Appendix 10

Traffic Impact Analysis

BEYOND FOOD MART (CLINTON KEITH ROAD & JANA LANE) REVISED TRAFFIC IMPACT ANALYSIS

City of Wildomar

November 30, 2022

ganddini

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

BEYOND FOOD MART (CLINTON KEITH ROAD & JANA LANE) REVISED TRAFFIC IMPACT ANALYSIS

City of Wildomar

November 30, 2022

prepared by

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Project No. 19510

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EXECUTIVE SUMMARY

The approximately 4.35-acre project site is located on the southeast corner of Jana Lane and Clinton Keith Road in the City of Wildomar.

The currently vacant site is proposed to include a 16 fueling position convenience store/gas station, and automated car wash, 3,800 square feet of fast-food restaurant with drive-thru, and 14,500 square feet of general office. The project site proposes one access driveway to Clinton Keith Road and three access driveways to Jana Lane. The project driveway on Clinton Keith Road will be restricted to right turns in/out only. The three project driveways on Jana Lane will be full access. For purposes of this analysis, the proposed project is anticipated to be constructed and fully operational by year 2024.

Existing Conditions

The study intersections currently operate within acceptable Levels of Service (D or better) during the peak hours for Existing conditions, except for the following study intersection which currently operates at unacceptable Levels of Service (E or F) during the peak hours:

- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5 (AM/PM Peak Hours – LOS E)

Project Trips

The proposed project is forecast to generate a total of approximately 5,667 daily trips, including 270 trips during the AM peak hour and 264 trips during the PM peak hour.

Levels of Service/Operational Analysis Findings (Non-CEQA)

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Existing Plus Ambient Growth Plus Project conditions, except for the following study intersections which are projected to operate at unacceptable Levels of Service (E or F) during the peak hours:

- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5 (AM/PM Peak Hours – LOS F)
- Jana Lane (NS) at Clinton Keith Road (EW) - #7 (AM/PM Peak Hours – LOS F)

The following improvements are recommended for Existing Plus Ambient Growth Plus Project conditions to maintain acceptable Level of Service:

- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5
  - Restrict the southbound approach to right turns only during weekday peak periods (7-9 AM, 4-6 PM). This intersection currently operates at unacceptable LOS. Based on the HCM delay methodology, the deficient LOS reported is primarily associated with left turns from the minor street (Salida Del Sol); east-west approaches along the major street (Clinton Keith Road) are uncontrolled and would operate within acceptable LOS. The intersection is not forecast to satisfy the MUTCD peak hour volume warrant; therefore, installation of a traffic signal is not warranted.

- Jana Lane (NS) at Clinton Keith Road (EW) - #7
  - Install a traffic signal
  - Construct northbound left turn lane
  - Restripe northbound shared left/right turn lane to right turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Existing Plus Ambient Growth Plus Project conditions with implementation of the recommended improvements.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions, except for the following study intersections which are projected to operate at unacceptable Levels of Service (E or F) during the peak hours:

- Inland Valley Drive (NS) at Clinton Keith Road (EW) - #4 (PM Peak Hour – LOS E)
- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5 (AM/PM Peak Hours – LOS F)
- Elizabeth Lane (NS) at Clinton Keith Road (EW) - #6 (AM/PM Peak Hours – LOS F)
- Jana Lane (NS) at Clinton Keith Road (EW) - #7 (AM/PM Peak Hours – LOS F)

The following improvements are recommended for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions to maintain acceptable Level of Service:

- Inland Valley Drive (NS) at Clinton Keith Road (EW) - #4
  - Construct additional eastbound through lane receiving lane
  - Construct additional westbound through lane

- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5
  - Install a traffic signal
  - Construct northbound, southbound, and westbound left turn lanes.
  - Restripe northbound, southbound, and westbound shared left/through/right turn lane to shared through/right turn lane.

- Elizabeth Lane (NS) at Clinton Keith Road (EW) - #6
  - Install a traffic signal
  - Construct northbound and southbound left turn lanes.
  - Restripe northbound and southbound shared left/through/right turn lane to shared through/right turn lane.
  - Construct additional eastbound through lane.

