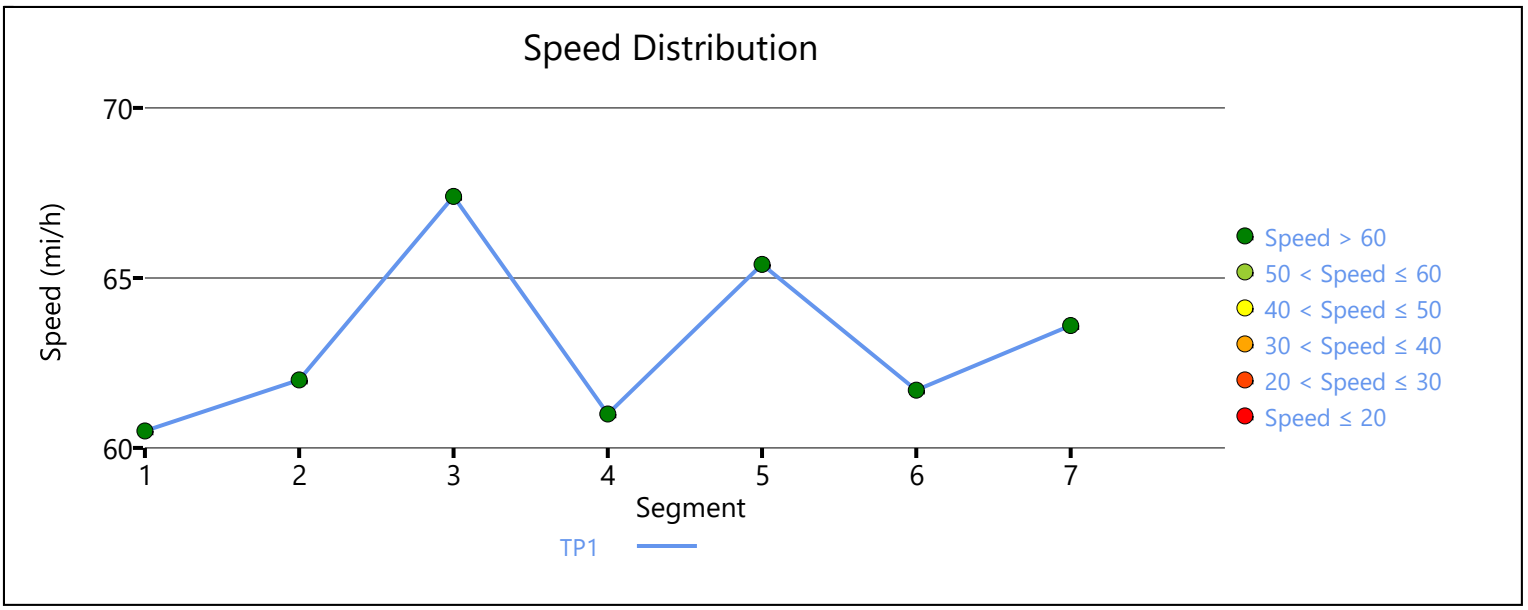
Facility Time Period Results

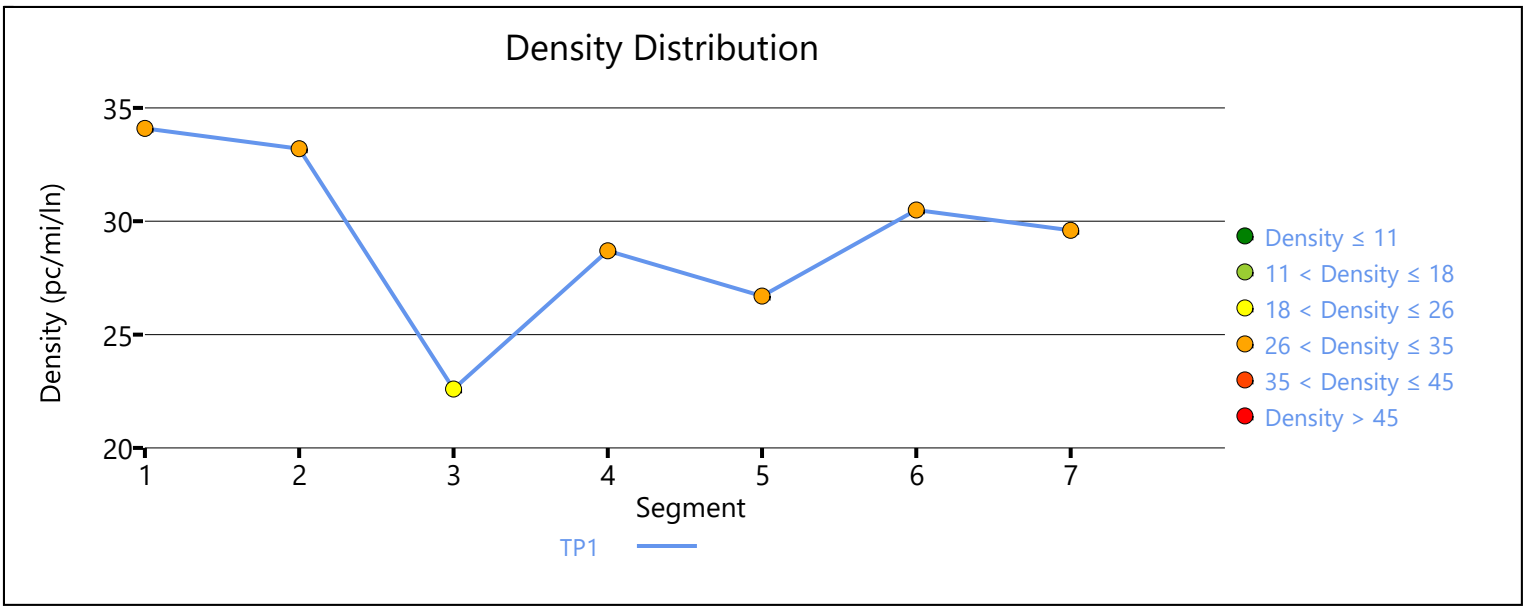
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	62.6	29.9	29.2	1.6	D

Facility Overall Results

Space Mean Speed, mi/h	62.6	Density, veh/mi/ln	29.2
Average Travel Time, min	1.6	Density, pc/mi/ln	29.9







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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/19/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.901	5254	7146	0.74	65.4	26.8	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.901	0.980	5254	1155	7200	2100	0.73	0.55	63.0	58.7	27.8	30.2	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.885	4070	7146	0.57	68.1	19.9	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.885	0.971	5033	963	7200	1900	0.70	0.51	61.1	59.1	27.5	25.6	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.901	5035	7146	0.70	66.2	25.3	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.901	0.990	6232	1197	7200	2100	0.87	0.57	58.5	56.0	35.5	31.5	D

Segment 7: Basic

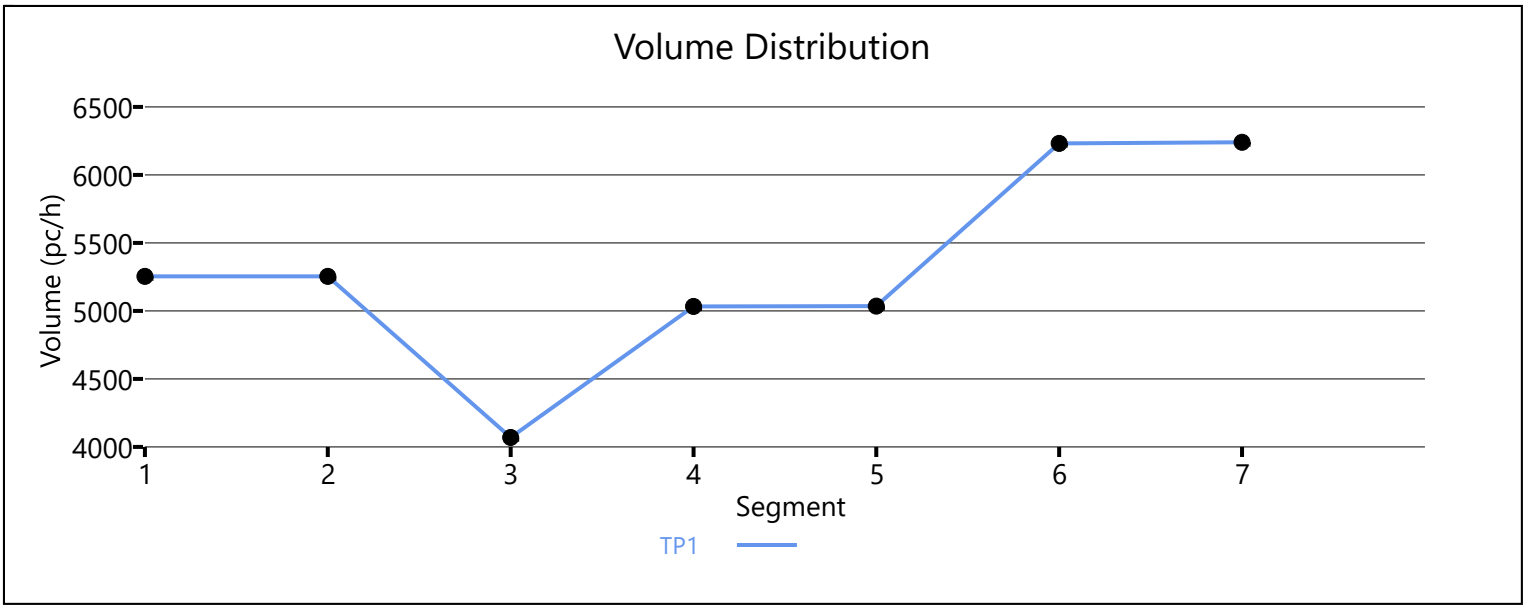
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	6240	7146	0.87	60.1	34.6	D

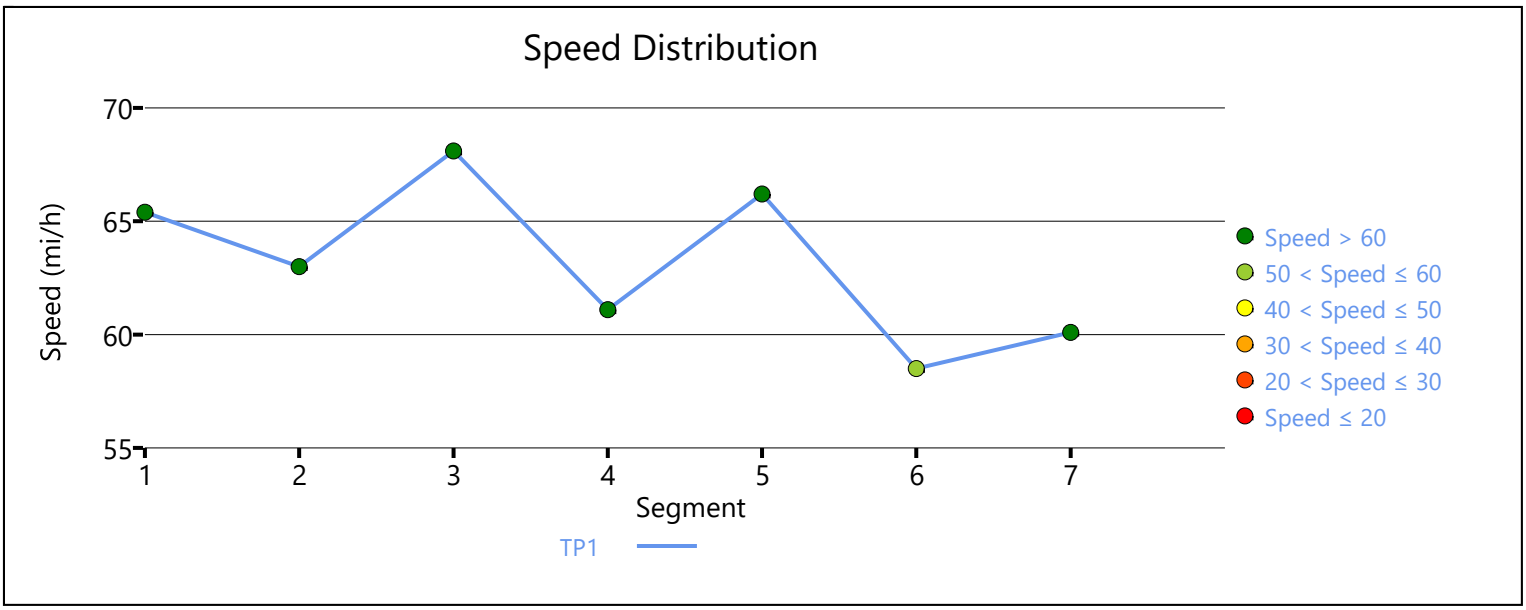
Facility Time Period Results

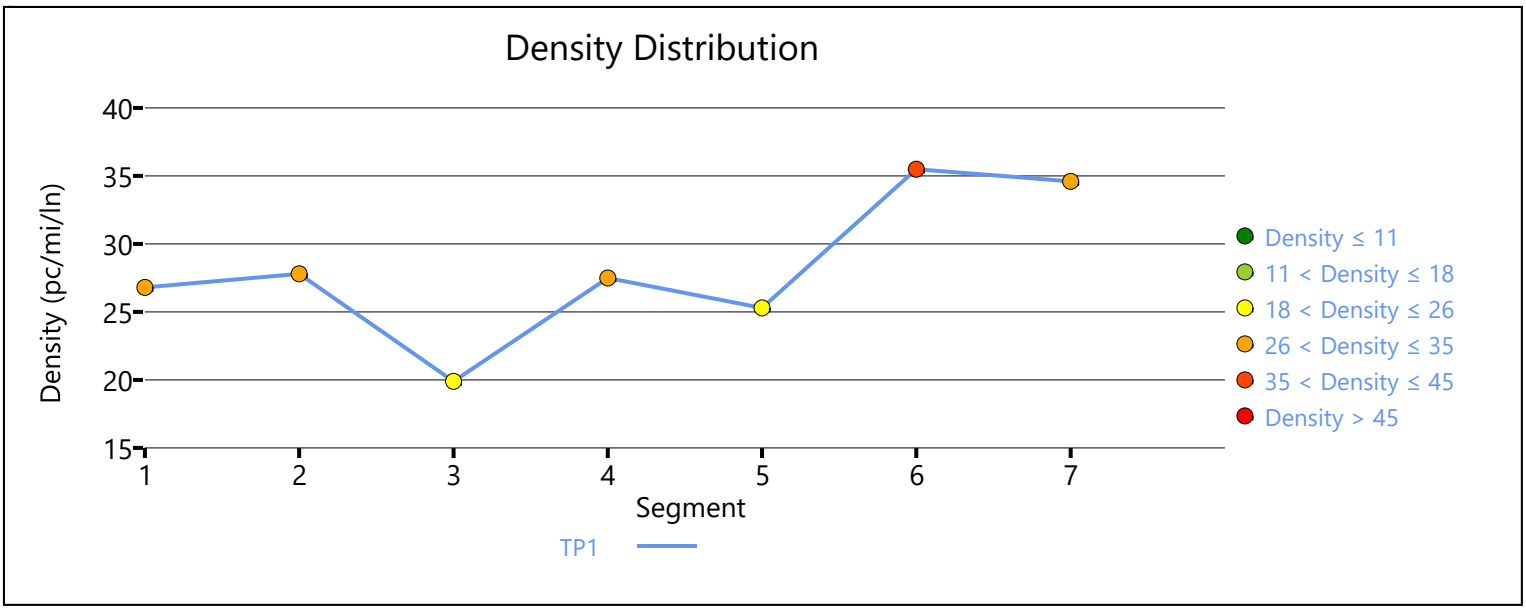
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	62.7	28.0	25.2	1.8	D

Facility Overall Results

Space Mean Speed, mi/h	62.7	Density, veh/mi/ln	25.2
Average Travel Time, min	1.8	Density, pc/mi/ln	28.0







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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	6/19/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	5904	7146	0.83	62.2	31.6	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	5904	1883	7200	2100	0.82	0.90	61.3	56.9	32.1	34.8	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3984	7146	0.56	68.2	19.5	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.962	4341	357	7200	1900	0.60	0.19	62.5	60.7	23.2	20.7	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4375	7146	0.61	67.8	21.5	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.980	4814	439	7200	2100	0.67	0.21	63.2	61.9	25.4	21.5	C

Segment 7: Basic

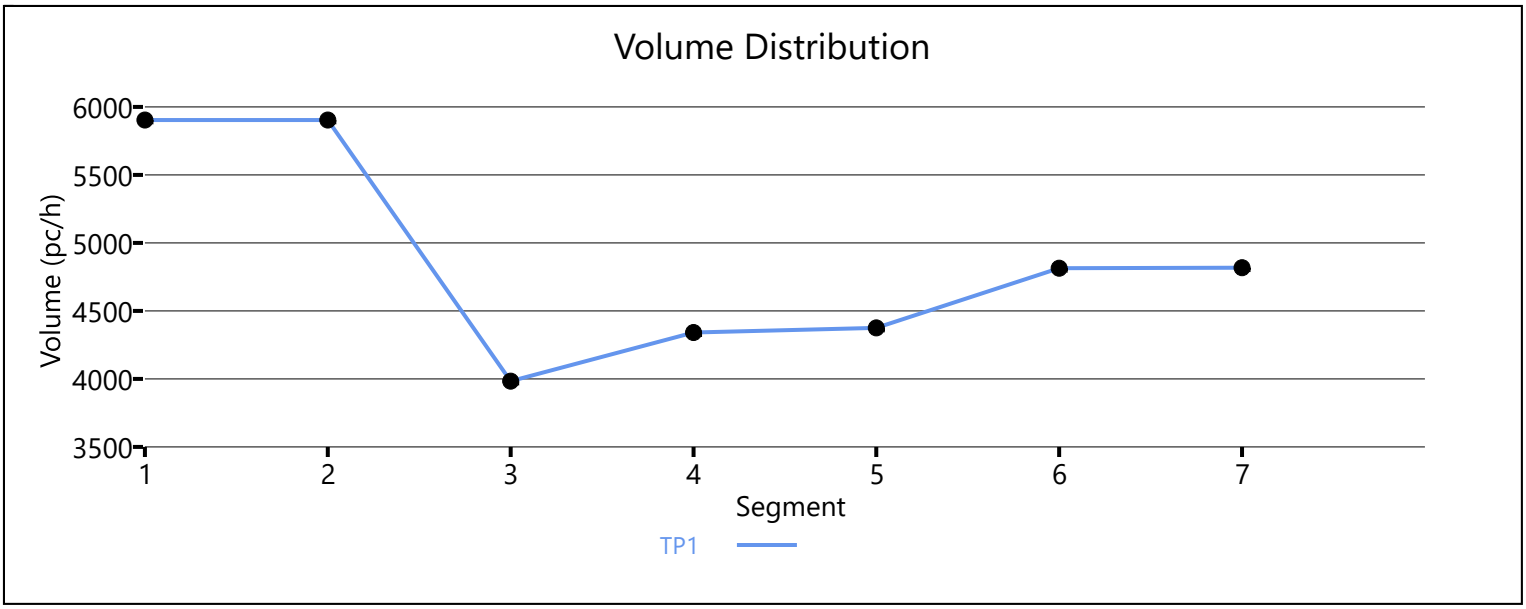
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4818	7146	0.67	66.8	24.0	C

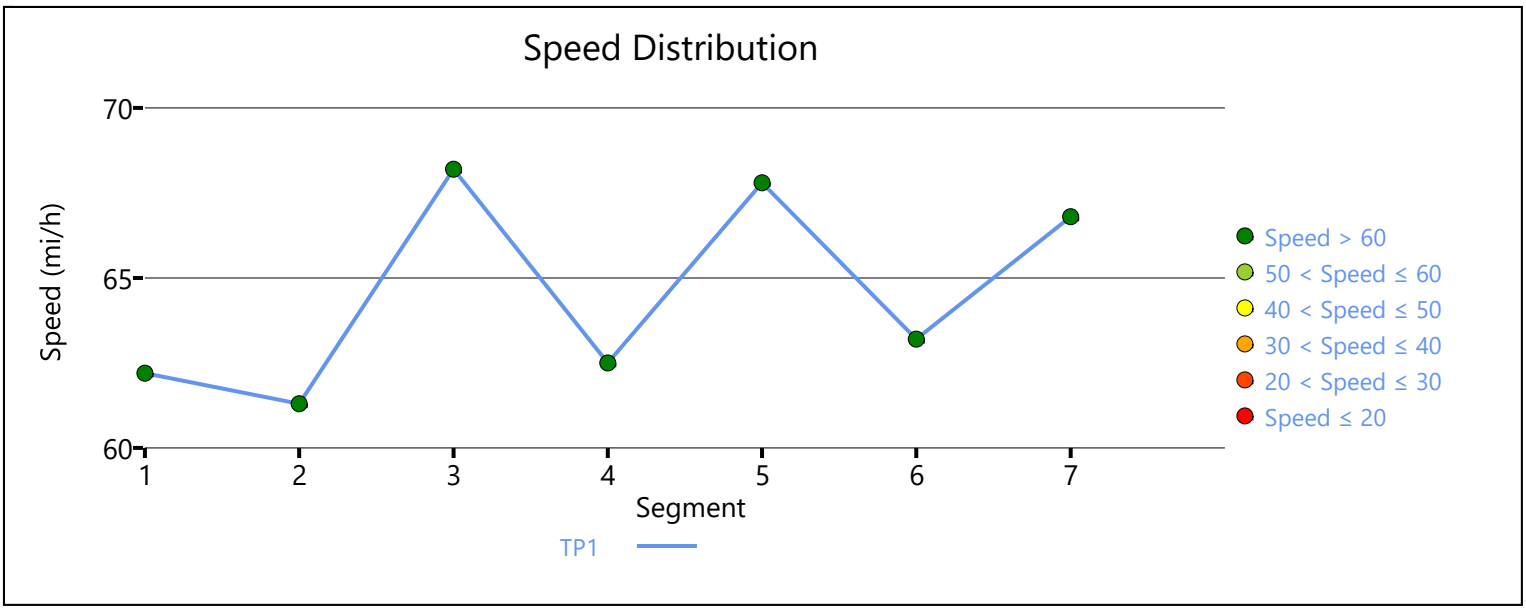
Facility Time Period Results

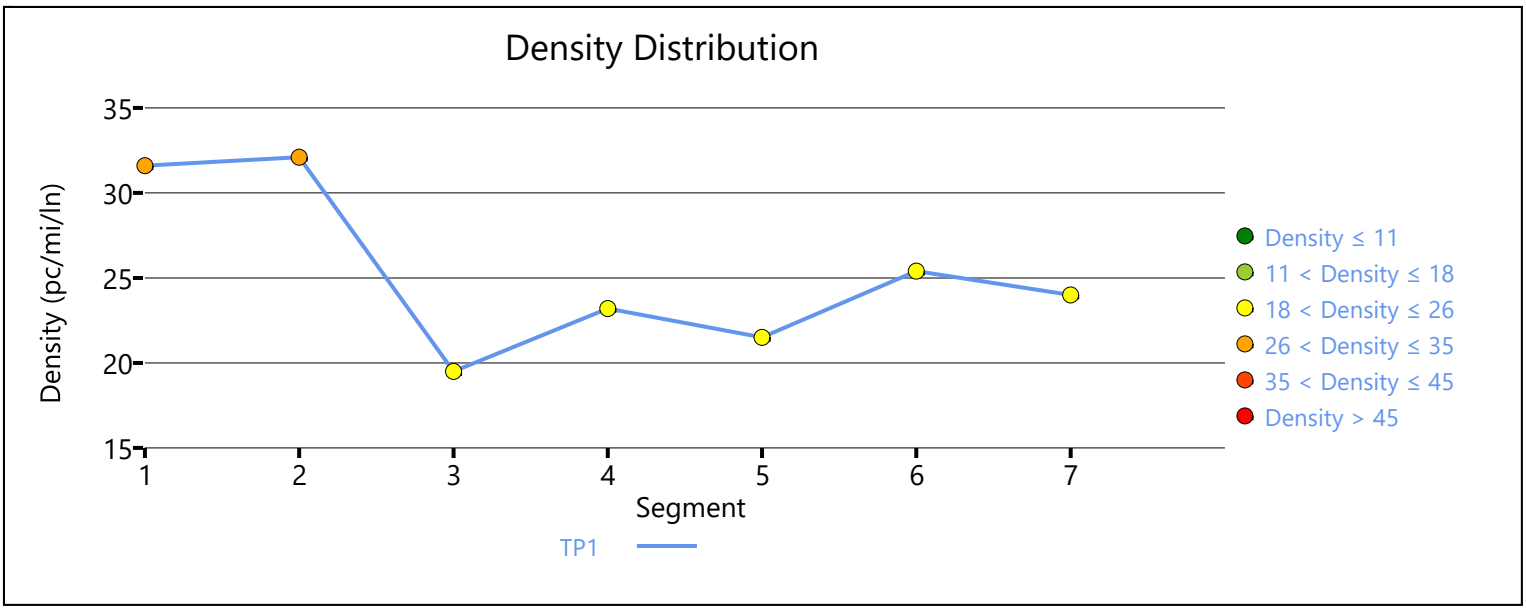
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	63.9	26.0	25.3	1.6	C

Facility Overall Results

Space Mean Speed, mi/h	63.9	Density, veh/mi/ln	25.3
Average Travel Time, min	1.6	Density, pc/mi/ln	26.0







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APPENDIX 8.7:

HORIZON YEAR WITH PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	6779	7146	0.95	56.1	40.3	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.935	5883	1002	7200	2100	0.94	0.48	31.2	59.1	62.9	35.6	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	4570	7146	0.81	18.2	83.8	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.935	5578	1128	7200	1900	0.96	0.59	24.4	51.4	76.2	34.8	F

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	5492	7146	0.97	23.6	77.7	F

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.962	6654	1203	7200	2100	1.13	0.57	39.8	39.3	55.7	40.5	F

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	6654	7146	1.13	58.0	38.2	F

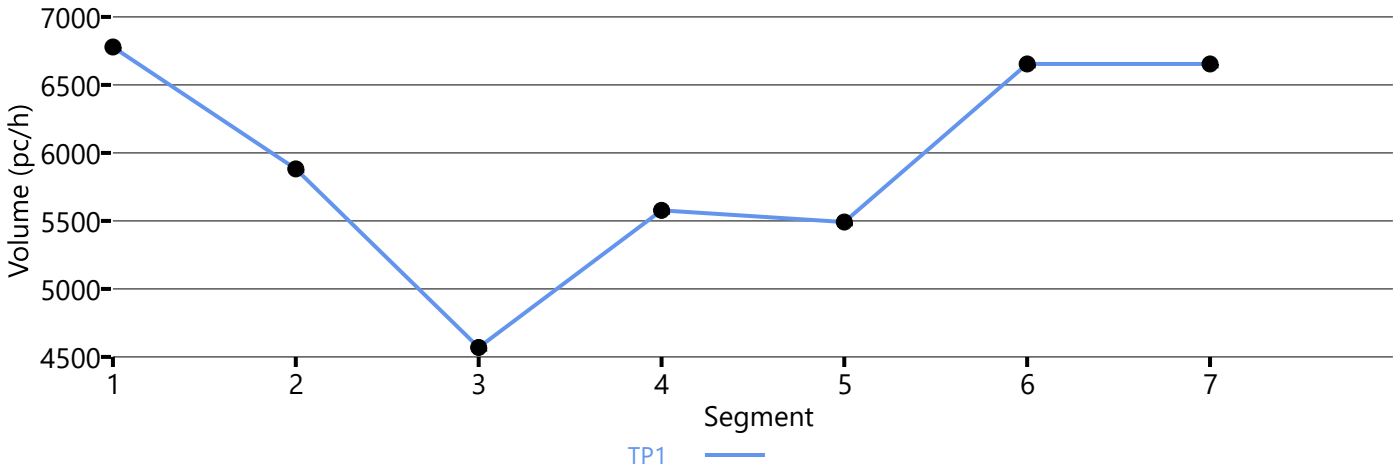
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	29.6	65.6	60.3	3.8	F

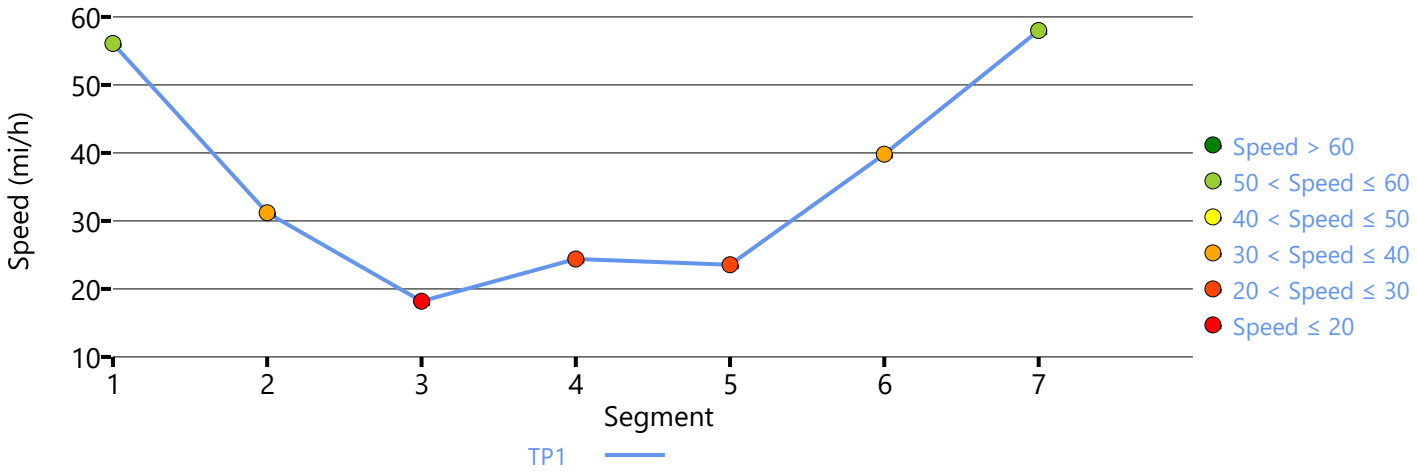
Facility Overall Results

Space Mean Speed, mi/h	29.6	Density, veh/mi/ln	60.3
Average Travel Time, min	3.8	Density, pc/mi/ln	65.6

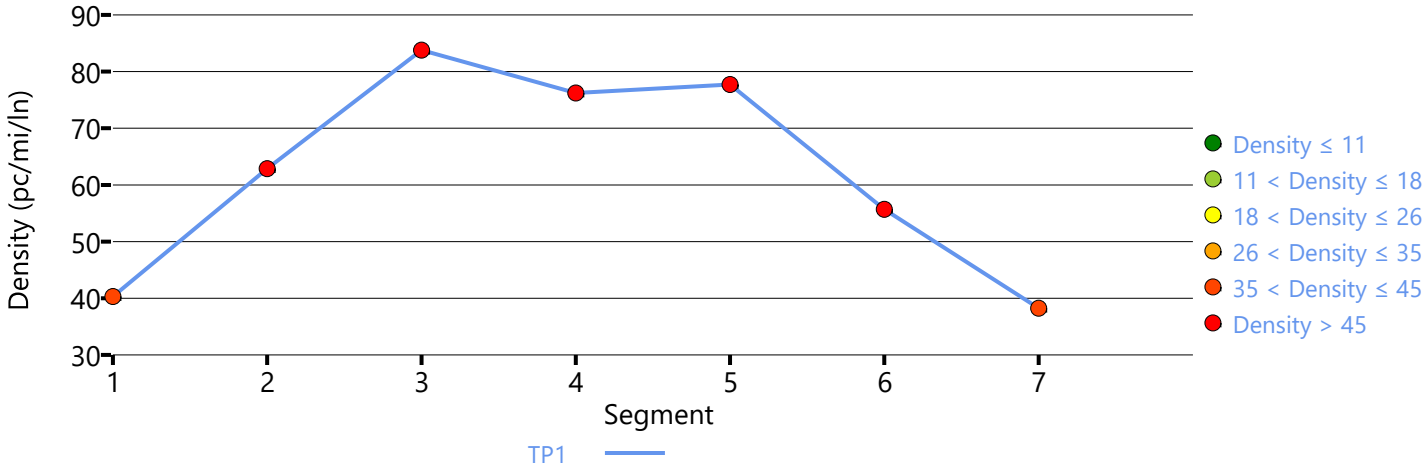
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	6193	7146	0.87	60.4	34.2	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.952	6193	1622	7200	2100	0.86	0.77	62.0	57.6	33.3	35.2	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	4560	7146	0.64	67.4	22.6	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.971	5248	688	7200	1900	0.73	0.36	61.0	59.0	28.7	25.9	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5242	7146	0.73	65.4	26.7	D

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.980	5657	415	7200	2100	0.79	0.20	61.7	60.2	30.6	25.4	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5657	7146	0.79	63.5	29.7	D

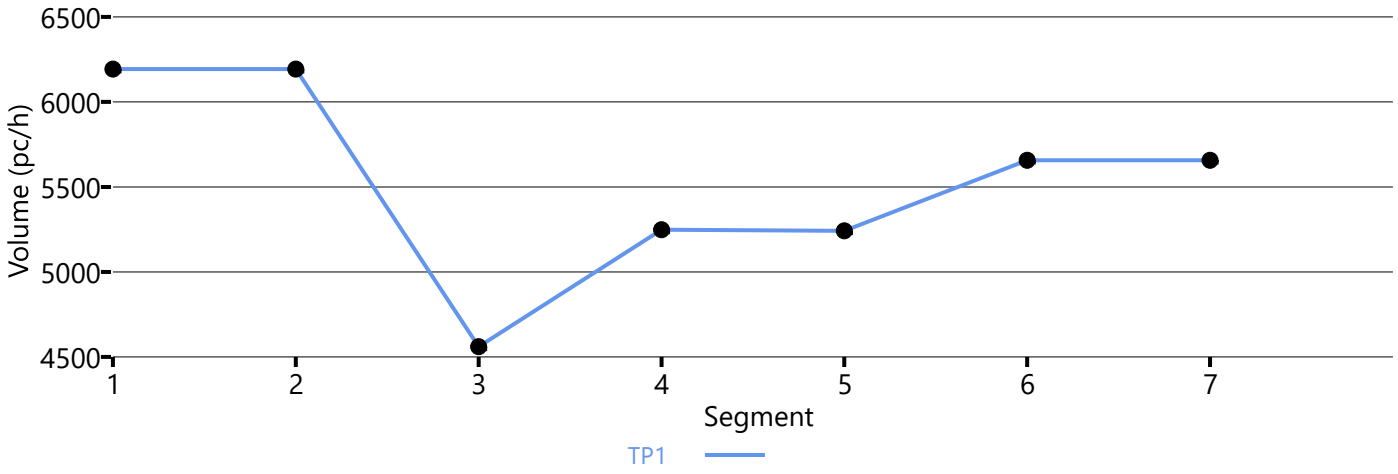
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	62.6	30.0	29.3	1.6	D

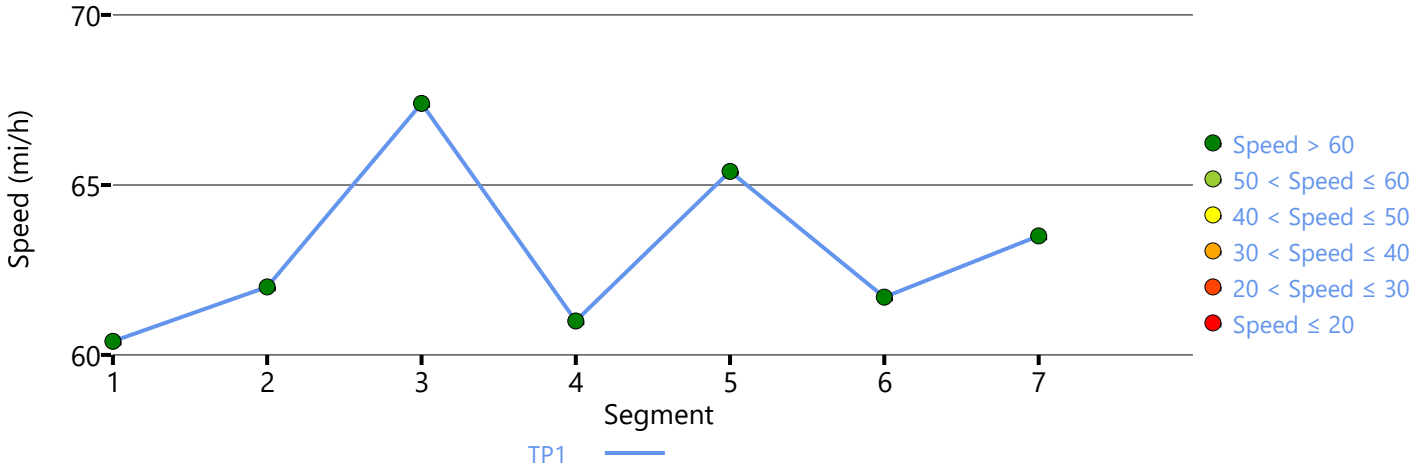
Facility Overall Results

Space Mean Speed, mi/h	62.6	Density, veh/mi/ln	29.3
Average Travel Time, min	1.6	Density, pc/mi/ln	30.0

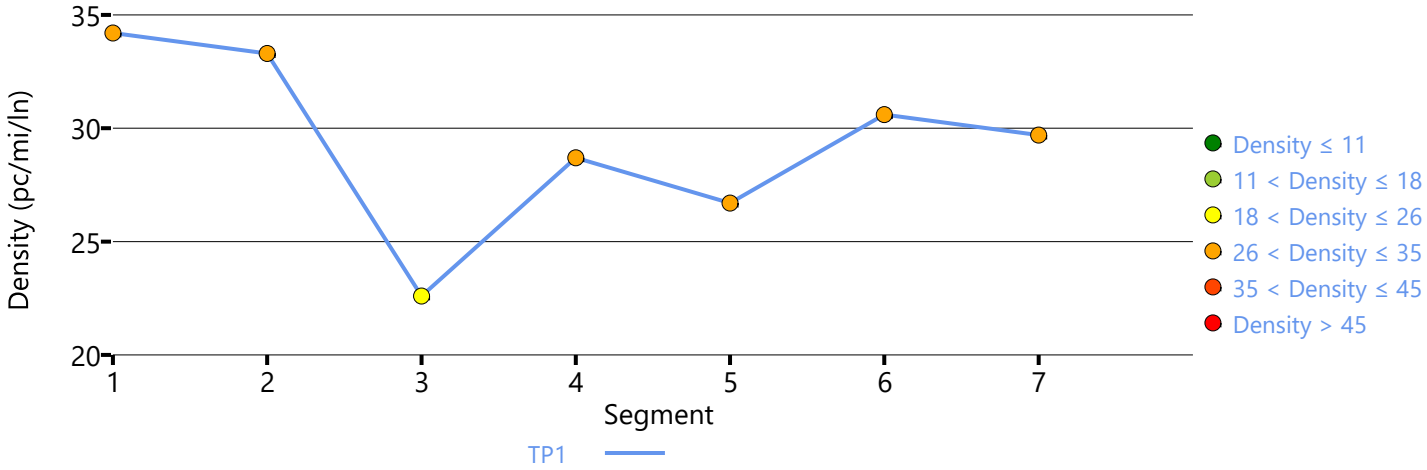
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.901	5260	7146	0.74	65.3	26.8	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.901	0.980	5260	1160	7200	2100	0.73	0.55	63.0	58.7	27.8	30.2	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.885	4070	7146	0.57	68.1	19.9	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.885	0.971	5033	963	7200	1900	0.70	0.51	61.1	59.1	27.5	25.6	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.901	5035	7146	0.70	66.2	25.3	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.901	0.990	6244	1209	7200	2100	0.87	0.58	58.4	55.9	35.6	31.6	D