- Jana Lane (NS) at Clinton Keith Road (EW) - #7
  - Install a traffic signal
  - Construct northbound left turn lane
  - Restripe northbound shared left/right turn lane to right turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions with implementation of the recommended improvements.

VMT Analysis Findings (CEQA)

The 14,500 square feet of office is greater than the screening threshold of 10,000 square feet of office or less. Based on the WRCOG VMT Screening Tool, the 14,500 square feet of office will reduce the City required VMT by at least 3 percent. Therefore, the project meets the City established VMT screening criteria for locally serving retail 50,000 square feet or less (commercial retail portion of the project site) and the requirement of reducing VMT by at least 3 percent (office portion of the project site) and can be presumed to result in a less than significant impact.

1. INTRODUCTION

This section introduces the proposed project and the general scope of the analysis.

PURPOSE AND OBJECTIVES

The purpose of this study is to evaluate the potential for transportation impacts resulting from development of the proposed project both in the context of the City of Wildomar's discretionary authority for conformance with locally established operational standards and the California Environmental Quality Act (CEQA). Although this is a technical report, effort has been made to write the report clearly and concisely. A glossary is provided in Appendix A to assist the reader with terms related to transportation engineering.

This study was prepared in consultation with City of Wildomar staff and in accordance with the procedures and methodologies for assessing transportation impacts established by the City of Wildomar. To assess the project's conformance with local operational standards, this study evaluates the project's effect on traffic operations and, if necessary, identifies recommended improvements or corrective measures to alleviate operational deficiencies substantially caused or worsened by the proposed project. For CEQA purposes, this study also evaluates the significance of project-related transportation impacts as measured by vehicle miles traveled (VMT) relative to thresholds established by the City of Wildomar as the lead agency and, if necessary, identifies feasible mitigation measures to mitigate any significant impacts.

PROJECT DESCRIPTION

The approximately 4.35-acre project site is located on the southeast corner of Jana Lane and Clinton Keith Road in the City of Wildomar, California. Figure 1 shows the project location map.

The currently vacant site is proposed to include a 16 fueling position convenience store/gas station, and automated car wash, 3,800 square feet of fast-food restaurant with drive-thru, and 14,500 square feet of general office. The project site proposes one access driveway to Clinton Keith Road and three access driveways to Jana Lane. The project driveway on Clinton Keith Road will be restricted to right turns in/out only. The three project driveways on Jana Lane will be full access. For purposes of this analysis, the proposed project is anticipated to be constructed and fully operational by year 2024. Figure 2 illustrates the project site plan.

SCOPE OF ANALYSIS

The scope of this analysis was determined in consultation with City of Wildomar staff as documented in the City-approved scoping agreement provided in Appendix B.

Study Area

Based on the study intersections identified in the approved scoping agreement (Appendix B), the study area consists of the following study intersections within City of Wildomar jurisdiction:

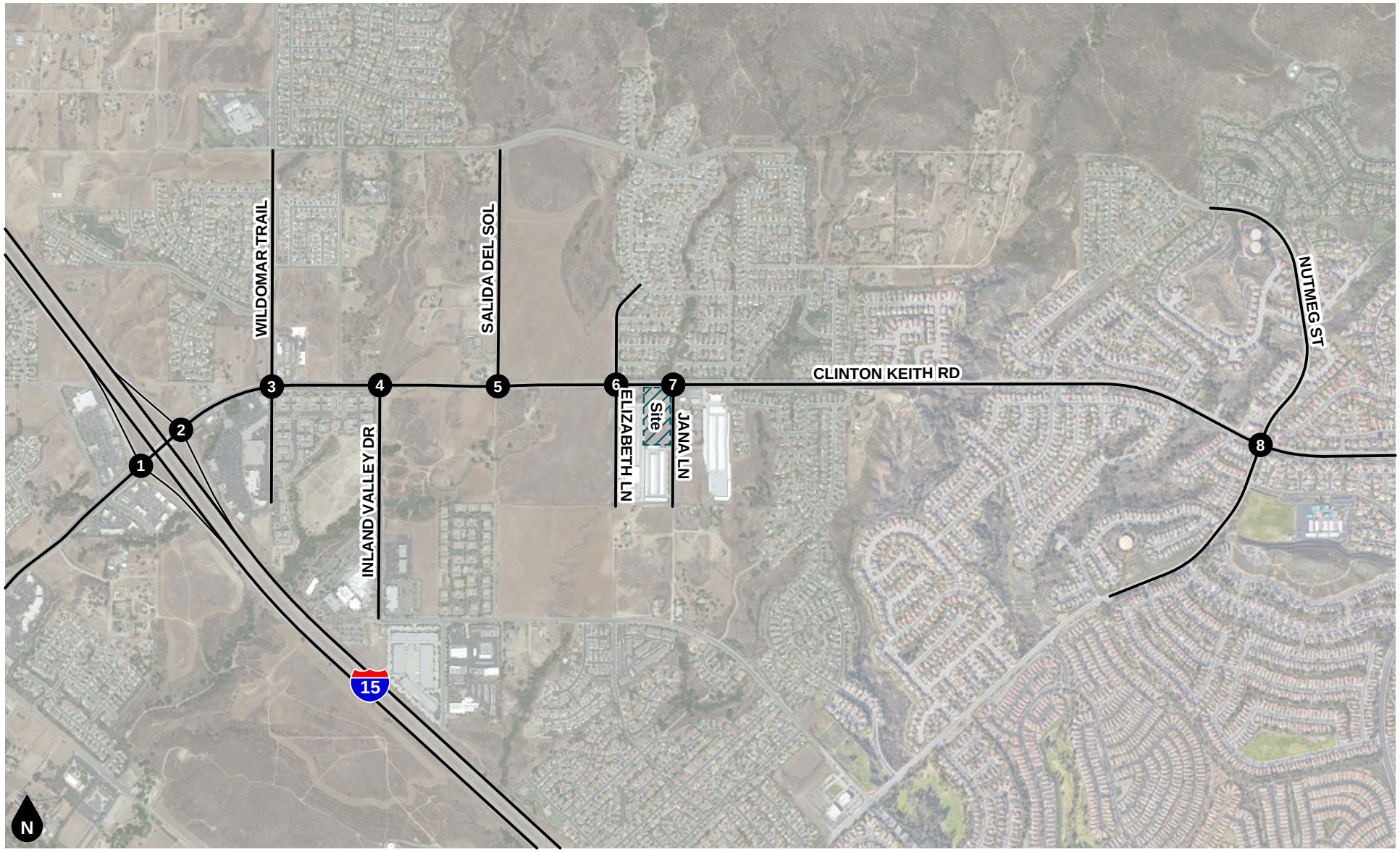
Study Intersections[1]	Jurisdiction[2]
1. I-215 SB Ramps (NS) at Clinton Keith Road (EW)	Caltrans
2. I-215 NB Ramps (NS) at Clinton Keith Road (EW)	Caltrans
3. Wildomar Trail (NS) at Clinton Keith Road (EW)	City of Wildomar
4. Inland Valley Drive (NS) at Clinton Keith Road (EW)	City of Wildomar
5. Salida Del Sol (NS) at Clinton Keith Road (EW)	City of Wildomar
6. Elizabeth Lane (NS) at Clinton Keith Road (EW)	City of Wildomar
7. Jana Lane (NS) at Clinton Keith Road (EW)	City of Wildomar
8. Nutmeg Street (NS) at Clinton Keith Road (EW)	City of Murrieta

Notes:
1. (NS) = North-South roadway; (EW) = East-West roadway; NB = Northbound; SB = Southbound
2. Caltrans = California Department of Transportation

Analysis Scenarios

The following scenarios are analyzed for weekday AM and PM peak hour conditions:

- Existing [2022]
- Existing Plus Ambient Growth Plus Project [2024]
- Existing Plus Ambient Growth Plus Project Plus Cumulative [2024]