Segment 7: Basic

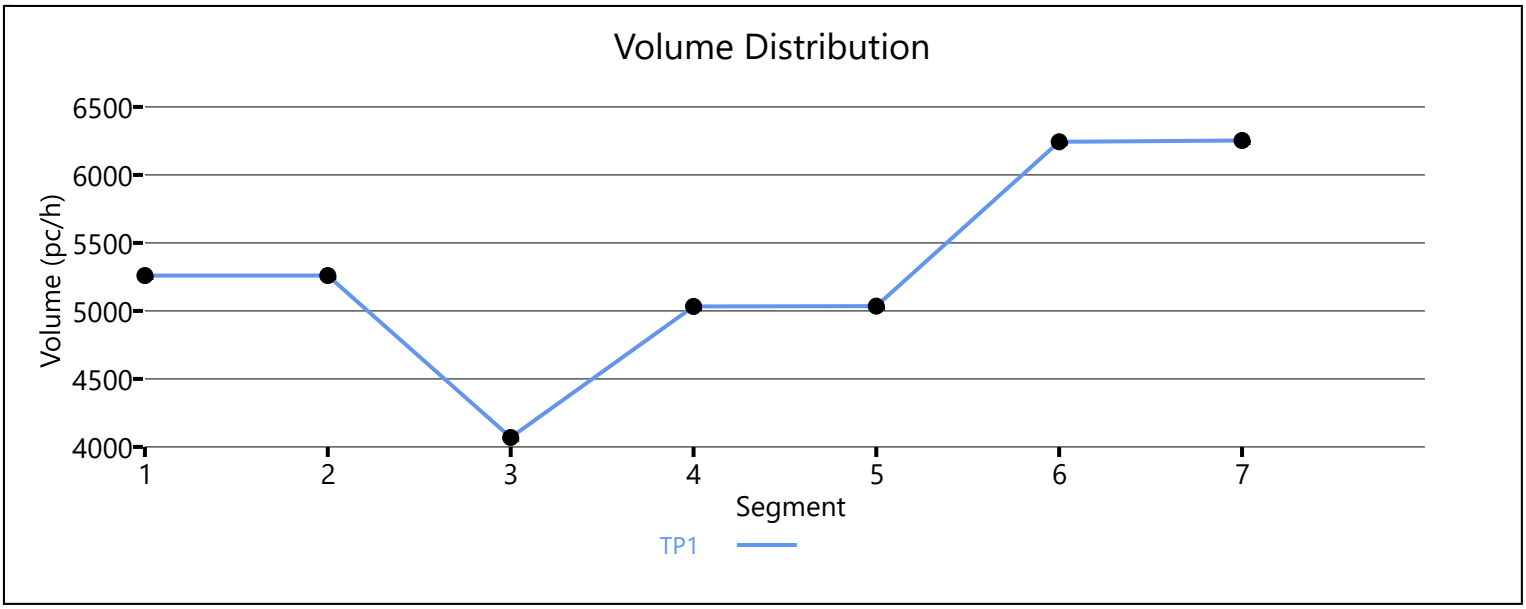
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	6253	7146	0.88	60.0	34.7	D

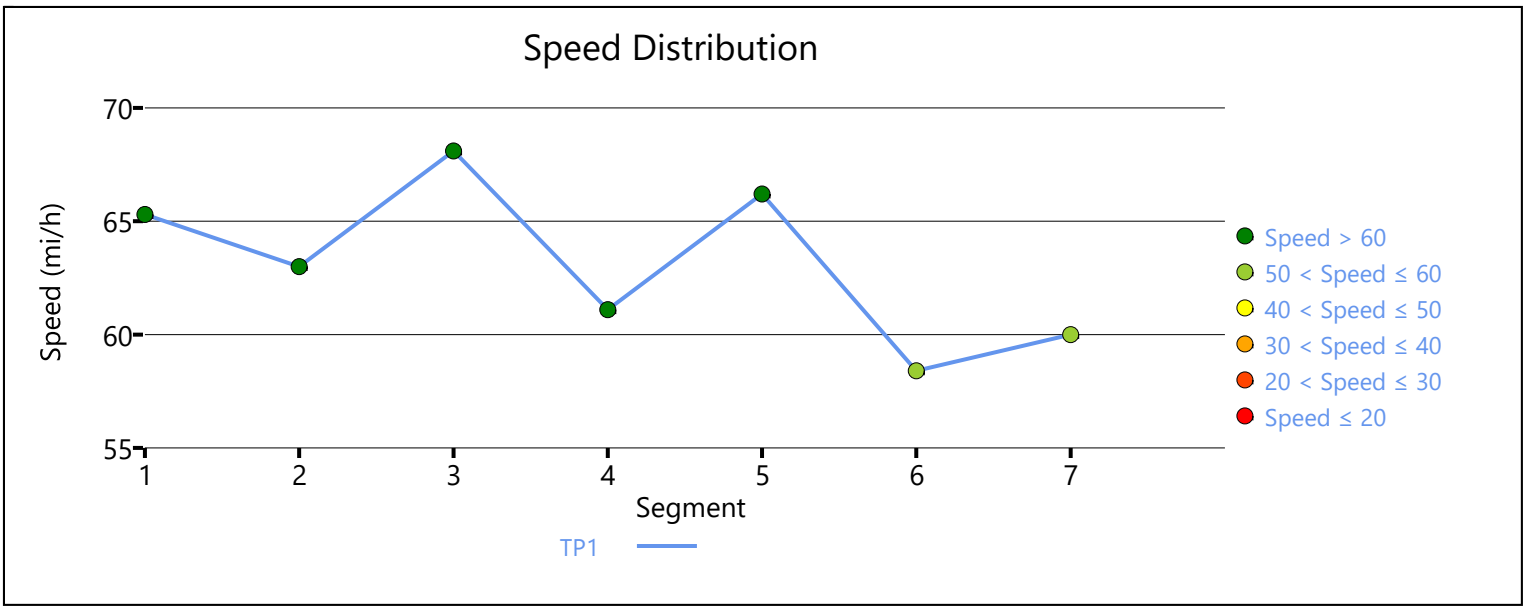
Facility Time Period Results

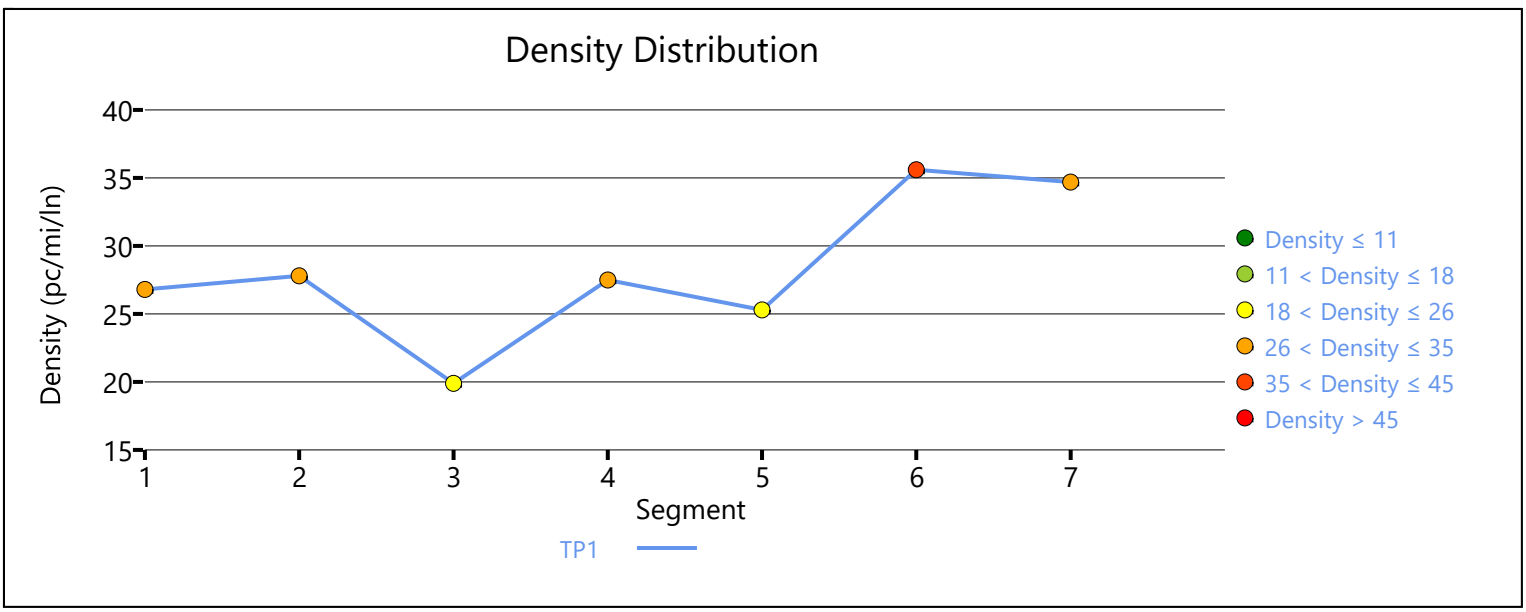
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	62.7	28.1	25.2	1.8	D

Facility Overall Results

Space Mean Speed, mi/h	62.7	Density, veh/mi/ln	25.2
Average Travel Time, min	1.8	Density, pc/mi/ln	28.1







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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	5908	7146	0.83	62.2	31.7	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	5908	1887	7200	2100	0.82	0.90	61.3	56.9	32.1	34.8	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3984	7146	0.56	68.2	19.5	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.943	4366	382	7200	1900	0.61	0.20	62.5	60.6	23.3	20.9	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4391	7146	0.61	67.7	21.6	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.980	4830	439	7200	2100	0.67	0.21	63.1	61.8	25.5	21.5	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4835	7146	0.68	66.8	24.1	C

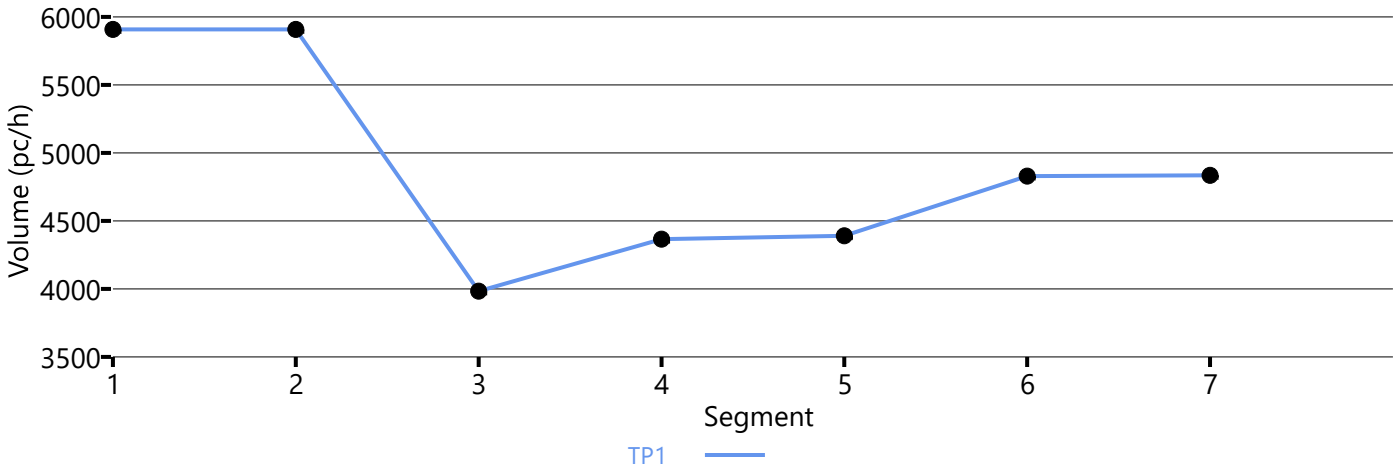
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	63.9	26.1	25.4	1.6	D

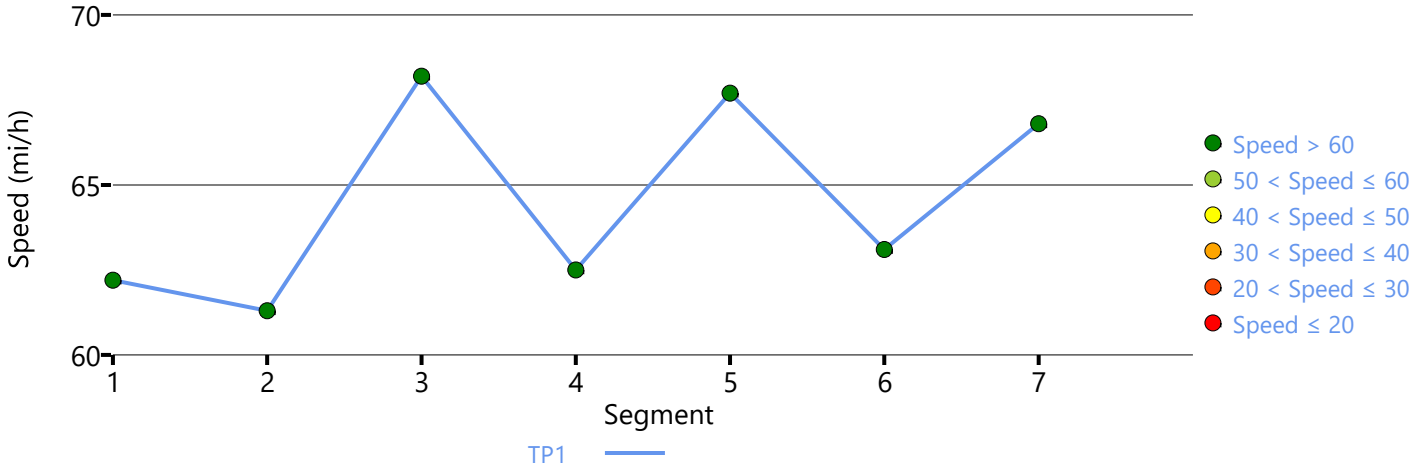
Facility Overall Results

Space Mean Speed, mi/h	63.9	Density, veh/mi/ln	25.4
Average Travel Time, min	1.6	Density, pc/mi/ln	26.1

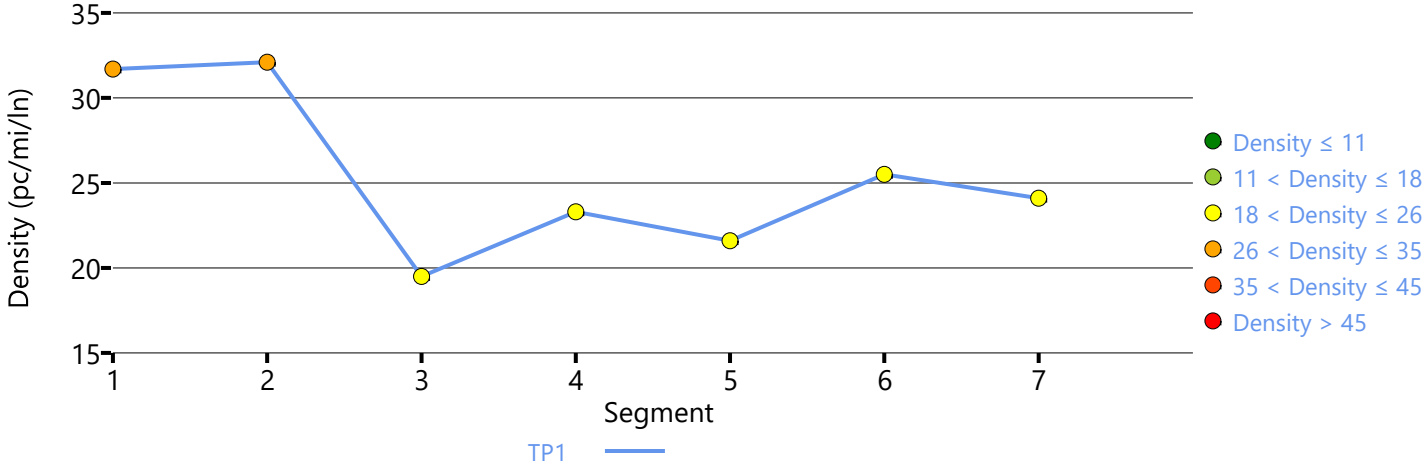
Volume Distribution



Speed Distribution



Density Distribution



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APPENDIX 8.8:

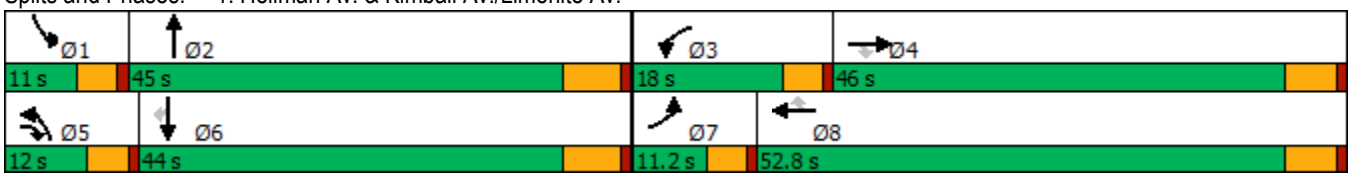
HORIZON YEAR WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	55	612	376	333	828	125	163	265	58	45	25
Future Volume (vph)	55	612	376	333	828	125	163	265	58	45	25
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	11.2	46.0	12.0	18.0	52.8	52.8	12.0	45.0	11.0	44.0	44.0
Total Split (%)	9.3%	38.3%	10.0%	15.0%	44.0%	44.0%	10.0%	37.5%	9.2%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	6.3	40.3	60.6	13.4	49.5	49.5	14.5	38.9	6.2	31.8	31.8
Actuated g/C Ratio	0.05	0.34	0.51	0.11	0.42	0.42	0.12	0.33	0.05	0.27	0.27
v/c Ratio	0.64	0.99	0.40	0.99	0.58	0.18	0.44	0.47	0.69	0.05	0.05
Control Delay	85.4	73.2	6.3	97.0	29.3	4.5	57.1	18.9	91.2	28.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.4	73.2	6.3	97.0	29.3	4.5	57.1	18.9	91.2	28.8	0.2
LOS	F	E	A	F	C	A	E	B	F	C	A
Approach Delay		49.7			44.4			27.4		51.7	
Approach LOS		D			D			C		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 42.5	Intersection LOS: D
Intersection Capacity Utilization 81.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	612	376	333	828	125	163	265	303	58	45	25
Future Volume (veh/h)	55	612	376	333	828	125	163	265	303	58	45	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1800	1900	1900	1700	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	58	644	396	351	872	132	172	279	319	61	47	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	74	642	644	354	1471	656	195	589	525	77	1116	498
Arrive On Green	0.04	0.34	0.34	0.11	0.41	0.41	0.06	0.33	0.33	0.05	0.31	0.31
Sat Flow, veh/h	1714	1900	1610	3141	3610	1610	3141	1805	1610	1714	3610	1610
Grp Volume(v), veh/h	58	644	396	351	872	132	172	279	319	61	47	26
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1570	1805	1610	1570	1805	1610	1714	1805	1610
Q Serve(g_s), s	4.0	40.2	23.3	13.3	22.4	6.3	6.5	14.7	19.8	4.2	1.1	1.3
Cycle Q Clear(g_c), s	4.0	40.2	23.3	13.3	22.4	6.3	6.5	14.7	19.8	4.2	1.1	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	74	642	644	354	1471	656	195	589	525	77	1116	498
V/C Ratio(X)	0.79	1.00	0.61	0.99	0.59	0.20	0.88	0.47	0.61	0.79	0.04	0.05
Avail Cap(c_a), veh/h	95	642	644	354	1471	656	195	589	525	92	1147	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.4	39.4	28.4	52.7	27.5	22.7	55.3	31.9	33.7	56.2	28.8	28.9
Incr Delay (d2), s/veh	21.0	36.3	1.7	45.6	0.6	0.1	39.2	2.7	5.2	25.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	24.2	8.9	7.3	9.3	2.3	3.5	6.5	8.1	2.3	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.4	75.7	30.1	98.3	28.2	22.9	94.6	34.7	38.8	82.0	28.8	28.9
LnGrp LOS	E	F	C	F	C	C	F	C	D	F	C	C
Approach Vol, veh/h		1098			1355			770			134	
Approach Delay, s/veh		59.3			45.8			49.8			53.0	
Approach LOS		E			D			D			D	

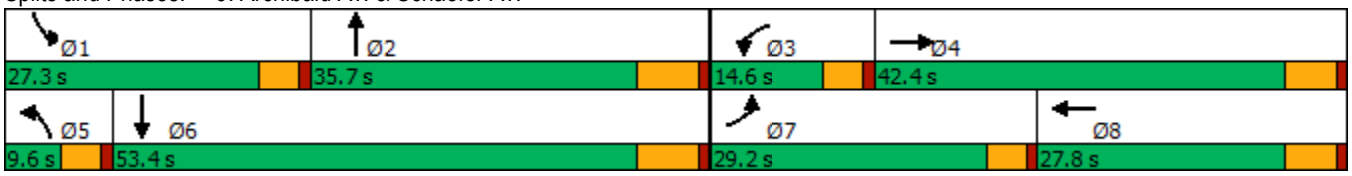
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	45.0	18.0	46.0	12.0	43.0	9.7	54.3
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	6.4	38.8	13.4	40.2	7.4	37.8	6.6	47.0
Max Q Clear Time (g_c+I1), s	6.2	21.8	15.3	42.2	8.5	3.3	6.0	24.4
Green Ext Time (p_c), s	0.0	3.1	0.0	0.0	0.0	0.3	0.0	6.2

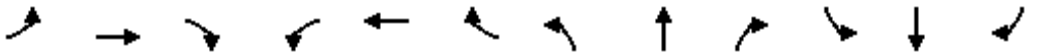
Intersection Summary	
HCM 6th Ctrl Delay	51.4
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	10	10	43	140	69	1557	22	974
Future Volume (vph)	10	10	43	140	69	1557	22	974
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	27.8	9.6	27.8	9.6	28.5	9.6	28.5
Total Split (s)	29.2	42.4	14.6	27.8	9.6	35.7	27.3	53.4
Total Split (%)	24.3%	35.3%	12.2%	23.2%	8.0%	29.8%	22.8%	44.5%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.5	4.6	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.4	20.1	6.6	23.0	5.1	31.6	5.8	25.8
Actuated g/C Ratio	0.07	0.28	0.09	0.32	0.07	0.43	0.08	0.35
v/c Ratio	0.08	0.04	0.29	0.84	0.61	0.73	0.17	0.67
Control Delay	38.0	19.2	38.9	35.4	59.4	21.3	38.1	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	19.2	38.9	35.4	59.4	21.3	38.1	21.3
LOS	D	B	D	D	E	C	D	C
Approach Delay		25.4		35.7		22.9		21.6
Approach LOS		C		D		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 72.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 24.4	Intersection LOS: C
Intersection Capacity Utilization 76.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	43	140	339	69	1557	10	22	974	191
Future Volume (veh/h)	10	10	10	43	140	339	69	1557	10	22	974	191
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	10	10	10	45	146	336	72	1622	10	23	1015	199
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	22	213	213	117	153	353	91	1962	12	44	1486	291
Arrive On Green	0.01	0.24	0.24	0.07	0.30	0.30	0.05	0.37	0.37	0.03	0.34	0.34
Sat Flow, veh/h	1714	872	872	1714	511	1177	1714	5319	33	1714	4353	852
Grp Volume(v), veh/h	10	0	20	45	0	482	72	1054	578	23	806	408
Grp Sat Flow(s),veh/h/ln	1714	0	1743	1714	0	1688	1714	1729	1894	1714	1729	1747
Q Serve(g_s), s	0.4	0.0	0.6	1.8	0.0	20.5	3.0	20.3	20.3	1.0	14.7	14.7
Cycle Q Clear(g_c), s	0.4	0.0	0.6	1.8	0.0	20.5	3.0	20.3	20.3	1.0	14.7	14.7
Prop In Lane	1.00		0.50	1.00		0.70	1.00		0.02	1.00		0.49
Lane Grp Cap(c), veh/h	22	0	426	117	0	506	91	1276	699	44	1181	596
V/C Ratio(X)	0.46	0.00	0.05	0.39	0.00	0.95	0.79	0.83	0.83	0.53	0.68	0.68
Avail Cap(c_a), veh/h	575	0	870	234	0	506	117	1377	754	531	2211	1117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	21.2	32.7	0.0	25.2	34.3	21.0	21.0	35.3	20.7	20.8
Incr Delay (d2), s/veh	5.7	0.0	0.0	0.8	0.0	28.2	18.7	4.0	7.1	3.6	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.7	0.0	11.2	1.6	7.4	8.7	0.4	5.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	0.0	21.2	33.5	0.0	53.4	53.0	25.1	28.1	38.9	21.4	22.2
LnGrp LOS	D	A	C	C	A	D	D	C	C	D	C	C
Approach Vol, veh/h		30			527			1704			1237	
Approach Delay, s/veh		28.0			51.7			27.3			22.0	
Approach LOS		C			D			C			C	

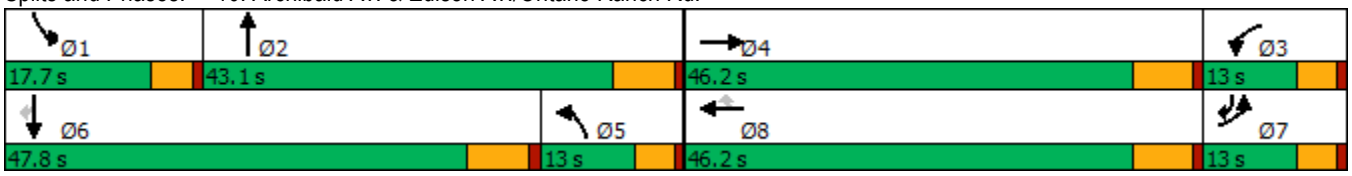
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	33.6	9.6	23.7	8.5	31.5	5.5	27.8
Change Period (Y+Rc), s	4.6	6.5	4.6	5.8	4.6	6.5	4.6	5.8
Max Green Setting (Gmax), s	22.7	29.2	10.0	36.6	5.0	46.9	24.6	22.0
Max Q Clear Time (g_c+I1), s	3.0	22.3	3.8	2.6	5.0	16.7	2.4	22.5
Green Ext Time (p_c), s	0.0	4.8	0.0	0.1	0.0	8.2	0.0	0.0

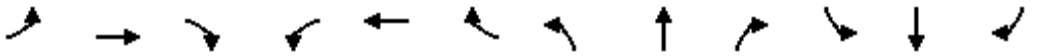
Intersection Summary	
HCM 6th Ctrl Delay	29.1
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	455	866	377	616	1812	299	503	1285	522	79	704	272
Future Volume (vph)	455	866	377	616	1812	299	503	1285	522	79	704	272
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	9.6
Total Split (s)	13.0	46.2		13.0	46.2	46.2	13.0	43.1		17.7	47.8	13.0
Total Split (%)	10.8%	38.5%		10.8%	38.5%	38.5%	10.8%	35.9%		14.8%	39.8%	10.8%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	4.6
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lag	Lag		Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	Max	None		Max	None	None	None	None		None	None	Max
Act Effct Green (s)	8.5	21.4	106.9	25.2	38.1	38.1	15.5	33.4	106.9	7.1	22.5	37.7
Actuated g/C Ratio	0.08	0.20	1.00	0.24	0.36	0.36	0.14	0.31	1.00	0.07	0.21	0.35
v/c Ratio	1.80	0.58	0.24	0.83	0.68	0.40	1.03	0.74	0.33	0.36	0.60	0.44
Control Delay	404.9	40.5	0.3	51.4	31.6	6.3	94.5	36.3	0.6	55.3	40.2	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	404.9	40.5	0.3	51.4	31.6	6.3	94.5	36.3	0.6	55.3	40.2	20.2
LOS	F	D	A	D	C	A	F	D	A	E	D	C
Approach Delay		129.2			33.3			40.9			36.2	
Approach LOS		F			C			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.80	
Intersection Signal Delay: 56.8	Intersection LOS: E
Intersection Capacity Utilization 88.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	455	866	377	616	1812	299	503	1285	522	79	704	272
Future Volume (veh/h)	455	866	377	616	1812	299	503	1285	522	79	704	272
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	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	464	884	0	629	1849	152	513	1311	0	81	718	139
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	276	1424		798	2648	561	461	1705		155	1086	444
Arrive On Green	0.09	0.19	0.00	0.25	0.35	0.35	0.13	0.30	0.00	0.05	0.19	0.19
Sat Flow, veh/h	3238	7600	1610	3238	7600	1610	3429	5700	1610	3429	5700	1610
Grp Volume(v), veh/h	464	884	0	629	1849	152	513	1311	0	81	718	139
Grp Sat Flow(s),veh/h/ln	1619	1900	1610	1619	1900	1610	1714	1900	1610	1714	1900	1610
Q Serve(g_s), s	8.4	10.6	0.0	17.9	20.7	5.1	13.3	20.6	0.0	2.3	11.5	0.0
Cycle Q Clear(g_c), s	8.4	10.6	0.0	17.9	20.7	5.1	13.3	20.6	0.0	2.3	11.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	276	1424		798	2648	561	461	1705		155	1086	444
V/C Ratio(X)	1.68	0.62		0.79	0.70	0.27	1.11	0.77		0.52	0.66	0.31
Avail Cap(c_a), veh/h	276	3082		798	3082	653	461	2115		455	2387	811
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	36.9	0.0	34.8	27.7	13.4	42.7	31.5	0.0	46.0	37.0	28.3
Incr Delay (d2), s/veh	322.4	0.4	0.0	7.8	0.6	0.3	76.1	1.4	0.0	1.0	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.6	4.7	0.0	7.4	8.7	2.3	10.1	8.8	0.0	0.9	5.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	367.6	37.3	0.0	42.5	28.2	13.7	118.7	32.9	0.0	47.1	37.7	28.7
LnGrp LOS	F	D		D	C	B	F	C		D	D	C
Approach Vol, veh/h		1348	A		2630			1824	A		938	
Approach Delay, s/veh		151.0			30.8			57.0			37.2	
Approach LOS		F			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	36.0	28.9	24.7	19.8	25.3	13.0	40.6
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	6.5	* 6.5	4.6	6.2
Max Green Setting (Gmax), s	13.1	36.6	8.4	40.0	8.4	* 41	8.4	40.0
Max Q Clear Time (g_c+I1), s	4.3	22.6	19.9	12.6	15.3	13.5	10.4	22.7
Green Ext Time (p_c), s	0.1	6.8	0.0	5.9	0.0	5.0	0.0	11.7

Intersection Summary	
HCM 6th Ctrl Delay	62.8
HCM 6th LOS	E

Notes

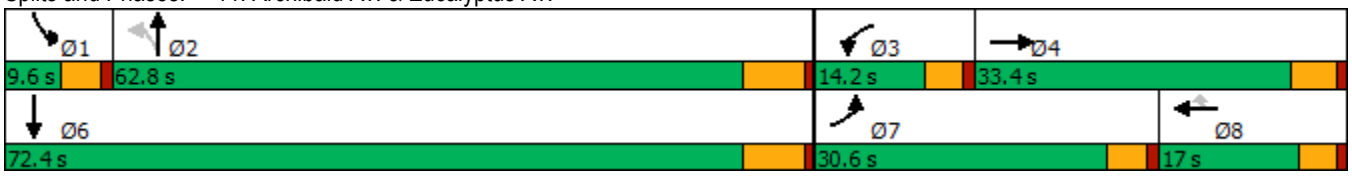
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

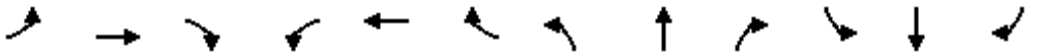
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	47	30	123	276	162	237	1987	60	1345
Future Volume (vph)	47	30	123	276	162	237	1987	60	1345
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Prot	NA
Protected Phases	7	4	3	8			2	1	6
Permitted Phases					8	2			
Detector Phase	7	4	3	8	8	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	30.6	23.2	9.5	14.5	14.5	32.5	32.5	9.6	24.5
Total Split (s)	30.6	33.4	14.2	17.0	17.0	62.8	62.8	9.6	72.4
Total Split (%)	25.5%	27.8%	11.8%	14.2%	14.2%	52.3%	52.3%	8.0%	60.3%
Yellow Time (s)	3.6	4.2	3.5	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.2	4.5	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	10.3	13.9	9.8	12.6	12.6	56.8	56.8	5.0	66.5
Actuated g/C Ratio	0.10	0.13	0.10	0.12	0.12	0.55	0.55	0.05	0.65
v/c Ratio	0.34	0.26	0.44	1.41	0.48	1.84	0.78	0.77	0.49
Control Delay	48.8	24.0	51.8	244.4	12.8	428.9	22.1	101.3	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	24.0	51.8	244.4	12.8	428.9	22.1	101.3	11.1
LOS	D	C	D	F	B	F	C	F	B
Approach Delay		34.3		142.0			63.9		14.6
Approach LOS		C		F			E		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.84	
Intersection Signal Delay: 55.7	Intersection LOS: E
Intersection Capacity Utilization 84.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	30	36	123	276	162	237	1987	84	60	1345	169
Future Volume (veh/h)	47	30	36	123	276	162	237	1987	84	60	1345	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1728	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	50	32	38	131	294	115	252	2114	89	64	1431	180
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	62	85	100	191	241	204	231	2935	123	81	3124	393
Arrive On Green	0.04	0.11	0.11	0.06	0.13	0.13	0.58	0.58	0.58	0.05	0.67	0.67
Sat Flow, veh/h	1646	791	940	3238	1900	1610	303	5100	214	1714	4666	587
Grp Volume(v), veh/h	50	0	70	131	294	115	252	1431	772	64	1060	551
Grp Sat Flow(s),veh/h/ln	1646	0	1731	1619	1900	1610	303	1729	1856	1714	1729	1794
Q Serve(g_s), s	3.0	0.0	3.7	3.9	12.5	6.6	51.5	29.5	29.8	3.6	14.4	14.4
Cycle Q Clear(g_c), s	3.0	0.0	3.7	3.9	12.5	6.6	56.6	29.5	29.8	3.6	14.4	14.4
Prop In Lane	1.00		0.54	1.00		1.00	1.00		0.12	1.00		0.33
Lane Grp Cap(c), veh/h	62	0	185	191	241	204	231	1990	1068	81	2315	1201
V/C Ratio(X)	0.80	0.00	0.38	0.69	1.22	0.56	1.09	0.72	0.72	0.79	0.46	0.46
Avail Cap(c_a), veh/h	435	0	496	319	241	204	231	1990	1068	87	2315	1201
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	0.0	40.9	45.4	43.0	40.4	31.6	15.1	15.2	46.4	7.8	7.8
Incr Delay (d2), s/veh	8.5	0.0	1.3	1.6	129.8	3.5	84.9	2.3	4.3	31.9	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.6	1.6	14.4	2.8	10.8	9.9	11.3	2.2	4.1	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	0.0	42.2	47.1	172.8	43.9	116.5	17.4	19.5	78.3	8.4	9.0
LnGrp LOS	E	A	D	D	F	D	F	B	B	E	A	A
Approach Vol, veh/h		120			540			2455			1675	
Approach Delay, s/veh		47.7			114.8			28.2			11.3	
Approach LOS		D			F			C			B	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	9.3	63.1	10.3	15.7		72.4	8.3	17.7
Change Period (Y+Rc), s	4.6	6.5	4.5	5.2		6.5	4.6	* 5.2
Max Green Setting (Gmax), s	5.0	56.3	9.7	28.2		65.9	26.0	* 13
Max Q Clear Time (g_c+I1), s	5.6	58.6	5.9	5.7		16.4	5.0	14.5
Green Ext Time (p_c), s	0.0	0.0	0.1	0.3		13.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

Notes

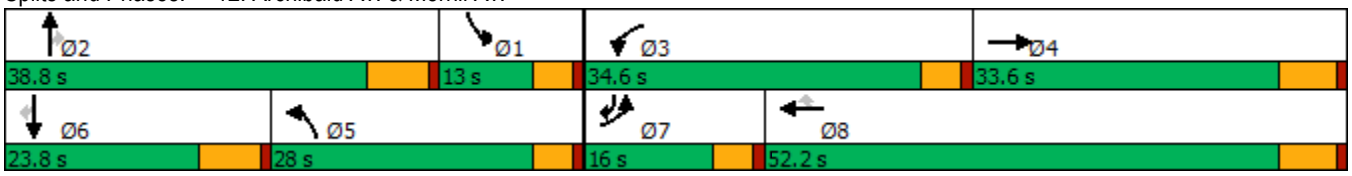
User approved volume balancing among the lanes for turning movement.

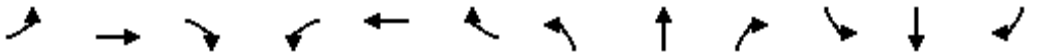
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	347	28	536	199	97	158	734	1492	89	48	1147	603
Future Volume (vph)	347	28	536	199	97	158	734	1492	89	48	1147	603
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			Free			8			2			6
Detector Phase	7	4		3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	16.2		9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	9.6
Total Split (s)	16.0	33.6		34.6	52.2	52.2	28.0	38.8	38.8	13.0	23.8	16.0
Total Split (%)	13.3%	28.0%		28.8%	43.5%	43.5%	23.3%	32.3%	32.3%	10.8%	19.8%	13.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	None
Act Effct Green (s)	11.6	13.2	91.7	25.5	16.5	16.5	23.8	38.5	38.5	7.1	17.6	31.1
Actuated g/C Ratio	0.13	0.14	1.00	0.28	0.18	0.18	0.26	0.42	0.42	0.08	0.19	0.34
v/c Ratio	0.83	0.11	0.34	0.43	0.29	0.38	1.71	0.64	0.12	0.20	1.08	0.82
Control Delay	57.9	35.2	0.6	34.2	32.9	6.1	354.0	26.0	0.7	44.5	88.8	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	35.2	0.6	34.2	32.9	6.1	354.0	26.0	0.7	44.5	88.8	19.3
LOS	E	D	A	C	C	A	F	C	A	D	F	B
Approach Delay		23.5			24.2			129.1			64.3	
Approach LOS		C			C			F			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.71	
Intersection Signal Delay: 81.5	Intersection LOS: F
Intersection Capacity Utilization 101.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	28	536	199	97	158	734	1492	89	48	1147	603
Future Volume (veh/h)	347	28	536	199	97	158	734	1492	89	48	1147	603
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	358	29	0	205	100	68	757	1538	46	49	1182	312
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	433	225		243	254	216	474	2176	615	321	1165	533
Arrive On Green	0.13	0.12	0.00	0.14	0.13	0.13	0.41	0.57	0.38	0.15	0.31	0.20
Sat Flow, veh/h	3429	1900	1610	1714	1900	1610	1714	5700	1610	3238	5700	1610
Grp Volume(v), veh/h	358	29	0	205	100	68	757	1538	46	49	1182	312
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	1900	1610	1714	1900	1610	1619	1900	1610
Q Serve(g_s), s	8.6	1.2	0.0	9.9	4.1	2.4	23.4	16.4	0.9	1.1	17.3	4.2
Cycle Q Clear(g_c), s	8.6	1.2	0.0	9.9	4.1	2.4	23.4	16.4	0.9	1.1	17.3	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	433	225		243	254	216	474	2176	615	321	1165	533
V/C Ratio(X)	0.83	0.13		0.84	0.39	0.32	1.60	0.71	0.07	0.15	1.01	0.59
Avail Cap(c_a), veh/h	462	615		608	1033	875	474	2176	615	321	1165	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.50	1.50	1.00	1.50	1.50	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	33.4	0.0	35.4	33.5	18.0	24.8	14.7	5.2	32.9	29.3	8.0
Incr Delay (d2), s/veh	10.3	0.3	0.0	3.0	1.0	0.8	278.3	2.0	0.2	0.1	29.9	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.5	0.0	4.2	1.9	1.3	43.1	5.0	0.6	0.4	9.3	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	33.7	0.0	38.4	34.5	18.9	303.1	16.6	5.4	33.0	59.3	12.7
LnGrp LOS	D	C		D	C	B	F	B	A	C	F	B
Approach Vol, veh/h		387	A		373			2341			1543	
Approach Delay, s/veh		45.4			33.8			109.0			49.0	
Approach LOS		D			C			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	38.8	16.6	16.2	28.0	23.8	15.3	17.5
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	8.4	32.3	30.0	27.4	23.4	17.3	11.4	46.0
Max Q Clear Time (g_c+I1), s	3.1	18.4	11.9	3.2	25.4	19.3	10.6	6.1
Green Ext Time (p_c), s	0.0	8.1	0.2	0.1	0.0	0.0	0.1	0.8