Legend

Study Intersection

Figure 1
Project Location Map

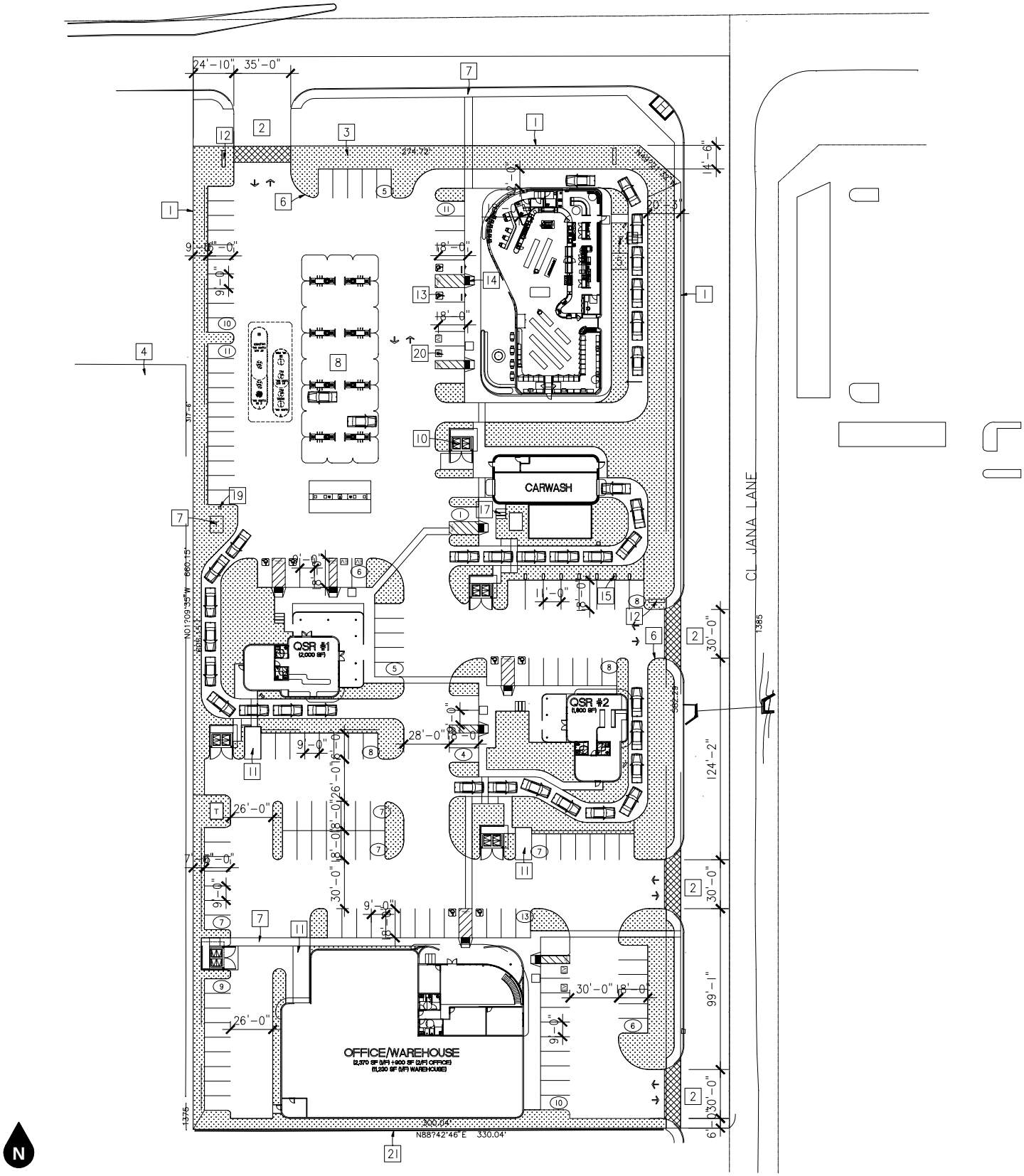


Figure 2
Site Plan

2. METHODOLOGY

This section discusses the analysis methodologies used to assess transportation facility performance as adopted by the respective jurisdictional agencies.