Intersection Summary	
HCM 6th Ctrl Delay	77.7
HCM 6th LOS	E

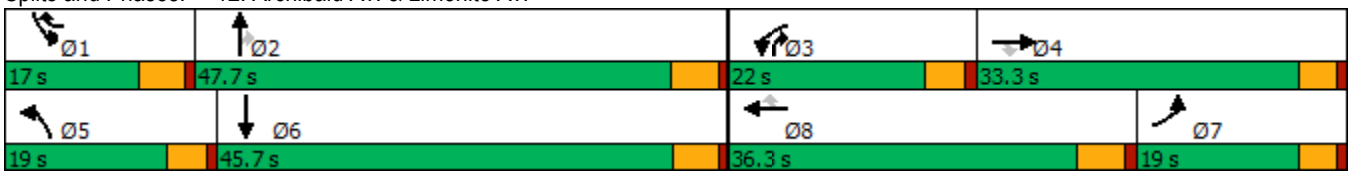
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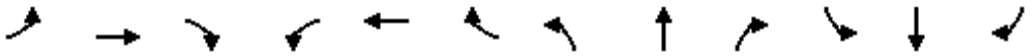
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	296	789	118	355	894	750	147	1415	432	424	1155
Future Volume (vph)	296	789	118	355	894	750	147	1415	432	424	1155
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	22.5	22.5	9.5	36.3	11.0	9.5	46.3	9.5	11.0	23.0
Total Split (s)	19.0	33.3	33.3	22.0	36.3	17.0	19.0	47.7	22.0	17.0	45.7
Total Split (%)	15.8%	27.8%	27.8%	18.3%	30.3%	14.2%	15.8%	39.8%	18.3%	14.2%	38.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	4.3	4.0	3.5	4.3	3.5	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	5.3	5.0	4.5	5.3	4.5	5.0	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	None	None	Max	Max
Act Effct Green (s)	14.3	28.6	28.6	17.5	31.0	43.3	13.3	41.5	59.8	12.0	40.9
Actuated g/C Ratio	0.12	0.24	0.24	0.15	0.26	0.36	0.11	0.35	0.50	0.10	0.34
v/c Ratio	0.73	0.95	0.26	1.40	0.99	1.25	0.76	0.82	0.53	1.25	0.86
Control Delay	61.6	64.7	10.7	237.1	71.2	146.6	74.7	39.7	15.3	178.3	40.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	64.7	10.7	237.1	71.2	146.6	74.7	39.7	15.3	178.3	40.9
LOS	E	E	B	F	E	F	E	D	B	F	D
Approach Delay		58.6			128.9			37.0			71.9
Approach LOS		E			F			D			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.40	
Intersection Signal Delay: 75.9	Intersection LOS: E
Intersection Capacity Utilization 97.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	789	118	355	894	750	147	1415	432	424	1155	298
Future Volume (veh/h)	296	789	118	355	894	750	147	1415	432	424	1155	298
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	308	822	61	370	931	390	153	1474	225	442	1203	159
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	426	878	392	270	954	590	181	1767	775	359	1609	213
Arrive On Green	0.12	0.24	0.24	0.15	0.26	0.26	0.10	0.34	0.34	0.10	0.35	0.35
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	5187	1571	3510	4635	613
Grp Volume(v), veh/h	308	822	61	370	931	390	153	1474	225	442	897	465
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	1729	1571	1755	1729	1790
Q Serve(g_s), s	9.9	26.2	3.5	17.5	30.0	14.5	9.7	30.7	10.0	12.0	26.8	26.8
Cycle Q Clear(g_c), s	9.9	26.2	3.5	17.5	30.0	14.5	9.7	30.7	10.0	12.0	26.8	26.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	426	878	392	270	954	590	181	1767	775	359	1200	621
V/C Ratio(X)	0.72	0.94	0.16	1.37	0.98	0.66	0.84	0.83	0.29	1.23	0.75	0.75
Avail Cap(c_a), veh/h	434	887	395	270	954	590	224	1875	808	359	1200	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	43.5	34.9	49.9	42.8	13.5	51.9	35.6	17.8	52.6	33.8	33.8
Incr Delay (d2), s/veh	5.8	16.8	0.2	188.4	23.2	2.2	20.8	3.4	0.2	125.8	4.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	13.3	1.3	21.7	15.7	4.9	5.3	12.7	3.4	11.3	11.2	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.4	60.3	35.1	238.3	65.9	15.7	72.7	39.0	18.1	178.4	38.0	41.8
LnGrp LOS	E	E	D	F	E	B	E	D	B	F	D	D
Approach Vol, veh/h		1191			1691			1852			1804	
Approach Delay, s/veh		57.7			92.1			39.2			73.4	
Approach LOS		E			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	45.3	22.0	33.0	16.3	46.0	18.7	36.3
Change Period (Y+Rc), s	5.0	5.3	4.5	4.5	4.5	* 5.3	4.5	5.3
Max Green Setting (Gmax), s	12.0	42.4	17.5	28.8	14.5	* 41	14.5	31.0
Max Q Clear Time (g_c+I1), s	14.0	32.7	19.5	28.2	11.7	28.8	11.9	32.0
Green Ext Time (p_c), s	0.0	7.1	0.0	0.4	0.1	4.3	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	65.7
HCM 6th LOS	E

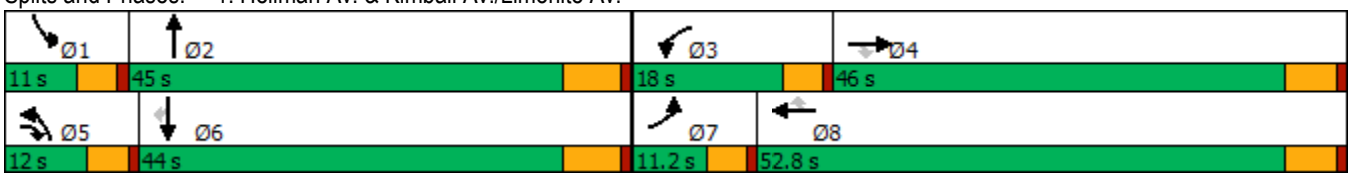
Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	30	971	258	489	822	83	326	93	130	98	148
Future Volume (vph)	30	971	258	489	822	83	326	93	130	98	148
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	5	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	37.8	9.6	9.6	37.8	37.8	9.6	43.2	9.6	43.2	43.2
Total Split (s)	11.2	46.0	12.0	18.0	52.8	52.8	12.0	45.0	11.0	44.0	44.0
Total Split (%)	9.3%	38.3%	10.0%	15.0%	44.0%	44.0%	10.0%	37.5%	9.2%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	4.8	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	5.8	4.6	6.2	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	6.1	40.2	53.4	13.4	51.5	51.5	7.4	38.8	6.4	37.8	37.8
Actuated g/C Ratio	0.05	0.34	0.44	0.11	0.43	0.43	0.06	0.32	0.05	0.32	0.32
v/c Ratio	0.37	1.61	0.34	1.48	0.56	0.11	1.78	0.48	1.51	0.09	0.25
Control Delay	67.1	310.0	11.8	266.6	28.4	2.4	402.5	22.3	314.5	29.3	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.1	310.0	11.8	266.6	28.4	2.4	402.5	22.3	314.5	29.3	5.7
LOS	E	F	B	F	C	A	F	C	F	C	A
Approach Delay		242.9			110.4			167.9		118.7	
Approach LOS		F			F			F		F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.78	
Intersection Signal Delay: 166.8	Intersection LOS: F
Intersection Capacity Utilization 108.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 1: Hellman Av. & Kimball Av./Limonite Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	971	258	489	822	83	326	93	432	130	98	148
Future Volume (veh/h)	30	971	258	489	822	83	326	93	432	130	98	148
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	1800	1900	1900	1700	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	32	1022	272	515	865	87	343	98	455	137	103	156
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	636	639	351	1514	675	194	584	521	91	1137	507
Arrive On Green	0.03	0.34	0.34	0.11	0.42	0.42	0.06	0.32	0.32	0.05	0.31	0.31
Sat Flow, veh/h	1714	1900	1610	3141	3610	1610	3141	1805	1610	1714	3610	1610
Grp Volume(v), veh/h	32	1022	272	515	865	87	343	98	455	137	103	156
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1570	1805	1610	1570	1805	1610	1714	1805	1610
Q Serve(g_s), s	2.2	40.2	14.7	13.4	22.0	4.0	7.4	4.7	32.0	6.4	2.4	8.8
Cycle Q Clear(g_c), s	2.2	40.2	14.7	13.4	22.0	4.0	7.4	4.7	32.0	6.4	2.4	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	637	639	351	1514	675	194	584	521	91	1137	507
V/C Ratio(X)	0.68	1.61	0.43	1.47	0.57	0.13	1.77	0.17	0.87	1.50	0.09	0.31
Avail Cap(c_a), veh/h	94	637	639	351	1514	675	194	584	521	91	1137	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.8	39.9	26.3	53.3	26.6	21.4	56.3	29.0	38.3	56.8	29.0	31.2
Incr Delay (d2), s/veh	6.4	279.8	0.5	225.8	0.5	0.1	367.1	0.6	18.2	272.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	67.3	5.5	16.1	9.1	1.5	12.7	2.0	14.5	9.6	1.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	319.7	26.7	279.1	27.1	21.5	423.4	29.7	56.5	329.7	29.0	31.5
LnGrp LOS	E	F	C	F	C	C	F	C	E	F	C	C
Approach Vol, veh/h		1326			1467			896			396	
Approach Delay, s/veh		253.5			115.2			194.0			134.0	
Approach LOS		F			F			F			F	

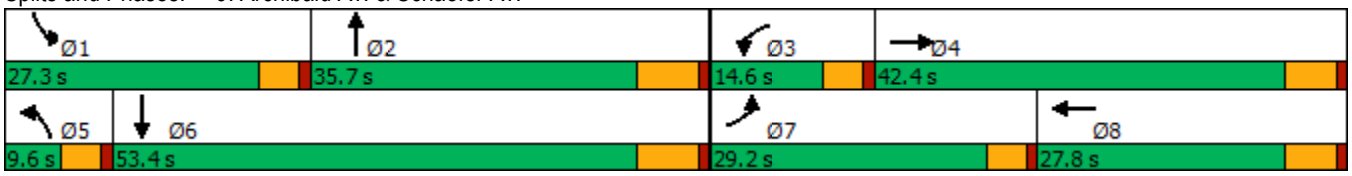
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	45.0	18.0	46.0	12.0	44.0	7.9	56.1
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	6.4	38.8	13.4	40.2	7.4	37.8	6.6	47.0
Max Q Clear Time (g_c+I1), s	8.4	34.0	15.4	42.2	9.4	10.8	4.2	24.0
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	1.0	0.0	6.0

Intersection Summary	
HCM 6th Ctrl Delay	179.2
HCM 6th LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	351	268	23	10	10	1210	322	1434
Future Volume (vph)	351	268	23	10	10	1210	322	1434
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	27.8	14.6	27.8	9.6	23.5	9.6	28.5
Total Split (s)	29.2	42.4	14.6	27.8	9.6	35.7	27.3	53.4
Total Split (%)	24.3%	35.3%	12.2%	23.2%	8.0%	29.8%	22.8%	44.5%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	6.5	4.6	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	24.8	32.6	10.1	15.2	5.0	29.5	22.9	55.2
Actuated g/C Ratio	0.22	0.30	0.09	0.14	0.05	0.27	0.21	0.50
v/c Ratio	0.96	0.76	0.15	0.27	0.14	0.98	0.95	0.59
Control Delay	81.4	44.3	52.4	15.7	58.7	61.7	83.4	22.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.4	44.3	52.4	15.7	58.7	61.7	83.4	22.9
LOS	F	D	D	B	E	E	F	C
Approach Delay		61.8		24.3		61.7		33.8
Approach LOS		E		C		E		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 48.1	Intersection LOS: D
Intersection Capacity Utilization 85.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 9: Archibald Av. & Schaefer Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	351	268	126	23	10	64	10	1210	74	322	1434	29
Future Volume (veh/h)	351	268	126	23	10	64	10	1210	74	322	1434	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	369	282	100	24	11	50	11	1274	59	339	1509	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	386	318	113	157	31	140	22	1353	63	356	2427	39
Arrive On Green	0.23	0.24	0.24	0.09	0.10	0.10	0.01	0.27	0.27	0.21	0.46	0.46
Sat Flow, veh/h	1714	1340	475	1714	299	1357	1714	5075	235	1714	5259	84
Grp Volume(v), veh/h	369	0	382	24	0	61	11	868	465	339	992	541
Grp Sat Flow(s),veh/h/ln	1714	0	1815	1714	0	1656	1714	1729	1852	1714	1729	1885
Q Serve(g_s), s	23.2	0.0	22.2	1.4	0.0	3.7	0.7	26.8	26.9	21.3	23.7	23.7
Cycle Q Clear(g_c), s	23.2	0.0	22.2	1.4	0.0	3.7	0.7	26.8	26.9	21.3	23.7	23.7
Prop In Lane	1.00		0.26	1.00		0.82	1.00		0.13	1.00		0.04
Lane Grp Cap(c), veh/h	386	0	430	157	0	171	22	922	494	356	1596	870
V/C Ratio(X)	0.96	0.00	0.89	0.15	0.00	0.36	0.49	0.94	0.94	0.95	0.62	0.62
Avail Cap(c_a), veh/h	386	0	608	157	0	334	78	925	495	356	1596	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	0.0	40.3	45.7	0.0	45.6	53.5	39.2	39.2	42.7	22.2	22.2
Incr Delay (d2), s/veh	34.0	0.0	11.3	0.2	0.0	1.3	6.2	17.2	26.5	34.7	0.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	0.0	10.8	0.6	0.0	1.6	0.3	12.8	15.0	11.9	8.8	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.8	0.0	51.5	45.9	0.0	46.8	59.7	56.4	65.8	77.4	23.0	23.6
LnGrp LOS	E	A	D	D	A	D	E	E	E	E	C	C
Approach Vol, veh/h		751			85			1344			1872	
Approach Delay, s/veh		63.5			46.6			59.7			33.0	
Approach LOS		E			D			E			C	

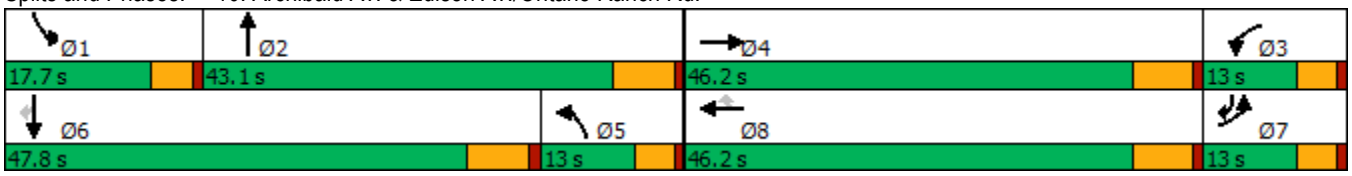
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.3	35.6	14.6	31.7	6.0	56.9	29.2	17.1
Change Period (Y+Rc), s	4.6	6.5	4.6	5.8	4.6	6.5	4.6	5.8
Max Green Setting (Gmax), s	22.7	29.2	10.0	36.6	5.0	46.9	24.6	22.0
Max Q Clear Time (g_c+I1), s	23.3	28.9	3.4	24.2	2.7	25.7	25.2	5.7
Green Ext Time (p_c), s	0.0	0.3	0.0	1.7	0.0	9.6	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	402	2005	592	423	1342	157	399	925	543	278	1074	431
Future Volume (vph)	402	2005	592	423	1342	157	399	925	543	278	1074	431
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	9.6
Total Split (s)	13.0	46.2		13.0	46.2	46.2	13.0	43.1		17.7	47.8	13.0
Total Split (%)	10.8%	38.5%		10.8%	38.5%	38.5%	10.8%	35.9%		14.8%	39.8%	10.8%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5		3.6	5.5	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5		4.6	6.5	4.6
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lag	Lag		Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	Max	None		Max	None	None	None	None		None	None	Max
Act Effct Green (s)	16.6	39.2	107.8	8.4	31.0	31.0	8.8	26.1	107.8	12.1	29.4	47.8
Actuated g/C Ratio	0.15	0.36	1.00	0.08	0.29	0.29	0.08	0.24	1.00	0.11	0.27	0.44
v/c Ratio	0.83	0.75	0.38	1.73	0.63	0.28	1.47	0.69	0.35	0.75	0.71	0.58
Control Delay	62.0	32.7	0.7	374.7	34.7	4.6	265.5	40.1	0.6	60.1	38.1	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.0	32.7	0.7	374.7	34.7	4.6	265.5	40.1	0.6	60.1	38.1	20.5
LOS	E	C	A	F	C	A	F	D	A	E	D	C
Approach Delay		30.3			107.0			76.7			37.3	
Approach LOS		C			F			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.73	
Intersection Signal Delay: 59.1	Intersection LOS: E
Intersection Capacity Utilization 94.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 10: Archibald Av. & Edison Av./Ontario Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	402	2005	592	423	1342	157	399	925	543	278	1074	431
Future Volume (veh/h)	402	2005	592	423	1342	157	399	925	543	278	1074	431
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	414	2067	0	436	1384	82	411	954	0	287	1107	222
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	512	2657		255	2053	435	270	1508		350	1539	683
Arrive On Green	0.16	0.35	0.00	0.08	0.27	0.27	0.08	0.26	0.00	0.10	0.27	0.27
Sat Flow, veh/h	3238	7600	1610	3238	7600	1610	3429	5700	1610	3429	5700	1586
Grp Volume(v), veh/h	414	2067	0	436	1384	82	411	954	0	287	1107	222
Grp Sat Flow(s),veh/h/ln	1619	1900	1610	1619	1900	1610	1714	1900	1610	1714	1900	1586
Q Serve(g_s), s	13.2	25.9	0.0	8.4	17.3	3.0	8.4	15.8	0.0	8.8	18.8	0.0
Cycle Q Clear(g_c), s	13.2	25.9	0.0	8.4	17.3	3.0	8.4	15.8	0.0	8.8	18.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	512	2657		255	2053	435	270	1508		350	1539	683
V/C Ratio(X)	0.81	0.78		1.71	0.67	0.19	1.52	0.63		0.82	0.72	0.33
Avail Cap(c_a), veh/h	512	2849		255	2849	604	270	1955		421	2206	869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	31.0	0.0	49.2	34.8	15.6	49.2	34.7	0.0	47.0	35.3	20.2
Incr Delay (d2), s/veh	12.9	1.3	0.0	336.0	0.4	0.2	253.4	0.4	0.0	8.8	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	11.2	0.0	15.1	7.6	1.5	12.9	6.8	0.0	4.0	8.2	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	32.3	0.0	385.1	35.2	15.8	302.5	35.1	0.0	55.8	35.9	20.5
LnGrp LOS	E	C		F	D	B	F	D		E	D	C
Approach Vol, veh/h		2481	A		1902			1365	A		1616	
Approach Delay, s/veh		36.3			114.5			115.6			37.3	
Approach LOS		D			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	34.7	13.0	43.5	14.9	35.3	21.5	35.0
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	6.5	* 6.5	4.6	6.2
Max Green Setting (Gmax), s	13.1	36.6	8.4	40.0	8.4	* 41	8.4	40.0
Max Q Clear Time (g_c+I1), s	10.8	17.8	10.4	27.9	10.4	20.8	15.2	19.3
Green Ext Time (p_c), s	0.1	5.6	0.0	9.4	0.0	7.7	0.0	9.5

Intersection Summary	
HCM 6th Ctrl Delay	71.5
HCM 6th LOS	E

Notes

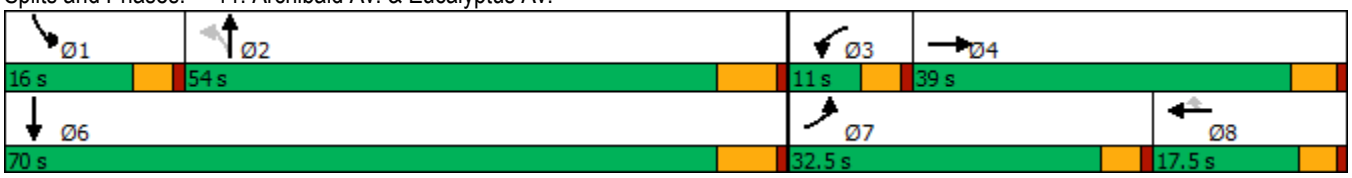
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

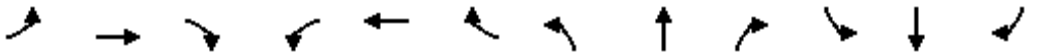
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	207	369	107	74	73	89	1543	184	1638
Future Volume (vph)	207	369	107	74	73	89	1543	184	1638
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Prot	NA
Protected Phases	7	4	3	8			2	1	6
Permitted Phases					8	2			
Detector Phase	7	4	3	8	8	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	30.6	23.2	9.5	14.5	14.5	32.5	32.5	9.6	24.5
Total Split (s)	32.5	39.0	11.0	17.5	17.5	54.0	54.0	16.0	70.0
Total Split (%)	27.1%	32.5%	9.2%	14.6%	14.6%	45.0%	45.0%	13.3%	58.3%
Yellow Time (s)	3.6	4.2	3.5	3.5	3.5	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.2	4.5	4.5	4.5	6.5	6.5	4.6	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	19.2	33.8	6.4	21.6	21.6	47.5	47.5	11.4	63.5
Actuated g/C Ratio	0.16	0.28	0.05	0.18	0.18	0.40	0.40	0.10	0.53
v/c Ratio	0.78	1.35	0.66	0.26	0.17	1.39	0.87	1.17	0.66
Control Delay	66.7	205.0	75.0	45.1	0.9	276.7	39.0	171.4	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.7	205.0	75.0	45.1	0.9	276.7	39.0	171.4	21.7
LOS	E	F	E	D	A	F	D	F	C
Approach Delay		172.5		46.3			50.8		36.0
Approach LOS		F		D			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.9	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 66.8	Intersection LOS: E
Intersection Capacity Utilization 103.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 11: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	369	305	107	74	73	89	1543	161	184	1638	102
Future Volume (veh/h)	207	369	305	107	74	73	89	1543	161	184	1638	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	213	380	314	110	76	56	92	1591	165	190	1689	105
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	241	272	225	159	363	307	134	1900	197	164	2656	165
Arrive On Green	0.14	0.28	0.28	0.05	0.19	0.19	0.40	0.40	0.40	0.10	0.53	0.53
Sat Flow, veh/h	1714	962	795	3238	1900	1610	253	4775	494	1714	4992	310
Grp Volume(v), veh/h	213	0	694	110	76	56	92	1152	604	190	1169	625
Grp Sat Flow(s),veh/h/ln	1714	0	1757	1619	1900	1610	253	1729	1811	1714	1729	1844
Q Serve(g_s), s	14.6	0.0	33.8	4.0	4.0	3.5	34.9	35.9	36.0	11.4	28.5	28.6
Cycle Q Clear(g_c), s	14.6	0.0	33.8	4.0	4.0	3.5	47.5	35.9	36.0	11.4	28.5	28.6
Prop In Lane	1.00		0.45	1.00		1.00	1.00		0.27	1.00		0.17
Lane Grp Cap(c), veh/h	241	0	498	159	363	307	134	1376	721	164	1840	981
V/C Ratio(X)	0.88	0.00	1.39	0.69	0.21	0.18	0.68	0.84	0.84	1.16	0.64	0.64
Avail Cap(c_a), veh/h	401	0	498	176	363	307	134	1376	721	164	1840	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	0.0	42.8	55.9	40.7	40.5	45.6	32.4	32.5	54.0	19.7	19.8
Incr Delay (d2), s/veh	7.0	0.0	189.6	7.5	0.3	0.3	24.7	6.2	11.2	120.0	1.7	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	40.5	1.8	1.9	1.4	3.6	15.0	16.7	10.2	10.6	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.3	0.0	232.4	63.4	41.0	40.8	70.3	38.6	43.7	173.9	21.4	22.9
LnGrp LOS	E	A	F	E	D	D	E	D	D	F	C	C
Approach Vol, veh/h		907			242			1848			1984	
Approach Delay, s/veh		191.3			51.1			41.8			36.5	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	16.0	54.0	10.3	39.0		70.0	21.4	28.0				
Change Period (Y+Rc), s	4.6	6.5	4.5	5.2		6.5	4.6	* 5.2				
Max Green Setting (Gmax), s	11.4	47.5	6.5	33.8		63.5	27.9	* 13				
Max Q Clear Time (g_c+I1), s	13.4	49.5	6.0	35.8		30.6	16.6	6.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0		14.5	0.2	0.2				

Intersection Summary			
HCM 6th Ctrl Delay		67.4	
HCM 6th LOS		E	

Notes

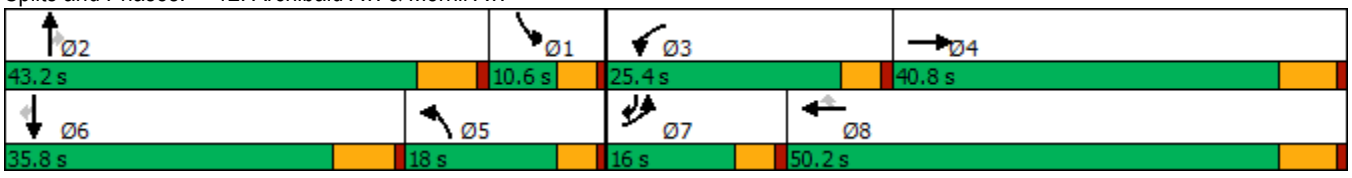
User approved volume balancing among the lanes for turning movement.

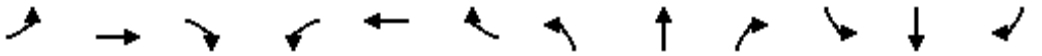
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	642	100	862	145	64	67	379	2207	401	88	1670	330
Future Volume (vph)	642	100	862	145	64	67	379	2207	401	88	1670	330
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			Free			8			2			6
Detector Phase	7	4		3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	16.2		9.6	49.2	49.2	9.6	36.5	36.5	9.6	16.5	9.6
Total Split (s)	16.0	40.8		25.4	50.2	50.2	18.0	43.2	43.2	10.6	35.8	16.0
Total Split (%)	13.3%	34.0%		21.2%	41.8%	41.8%	15.0%	36.0%	36.0%	8.8%	29.8%	13.3%
Yellow Time (s)	3.6	5.2		3.6	5.2	5.2	3.6	5.5	5.5	3.6	5.5	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2		4.6	6.2	6.2	4.6	6.5	6.5	4.6	6.5	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	None
Act Effct Green (s)	11.7	14.6	90.3	13.4	16.3	16.3	13.8	40.5	40.5	5.9	30.2	45.0
Actuated g/C Ratio	0.13	0.16	1.00	0.15	0.18	0.18	0.15	0.45	0.45	0.07	0.33	0.50
v/c Ratio	1.49	0.34	0.55	0.59	0.19	0.16	1.50	0.89	0.44	0.43	0.90	0.38
Control Delay	263.9	37.7	1.4	48.5	32.2	0.8	275.0	32.1	4.8	51.9	38.7	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	263.9	37.7	1.4	48.5	32.2	0.8	275.0	32.1	4.8	51.9	38.7	6.5
LOS	F	D	A	D	C	A	F	C	A	D	D	A
Approach Delay		108.7			33.1			59.3			34.2	
Approach LOS		F			C			E			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.50	
Intersection Signal Delay: 62.1	Intersection LOS: E
Intersection Capacity Utilization 94.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	642	100	862	145	64	67	379	2207	401	88	1670	330
Future Volume (veh/h)	642	100	862	145	64	67	379	2207	401	88	1670	330
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	662	103	0	149	66	30	391	2275	265	91	1722	170
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	454	270		183	221	187	267	2433	687	226	1942	762
Arrive On Green	0.13	0.14	0.00	0.11	0.12	0.12	0.16	0.43	0.43	0.07	0.34	0.34
Sat Flow, veh/h	3429	1900	1610	1714	1900	1610	1714	5700	1610	3238	5700	1610
Grp Volume(v), veh/h	662	103	0	149	66	30	391	2275	265	91	1722	170
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	1900	1610	1714	1900	1610	1619	1900	1610
Q Serve(g_s), s	11.4	4.2	0.0	7.3	2.7	1.1	13.4	32.7	5.7	2.3	24.5	1.9
Cycle Q Clear(g_c), s	11.4	4.2	0.0	7.3	2.7	1.1	13.4	32.7	5.7	2.3	24.5	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	454	270		183	221	187	267	2433	687	226	1942	762
V/C Ratio(X)	1.46	0.38		0.81	0.30	0.16	1.46	0.94	0.39	0.40	0.89	0.22
Avail Cap(c_a), veh/h	454	764		415	972	824	267	2433	687	226	1942	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	33.5	0.0	37.6	34.8	20.8	36.3	23.5	5.9	38.3	26.8	3.8
Incr Delay (d2), s/veh	217.4	0.9	0.0	3.3	0.7	0.4	228.2	8.3	1.6	0.4	6.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.2	1.9	0.0	3.1	1.3	0.6	22.0	14.1	3.4	0.9	10.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	254.7	34.3	0.0	40.9	35.5	21.2	264.5	31.8	7.5	38.7	33.2	4.5
LnGrp LOS	F	C		D	D	C	F	C	A	D	C	A
Approach Vol, veh/h		765	A		245			2931			1983	
Approach Delay, s/veh		225.0			37.0			60.7			31.0	
Approach LOS		F			D			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	43.2	13.8	18.4	18.0	35.8	16.0	16.2
Change Period (Y+Rc), s	4.6	6.5	4.6	6.2	4.6	6.5	4.6	6.2
Max Green Setting (Gmax), s	6.0	36.7	20.8	34.6	13.4	29.3	11.4	44.0
Max Q Clear Time (g_c+I1), s	4.3	34.7	9.3	6.2	15.4	26.5	13.4	4.7
Green Ext Time (p_c), s	0.0	1.8	0.1	0.4	0.0	2.3	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	71.0
HCM 6th LOS	E

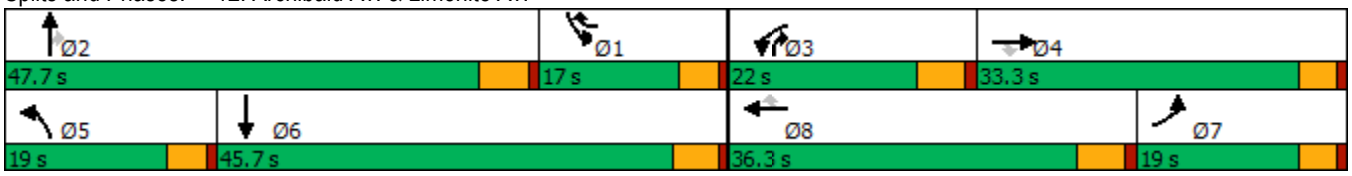
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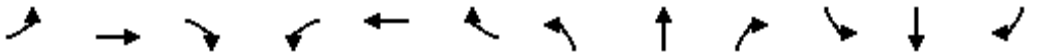
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	369	780	134	469	996	956	135	1762	446	433	1784
Future Volume (vph)	369	780	134	469	996	956	135	1762	446	433	1784
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4		3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	4	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	9.5	26.5	26.5	10.3	36.3	10.5	9.5	46.3	10.3	10.5	27.0
Total Split (s)	19.0	33.3	33.3	22.0	36.3	17.0	19.0	47.7	22.0	17.0	45.7
Total Split (%)	15.8%	27.8%	27.8%	18.3%	30.3%	14.2%	15.8%	39.8%	18.3%	14.2%	38.1%
Yellow Time (s)	3.5	3.5	3.5	4.3	4.3	3.5	3.5	4.3	4.3	3.5	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	5.3	5.3	4.5	4.5	5.3	5.3	4.5	5.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	None	None	Max	None	None	None	None	Max	None	None
Act Effct Green (s)	14.5	28.8	28.8	16.7	31.0	48.8	13.1	42.4	59.1	12.5	42.1
Actuated g/C Ratio	0.12	0.24	0.24	0.14	0.26	0.41	0.11	0.35	0.49	0.10	0.35
v/c Ratio	0.91	0.94	0.28	1.95	1.11	1.39	0.72	1.00	0.55	1.24	1.23
Control Delay	78.2	64.0	5.8	469.5	107.3	211.5	71.9	60.3	11.3	173.3	141.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.2	64.0	5.8	469.5	107.3	211.5	71.9	60.3	11.3	173.3	141.9
LOS	E	E	A	F	F	F	E	E	B	F	F
Approach Delay		62.0			218.6			51.7			147.2
Approach LOS		E			F			D			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.95	
Intersection Signal Delay: 128.6	Intersection LOS: F
Intersection Capacity Utilization 115.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	780	134	469	996	956	135	1762	446	433	1784	338
Future Volume (veh/h)	369	780	134	469	996	956	135	1762	446	433	1784	338
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	384	812	15	489	1038	498	141	1835	465	451	1858	163
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	422	863	385	251	929	581	169	1825	783	364	1793	157
Arrive On Green	0.12	0.24	0.24	0.14	0.26	0.26	0.09	0.35	0.35	0.10	0.37	0.37
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	5187	1590	3510	4857	424
Grp Volume(v), veh/h	384	812	15	489	1038	498	141	1835	465	451	1320	701
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	1729	1590	1755	1729	1824
Q Serve(g_s), s	13.0	26.6	0.9	16.7	31.0	22.0	9.2	42.4	13.8	12.5	44.5	44.5
Cycle Q Clear(g_c), s	13.0	26.6	0.9	16.7	31.0	22.0	9.2	42.4	13.8	12.5	44.5	44.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	422	863	385	251	929	581	169	1825	783	364	1276	673
V/C Ratio(X)	0.91	0.94	0.04	1.95	1.12	0.86	0.84	1.01	0.59	1.24	1.03	1.04
Avail Cap(c_a), veh/h	422	863	385	251	929	581	218	1825	783	364	1276	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	45.0	35.2	51.9	44.8	35.6	53.7	39.0	8.3	54.0	38.0	38.0
Incr Delay (d2), s/veh	26.0	18.0	0.0	441.7	67.4	11.6	19.3	22.4	1.2	128.7	34.6	45.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	13.6	0.3	38.1	21.9	9.0	5.0	20.6	3.9	11.8	23.4	26.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.4	63.0	35.3	493.6	112.2	47.2	73.1	61.4	9.5	182.7	72.6	83.8
LnGrp LOS	E	E	D	F	F	D	E	F	A	F	F	F
Approach Vol, veh/h		1211			2025			2441			2472	
Approach Delay, s/veh		67.6			188.3			52.2			95.8	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	47.7	22.0	33.3	15.7	49.5	19.0	36.3
Change Period (Y+Rc), s	5.0	* 5.3	5.3	4.5	4.5	5.0	4.5	5.3
Max Green Setting (Gmax), s	12.5	* 42	16.7	28.8	14.5	40.7	14.5	31.0
Max Q Clear Time (g_c+I1), s	14.5	44.4	18.7	28.6	11.2	46.5	15.0	33.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	101.5
HCM 6th LOS	F

Notes

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

APPENDIX 8.9:

HORIZON YEAR WITH PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project + IMPROVEMENTS
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.893	5011	7146	0.70	66.2	25.2	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.893	0.935	5011	1002	7200	2100	0.70	0.48	63.4	59.1	26.3	28.9	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.877	4034	7146	0.56	68.1	19.8	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.877	0.935	5162	1128	7200	1900	0.72	0.59	60.6	58.5	28.4	26.6	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.893	5143	7146	0.72	65.8	26.0	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.893	0.962	6346	1203	7200	2100	0.88	0.57	58.0	55.4	36.5	32.1	D

Segment 7: Basic

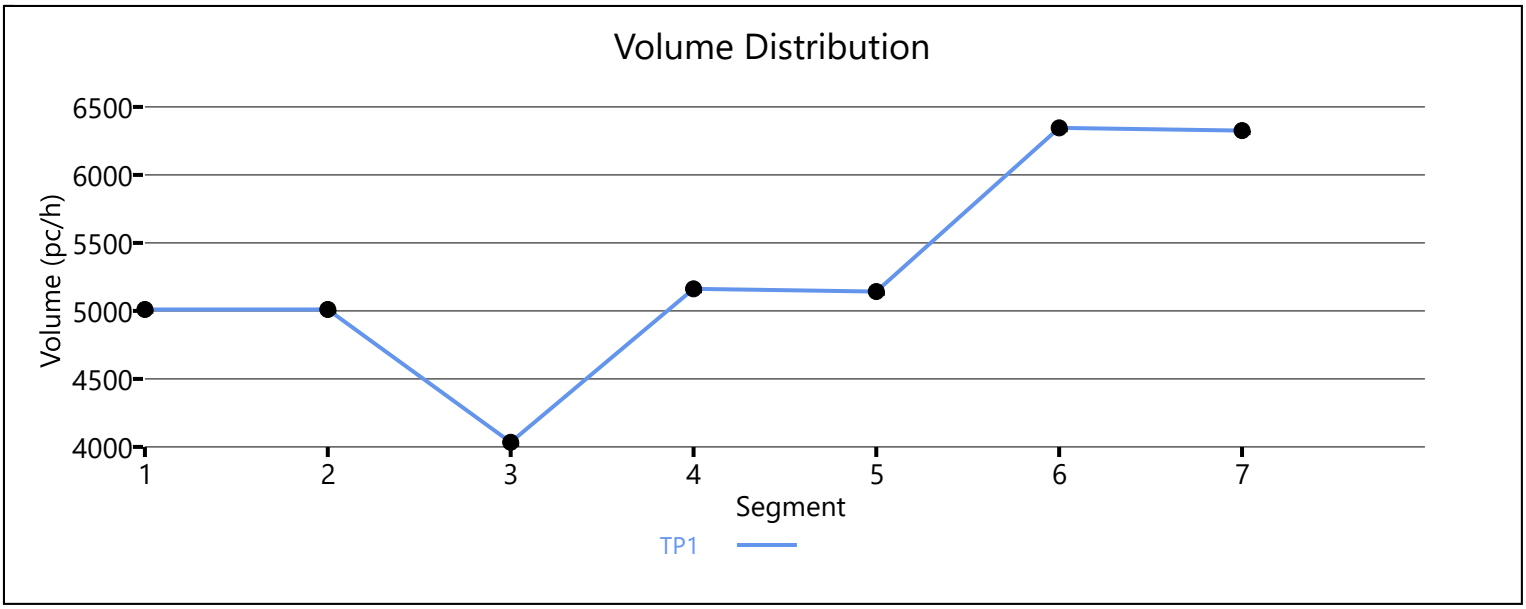
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.909	6326	7146	0.89	59.5	35.4	E

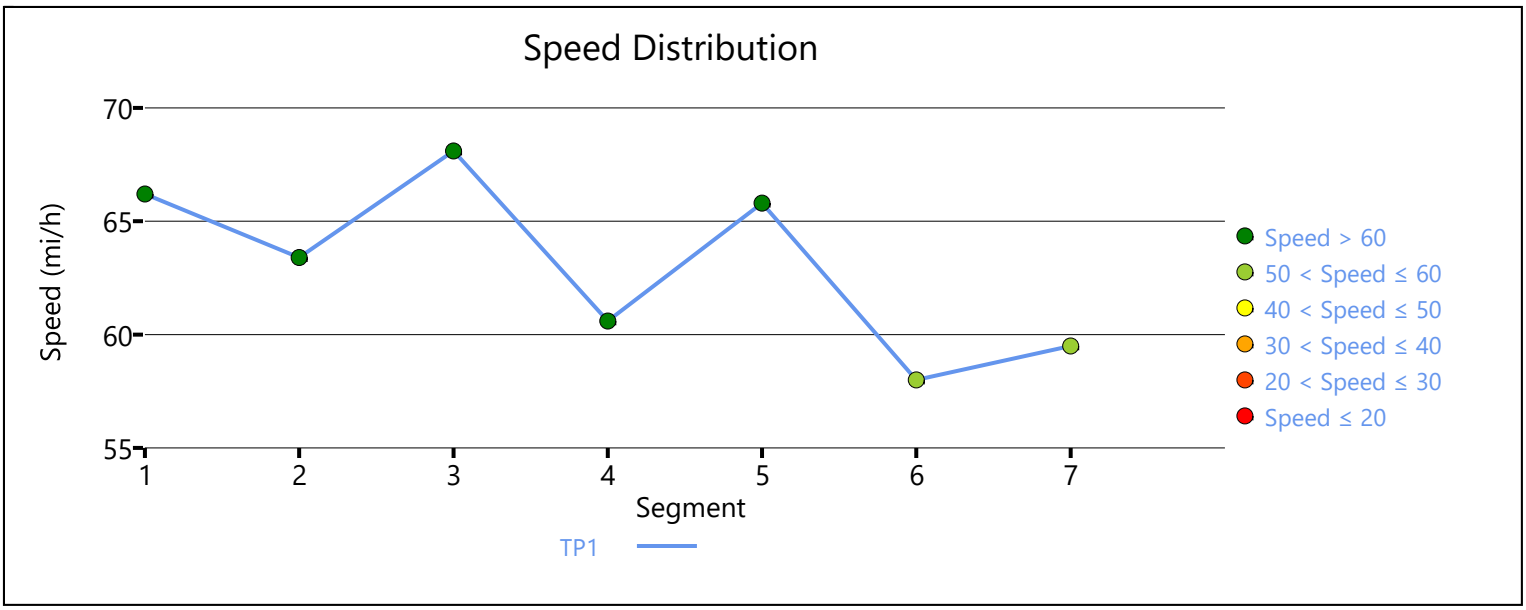
Facility Time Period Results

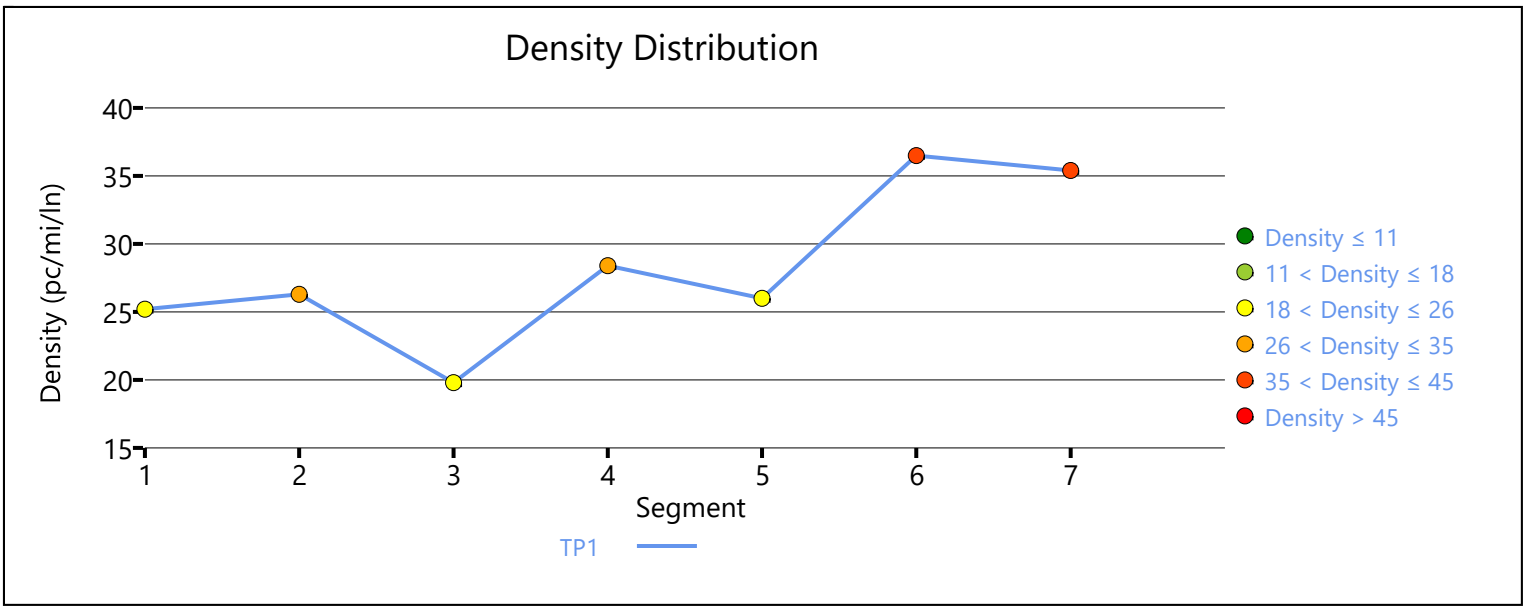
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	62.5	28.0	25.0	1.8	D