LEVEL OF SERVICE ANALYTICAL METHODOLOGY (NON-CEQA)

Level of Service analysis is performed for assessing conformance with General Plan and operational standards established by the applicable agencies. In accordance with current CEQA provisions, a project's effect on automobile delay (as measured by Level of Service) shall not constitute a significant environmental impact.

Intersection Delay Methodology

The technique used to assess the performance of intersections is known as the intersection delay methodology based on the procedures contained in the *Highway Capacity Manual* (Transportation Research Board, 6th Edition). The methodology considers the traffic volume and distribution of movements, traffic composition, geometric characteristics, and signalization details to calculate the average control delay per vehicle and corresponding Level of Service. Control delay is defined as the portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign) and includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay. The intersection control delay is then correlated to Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

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

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst individual movement (or movements sharing a single lane). Intersection delay and Level of Service calculations were performed using the Vistro software.

Performance Standards

City of Wildomar

The City of Wildomar defines intersection performance deficiency standards consistent with those of the County of Riverside General Plan Circulation Element. The Riverside County General Plan Policy C 2.1 states that the County will maintain the following County-wide target Level of Service:

The following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan which are currently County maintained, or are intended to be accepted into the County maintained roadway system:

- *Level of Service C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well as those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley, and Temescal Canyon Area Plans.*

- *Level of Service D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley, and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley, and Temescal Canyon Area Plans.*

- *Level of service E may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed.*

The applicable minimum Level of Service utilized for purposes of this analysis for the intersections located within the City of Wildomar is Level of Service D per the County-wide target Level of Service for projects located within a Community Development Area.

California Department of Transportation

As stated in the Guide for the Preparation of Traffic Impact Studies (State of California, 2002), "California Department of Transportation endeavors to maintain a target LOS [Level of Service] at the transition between LOS "C" and LOS "D" on State highway facilities". The California Department of Transportation acknowledges this may not always be feasible and recommends consultation with the California Department of Transportation to determine the appropriate target Level of Service. For consistency with local requirements, this analysis defines Level of Service D as the minimum acceptable Level of Service for State Highway facilities.

City of Murrieta

The City of Murrieta General Plan has established the typical acceptable peak hour Level of Service D for intersections. The City of Murrieta General Plan has established daily Level of Service C for roadway segments, unless the segments are within General Plan Focus Areas where Level of Service D is allowed.

Substantial Operational Deficiency Criteria

The following criteria are used to determine whether a project causes a substantial operational deficiency and should be required to provide improvements or corrective measures.

City of Wildomar

In the City of Wildomar, a project is considered to result in a substantial operational deficiency at a study intersection if one or more of the following conditions are satisfied:

- The addition of project generated trips is forecast to cause an intersection to deteriorate from acceptable Level of Service (D or better) to unacceptable Level of Service (E or F); or,

- The addition of project generated trips worsens the pre-project delay by 5 seconds or more at an intersection operating at an unacceptable Level of Service (E or F) in the baseline condition.

California Department of Transportation

Based on the established performance standards for County of Riverside, a potentially operational transportation impact is defined to occur if:

- The addition of project-generated trips is forecast to cause the performance of a study intersection to deteriorate from acceptable Level of Service (D or better) to unacceptable Level of Service (E or F); or,

- The addition of project generated trips is forecast to worsen the performance of a study intersection operating at unacceptable Level of Service (E or F) in the baseline condition.

City of Murrieta

The City of Murrieta TIA Guidelines establish the following operating requirements for general plan consistency.

Signalized Intersections

- Any study intersection operating at an acceptable Level of Service (D or better) without project traffic in which the addition of project traffic causes the intersection to degrade to a Level of Service (E or F) shall identify improvements to improve operations to Level of Service (D or better).

- Any signalized study intersection that is operating at unacceptable Level of Service (E or F) without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.

Unsignalized Intersections

An operational improvement would be required if the study determines that either section a) or both sections b) and c) occur:

a) The addition of project related traffic causes the intersection to degrade from an acceptable Level of Service D or better to Level of Service E or F.