Facility Overall Results

Space Mean Speed, mi/h	62.5	Density, veh/mi/ln	25.0
Average Travel Time, min	1.8	Density, pc/mi/ln	28.0







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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project + IMPROVEMENTS
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	4637	7146	0.65	67.3	23.0	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.952	4637	1622	7200	2100	0.64	0.77	61.7	57.6	25.1	29.1	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3003	7146	0.42	68.2	14.7	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	3691	688	7200	1900	0.51	0.36	63.0	61.1	19.5	18.5	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3692	7146	0.52	68.2	18.0	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.980	4107	415	7200	2100	0.57	0.20	64.0	62.7	21.4	18.0	B

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4111	7146	0.58	68.1	20.1	C

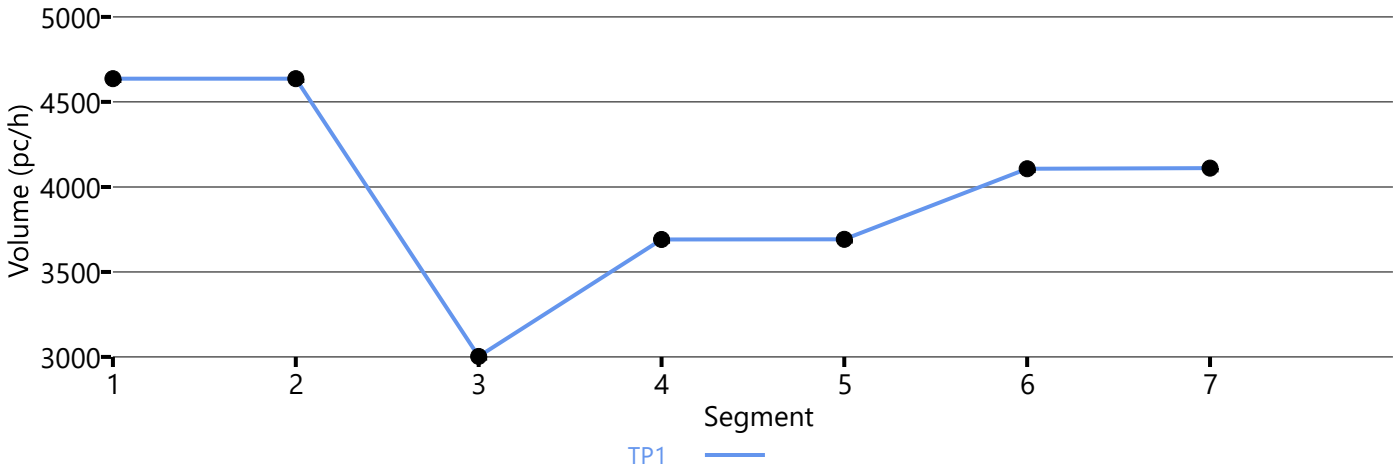
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.5	20.7	20.1	1.6	C

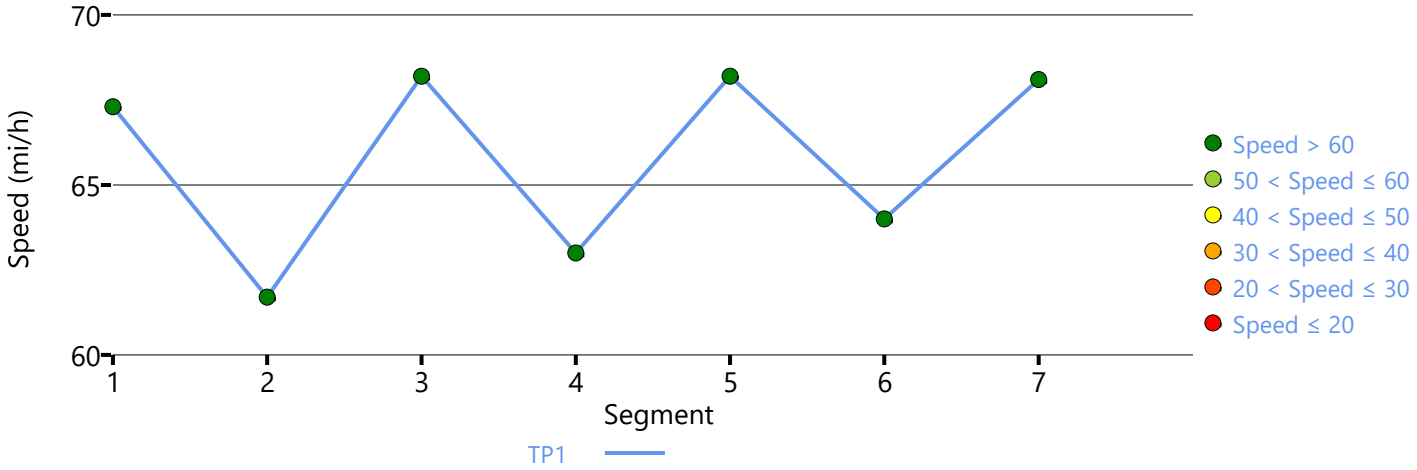
Facility Overall Results

Space Mean Speed, mi/h	65.5	Density, veh/mi/ln	20.1
Average Travel Time, min	1.6	Density, pc/mi/ln	20.7

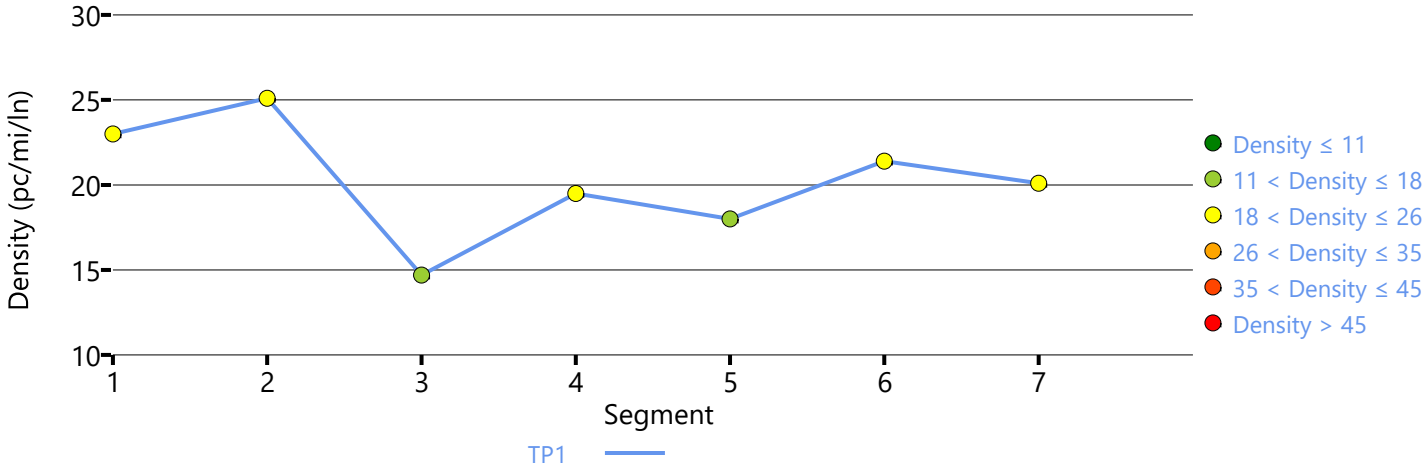
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project + IMPROVEMENTS
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 SB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1920	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	South of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.870	3922	7146	0.55	68.2	19.2	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.870	0.980	3922	1160	7200	2100	0.54	0.55	62.7	58.7	20.9	24.4	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.826	2754	7146	0.39	68.2	13.5	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.826	0.971	3717	963	7200	1900	0.52	0.51	62.8	60.9	19.7	19.4	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.862	3724	7146	0.52	68.2	18.2	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.862	0.990	4933	1209	7200	2100	0.69	0.58	61.9	60.2	26.6	25.4	C

Segment 7: Basic

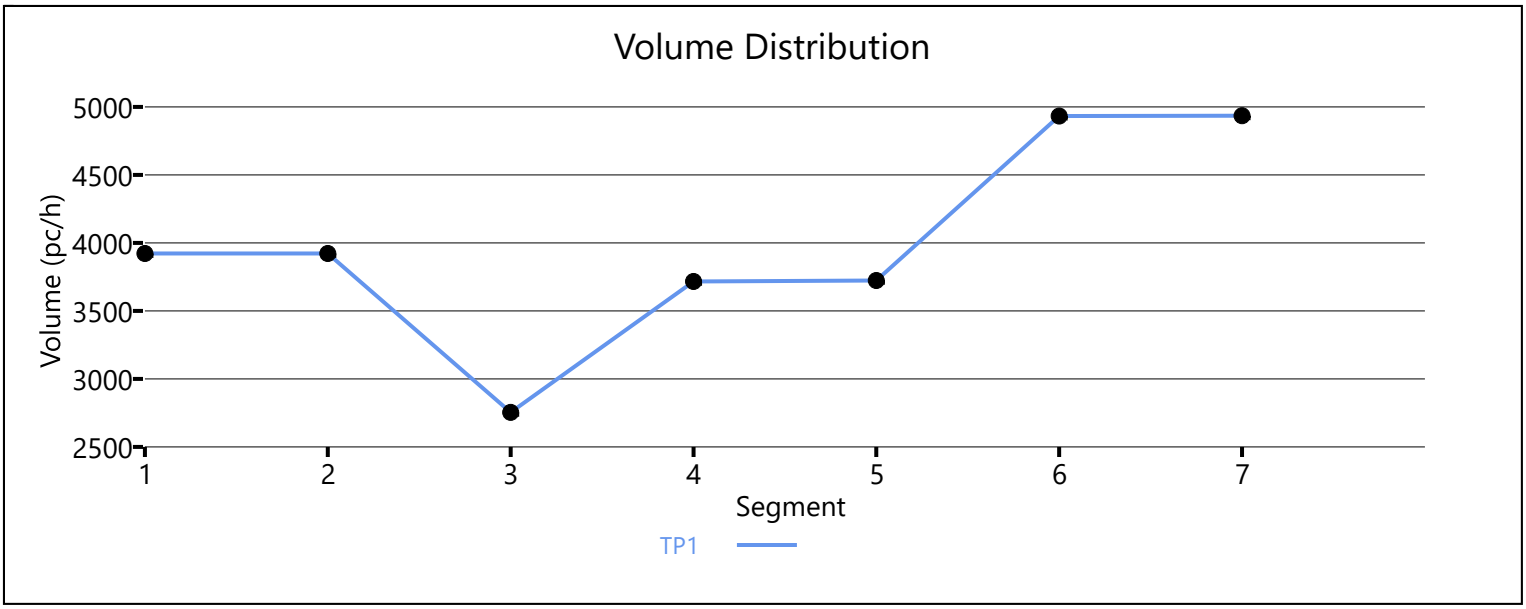
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.893	4935	7146	0.69	66.5	24.7	C

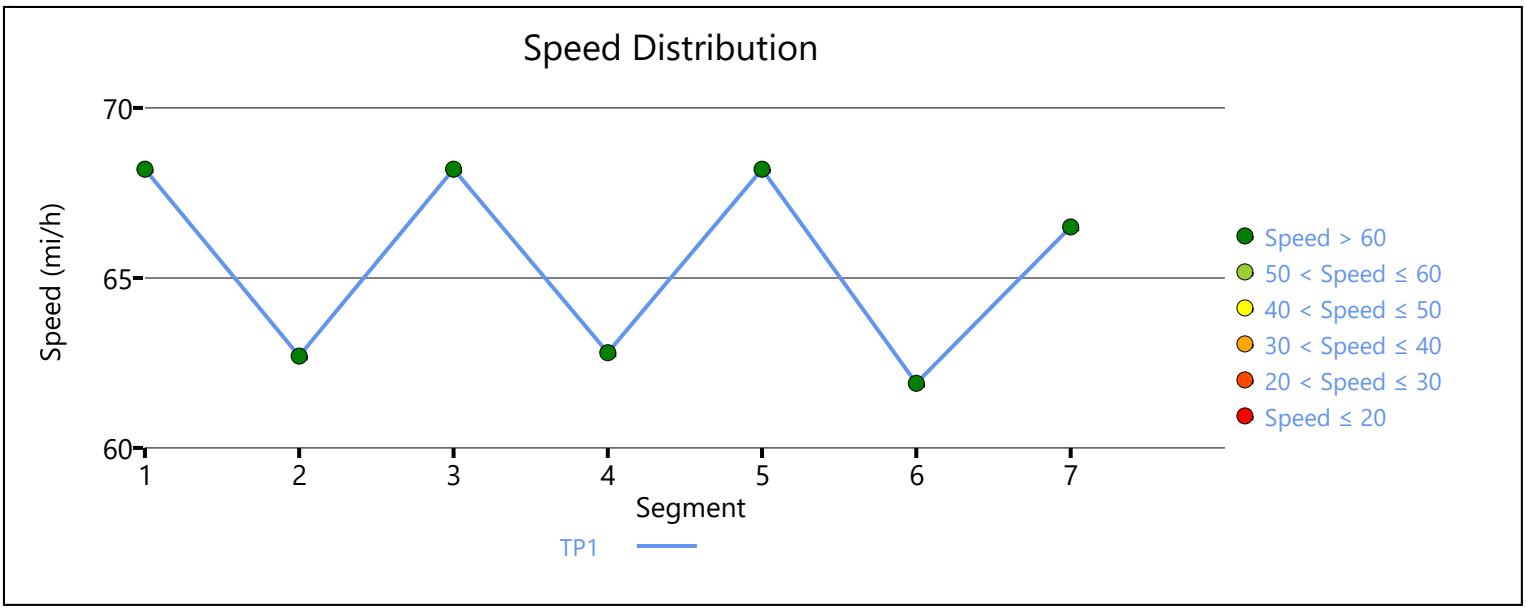
Facility Time Period Results

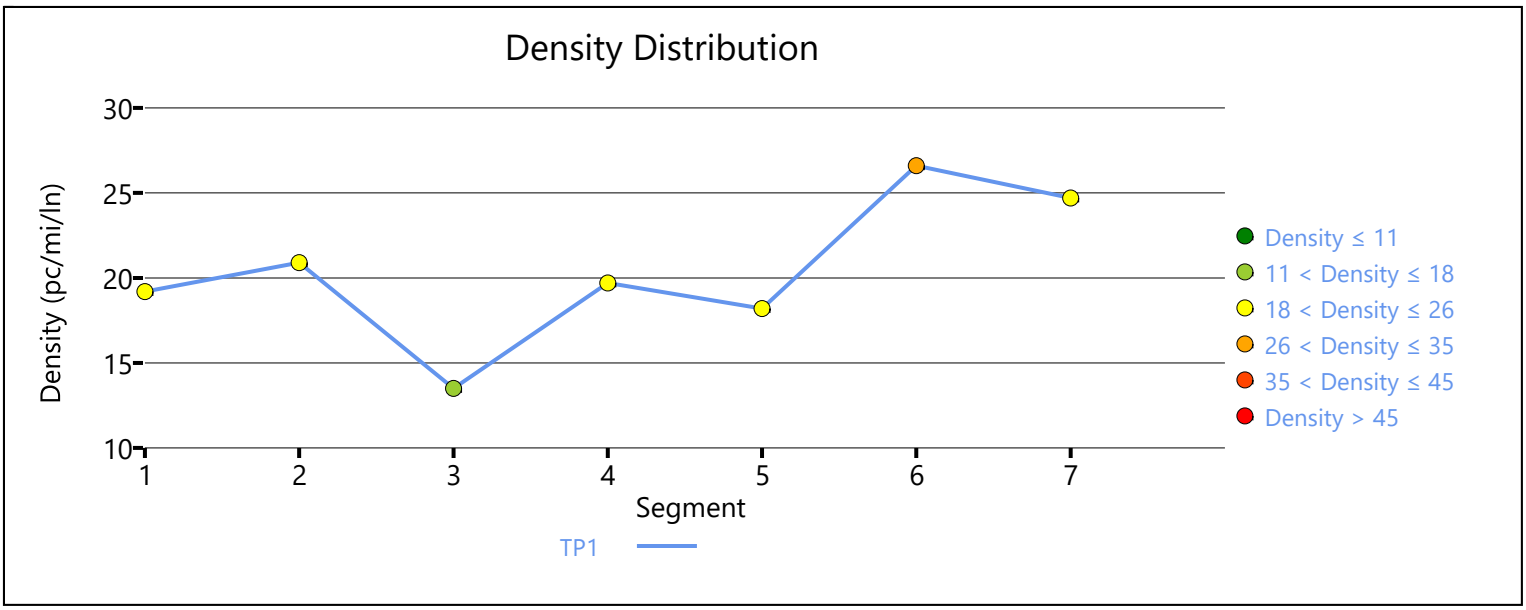
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.3	20.3	17.5	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	65.3	Density, veh/mi/ln	17.5
Average Travel Time, min	1.7	Density, pc/mi/ln	20.3







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HCS7 Freeway Facilities Report

Project Information

Analyst	LC	Date	7/16/2019
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project + IMPROVEMENTS
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	JN:11963 - I-15 NB, Limonite		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of Limonite	1500	3
2	Diverge	Diverge	Off-Ramp at Limonite	1500	3
3	Basic	Basic	Between	1000	3
4	Merge	Merge	Loop On-Ramp at Limonite	1000	3
5	Basic	Basic	Between	1000	3
6	Merge	Merge	On-Ramp at Limonite	1500	3
7	Basic	Basic	North of Limonite	1500	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4554	7146	0.64	67.5	22.5	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	4554	1887	7200	2100	0.63	0.90	60.9	56.9	24.9	29.4	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	2691	7146	0.38	68.2	13.2	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.943	3073	382	7200	1900	0.43	0.20	63.7	61.6	16.1	14.8	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	3065	7146	0.43	68.2	15.0	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.980	3504	439	7200	2100	0.49	0.21	64.6	63.2	18.1	15.2	B

Segment 7: Basic

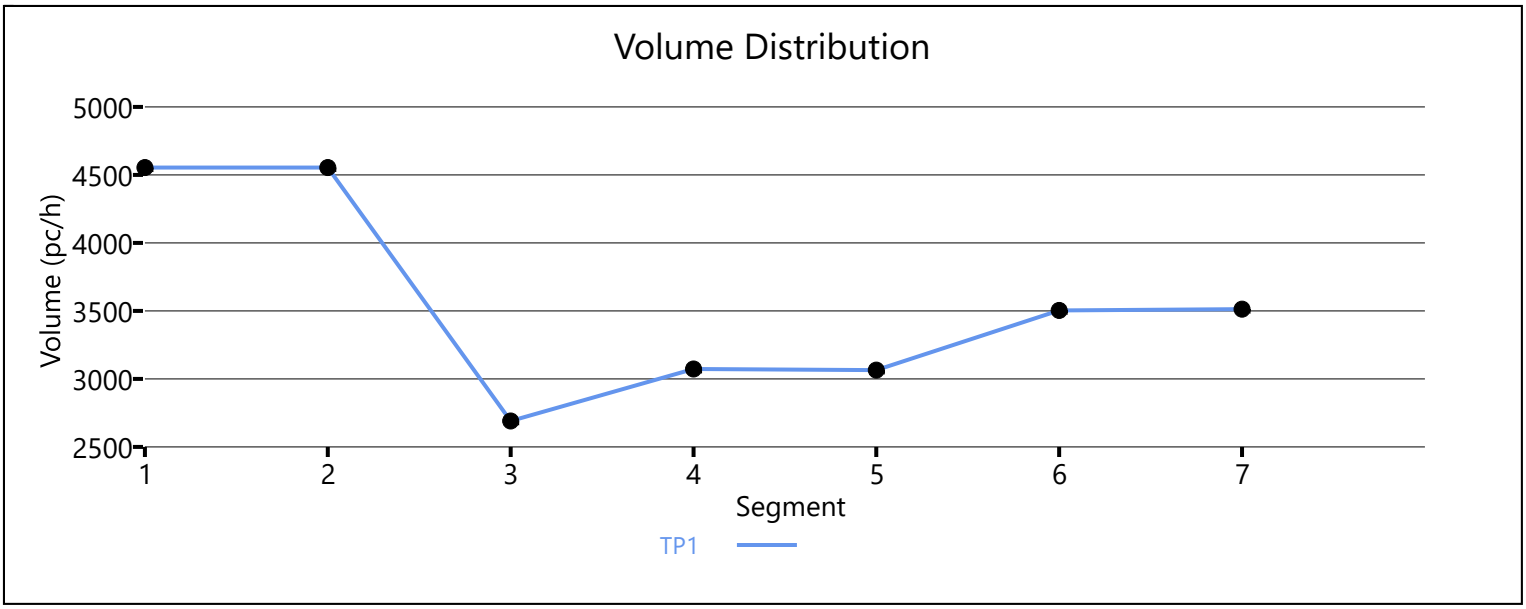
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	3513	7146	0.49	68.2	17.2	B

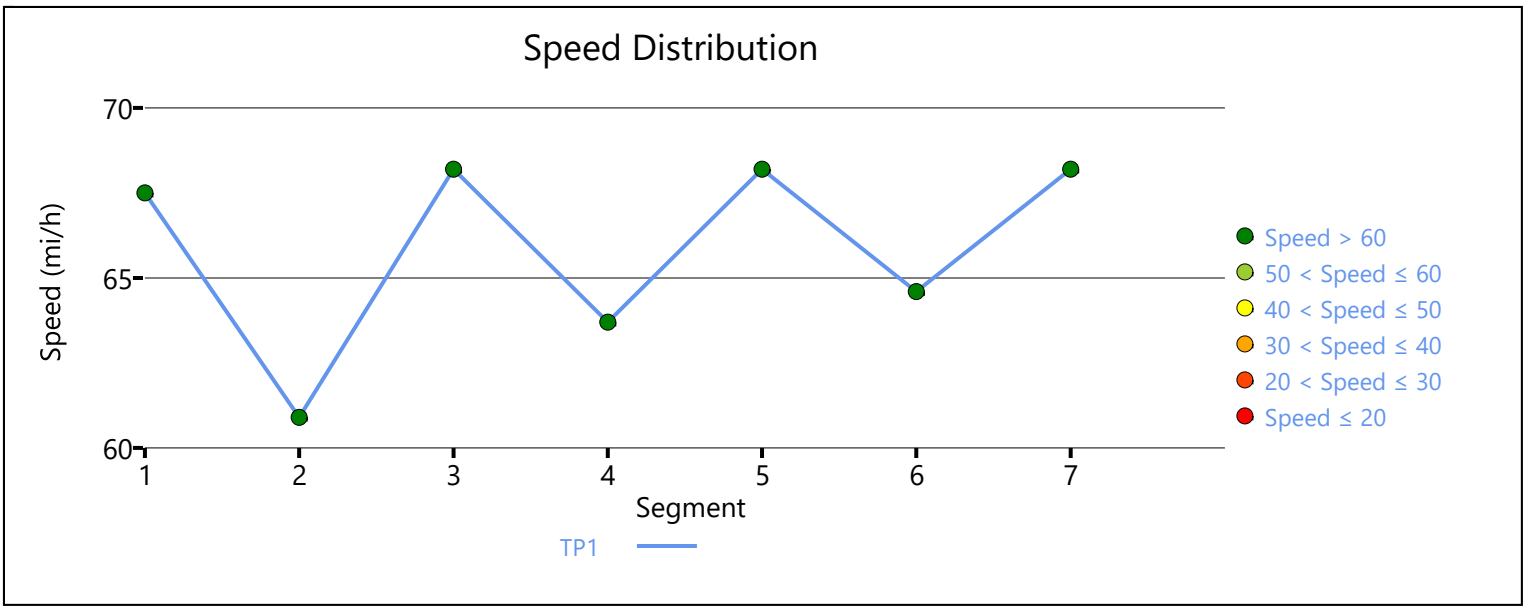
Facility Time Period Results

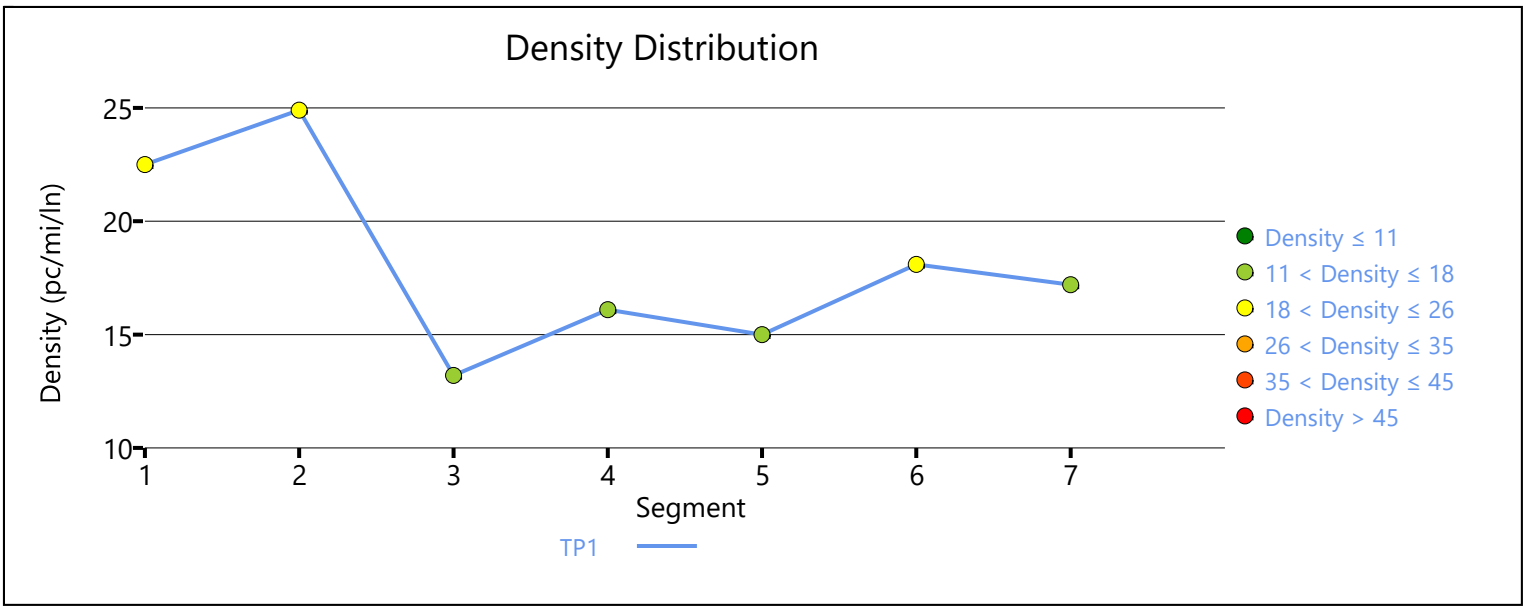
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.4	18.7	18.1	1.6	C

Facility Overall Results

Space Mean Speed, mi/h	65.4	Density, veh/mi/ln	18.1
Average Travel Time, min	1.6	Density, pc/mi/ln	18.7







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urbanxroads.com

October 25, 2019

Mr. Ray Polverini
Orbis Real Estate Partners
280 Newport Center Drive, Suite 240
Newport Beach, CA 92660

SUBJECT: THE HOMESTEAD VEHICLE MILES TRAVELLED (VMT) ASSESSMENT

Dear Mr. Ray Polverini:

The following Vehicle Miles Travelled (VMT) Assessment has been prepared for the proposed The Homestead (referred to as "Project"), which is located west of Archibald Avenue and on either side of Limonite Avenue, in the City of Eastvale (City). The Project is proposed to consist of the following uses (see Exhibit 1):

- 560,291 square feet of warehousing use (Buildings 1 through 6)
- 520,317 square feet of high-cube fulfillment center use (Building 7)

BACKGROUND

Senate Bill 743 (SB 743), approved in 2013, endeavors to change the way transportation impacts will be determined according to the California Environmental Quality Act (CEQA). The Office of Planning and Research (OPR) has recommended the use of VMT as the replacement for automobile delay-based level of service (LOS). As of December 2018, the Natural Resources Agency finalized updates to CEQA Guidelines to incorporate SB 743 (i.e., VMT). While a lead agency has the option to immediately apply the new VMT based analysis methodology and thresholds for the purposes of evaluating transportation impacts, statewide application of the new guidelines is required July 1, 2020.

The OPR published an updated Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018, which provided guidance in evaluating transportation impacts based on VMT. The OPR's current Technical Advisory has the following recommended numeric thresholds for residential, office and retail projects:

- For residential projects, a proposed project exceeding a level of 15% below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as City VMT per capita.
- For office projects, a proposed project exceeding a level of 15% below existing regional VMT per employee may indicate a significant transportation impact.
- For retail projects, a net increase in total VMT may indicate a significant transportation impact.
- Numerical thresholds are not provided for other project types such as industrial uses.

Furthermore, the Western Riverside Council of Governments (WRCOG) recently published a SB 743 Implementation Pathway Document Package in March 2019 ("WRCOG Document"). The WRCOG Document includes recommendations on VMT assessment methodology, thresholds of significance and examples of potential mitigation measures.

The WRCOG Document recommends use of the Riverside County Transportation Analysis Model (RivTAM) for VMT impact analysis in the WRCOG region. RivTAM is a sub-regional travel demand model based on the regional travel demand model maintained by Southern California Association of Governments (SCAG). In addition, the following thresholds to determine significant transportation impacts based on VMT were presented as part of the SB 743 Implementation Pathway roll-out:

- Below City-wide average VMT
- Below WRCOG regional average VMT

However, it is our understanding that as of July 2019, the City of Eastvale has not elected to adopt VMT thresholds of significance for purposes of determining transportation impacts under CEQA and has instead elected to continue to use LOS in the City of Eastvale. As such, the information presented in this memo are for informational purposes only.

VMT ANALYSIS

The calculation of VMT for a development project has two components – the total number of vehicle trips generated and the average trip length of each vehicle. The RivTAM is a useful tool to estimate the average trip length as it takes into account interaction between employment centers and housing areas based on socio-economic data such as population, households, employment and others. The vehicle trips produced by a proposed development Project are typically based on the type and size of the proposed development and trip generation rates published in Institute Transportation Engineers (ITE) Trip Generation Manual. The use of ITE based trip rates is typically preferred to ensure consistency with other technical reports such as noise, air quality and greenhouse gas analyses.

AVERAGE TRIP LENGTH

To calculate average trip length, a select-zone model run for the traffic analysis zone (TAZ) in which the Project is located was conducted using RivTAM. Where applicable, adjustments were made to the socio-economic data (i.e., number of employees) to reflect the Project's industrial warehouse land use. Socio-economic data inputs were derived based on Riverside County General Plan, Appendix E-2: Socioeconomic Build-out Assumptions and Methodology.

RivTAM was run to calculate the average trip length for both the base year (2012) and horizon year (2040) scenarios.

Table 1 provides a summary of average trip length for the Project TAZ. As shown on Table 1, the average trip length based on RivTAM was 14.4 miles for automobiles and 36.2 miles for heavy trucks.

TABLE 1: AVERAGE TRIP LENGTH

Vehicle Type	Average Trip Length (Miles)
Automobiles	14.4
Heavy Trucks	36.2

TRIP GENERATION

The daily vehicle trips for the Project have been calculated based on trip generation rates consistent with the ITE Trip Generation Manual, 10th Edition (2017). As shown on Table 2, the proposed Project is anticipated to generate a net total of 2,086 trips per day with 1,696 daily automobile trips and 390 daily truck trips.

TABLE 2: PROJECT TRIP GENERATION SUMMARY[1]

Project	Quantity	Units[2]	Daily[3]
Warehousing	560.291	TSF	
High-Cube Fulfillment Center	520.317	TSF	
Automobiles:			1,696
Truck Trips (Actual Vehicles):			390
		Project Trips	2,086

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

[2] TSF = thousand square feet

[3] Source: The Homestead Traffic Impact Analysis (October 2019, Urban Crossroads, Inc.)

PROJECT VMT

Table 3 provides a summary of Project VMT for passenger cars and trucks. As shown on Table 3, the estimated VMT for the Project is 24,422 vehicle-miles per day for automobiles and 14,118 vehicle-miles per day for trucks resulting in a total VMT of 38,540 vehicle-miles.

TABLE 3: PROJECT VMT

Vehicle Type	Project Trip Generation (Daily)	Average Trip Length (Miles)	Project VMT (Vehicle-Miles)
Automobiles	1,696	14.4	24,422
Trucks	390	36.2	14,118
Total	2,086	18.5	38,540

PROJECT VMT/SERVICE POPULATION

Service Population (SP) is defined as the sum of residents and employees. Since the Project does not have any residential component, the Project SP consists of employees only. Because the tenant of the Project's building is not yet known, the number of jobs that the Project would generate cannot be precisely determined; therefore, for purposes of this analysis, employment estimates were calculated using data and average employment density factors utilized in the County of Riverside General Plan.

The General Plan estimated that Light Industrial (LI) uses would employ one (1) worker for every 1,030 SF of building area (Riverside County General Plan, Appendix E-2, Table E-5). Based on this employment generation rate, the Project is expected to create approximately 1,049 new recurring jobs. As shown on Table 4, the Project's VMT/SP is 36.74.

TABLE 4: PROJECT VMT/SP

Project Employment	1,049
Project VMT	38,540
Project VMT/Employee	36.74

CITY OF EASTVALE AVERAGE VMT/SP

The average VMT/SP for the City of Eastvale was calculated based on jurisdictional VMT/SP data for 2012 and 2040 provided by WRCOG. The 2012 and 2040 jurisdictional VMT data provided by WRCOG were derived from the RivTAM model.

The Baseline (2019) average VMT/SP was calculated by linear interpolation between 2012 and 2040 data for unincorporated WRCOG region of Riverside County; Baseline (2019) average VMT/SP is 28.3.

FINDINGS

The Project generates 36.74 VMT/SP, which is 8.44 VMT/SP higher than the 28.3 Baseline (2019) average VMT/SP estimated for the City of Eastvale. The Project's VMT/SP is 29.8% higher than Baseline (2019) average VMT/SP for the City of Eastvale.

If you have any questions, please contact me directly at (949) 336-5992.

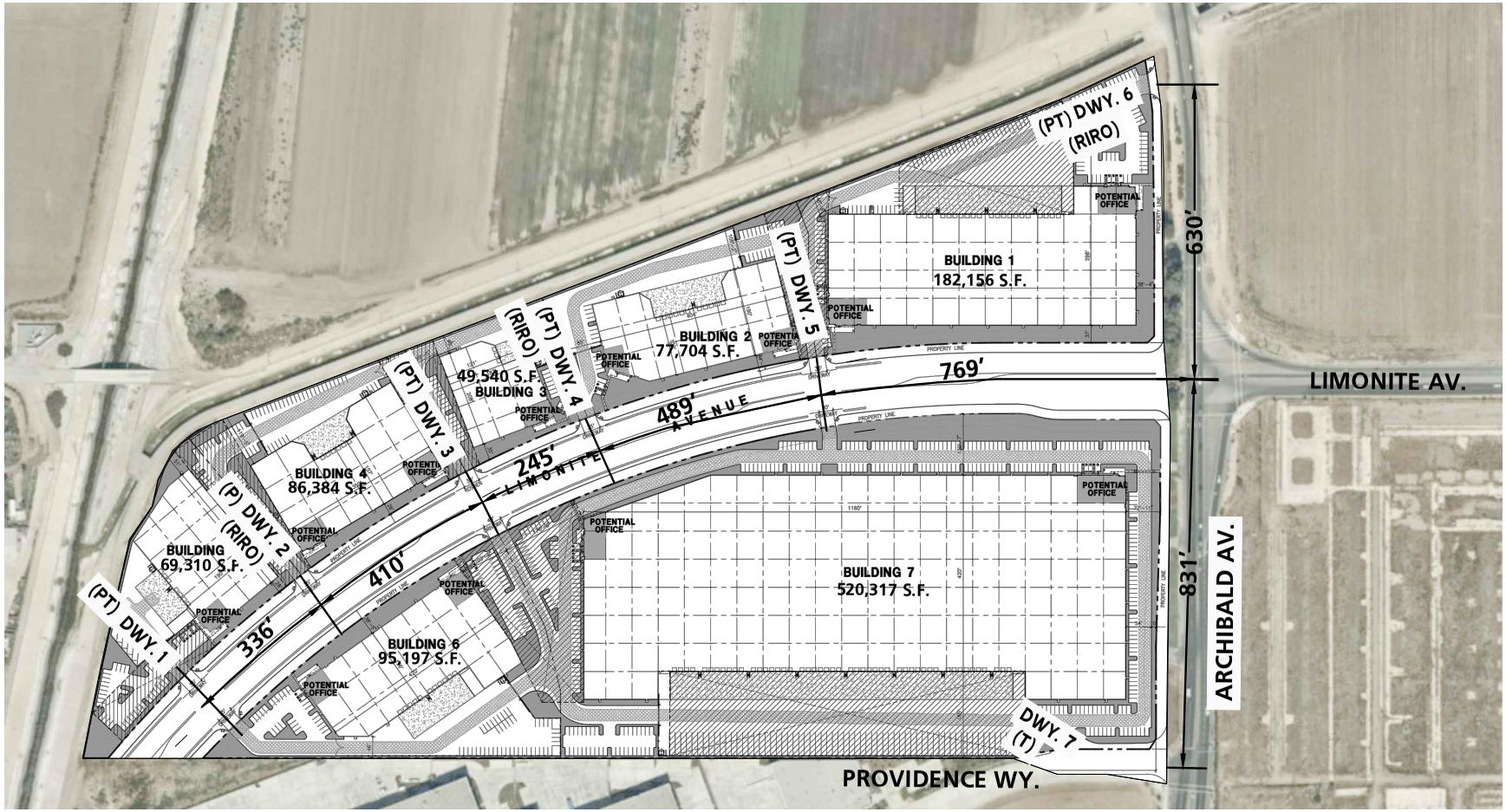
Respectfully submitted,

URBAN CROSSROADS, INC.

Aric Evatt, PTP
President

Pranesh Tarikere. PE
Senior Engineer

EXHIBIT 1: PRELIMINARY SITE PLAN



LEGEND:

RIRO	= RIGHT-IN/RIGHT-OUT ONLY ACCESS
P	= PASSENGER CARS ONLY
T	= TRUCKS ONLY
PT	= PASSENGER CARS AND TRUCKS

NOTE: UNLESS NOTED, ALL DRIVEWAYS ARE ASSUMED TO BE FULL ACCESS.

N