OR

b) The project adds 5.0 seconds or more of delay to an intersection that is already projected to operate without project traffic at a Level of Service E or F.

AND

c) The intersection meets the peak hour traffic signal warrant after the addition of project traffic.

If the conditions above are satisfied, improvements should be identified that achieve the following:

- LOS D or better for case a) above or to pre-project LOS and delay for case b) above.

If a project is forecast to result in a substantial operational deficiency, recommended corrective measures are identified that would reduce the project's effect to a level that does not exceed the specified deficiency criteria. Corrective measures can be in many forms, including the construction of physical improvements (e.g., addition of travel lanes, traffic control modifications, etc.) or the implementation of transportation demand management measures.

VEHICLE MILES TRAVELED ANALYTICAL METHODOLOGY (CEQA)

The metric used to evaluate the transportation impact of land use and transportation projects under CEQA is known as vehicle miles traveled (VMT). In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. Additional information and a detailed project assessment is provided in the Vehicle Miles Traveled section presented later in this report.

3. EXISTING CONDITIONS

EXISTING ROADWAY SYSTEM

Figure 3 identifies the lane geometry and intersection traffic controls for Existing conditions based on a field survey of the study area. Regional access to the project site is provided by the I-15 Freeway located approximately 1.15 miles west of the project site. Key roadways providing local circulation include Clinton Keith Road, Wildomar Trail, Inland Valley Drive, Salida Del Sol, Elizabeth Lane, Jana Lane, and Nutmeg Street.

GENERAL PLAN CONTEXT

Figure 4 shows the City of Wildomar General Plan Circulation Element roadway classifications map. This figure shows the nature and extent of arterial and collector highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of Wildomar standard roadway cross-sections is illustrated on Figure 5.

TRANSIT SERVICE

Figure 6 shows Existing public transit facilities and routes in the project vicinity. As shown on Figure 6, the study area is currently served by the Riverside Transit Agency bus service. Route 23 runs along Clinton Keith Road west of Inland Valley Drive and east of Nutmeg Street, and Inland Valley Drive south of Clinton Keith Road.

BICYCLE AND PEDESTRIAN FACILITIES

The City of Wildomar Community/Regional Roadside, Off-Road Multi-Use Trails are illustrated on Figure 7. There are currently on-street existing bicycle lanes along Clinton Keith Road from east of Inland Valley Drive westbound and from the City of Murrieta boundary eastbound. Salida Del Sol is a Regional: Roadside, Countryside, and Creekside: Multi-Use Trail.

Existing pedestrian facilities in the project vicinity are shown on Figure 8. Sidewalks are currently not provided on Clinton Keith Road or Jana Lane adjacent to the project site.

EXISTING ROADWAY VOLUMES

Figure 9 and Figure 10 show the Existing weekday AM and PM peak hour intersection turning movement volumes. Existing peak hour intersection volumes are based upon weekday AM and PM peak period intersection turning movement counts obtained in May 2022 during typical weekday conditions. The weekday AM peak period was counted between 7:00 AM and 9:00 PM and the weekday PM peak period was counted between 4::00 PM and 6:00 PM; these periods generally capture the peak times for commuter traffic when the roadway system is typically experiencing peak demand. The actual peak hour within each two-hour count period is determined based on the sum of the four consecutive 15-minute periods with the highest total volume. Thus, the weekday PM peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15-minute periods have the highest total volume and may vary at other intersections. Intersection turning movement count worksheets are provided in Appendix C.

EXISTING LEVELS OF SERVICE

The intersection Levels of Service for Existing conditions are shown in Table 1. Existing intersection Level of Service worksheets are provided in Appendix D.

As shown in Table 1, the study intersections currently operate within acceptable Levels of Service (D or better) during the peak hours for Existing conditions, except for the following study intersection which currently operates at unacceptable Levels of Service (E or F) during the peak hours:

- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5 (AM/PM Peak Hours – LOS E)

Table 1
Existing Intersection Levels of Service

Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
			Delay[3]	LOS[4]	Delay[3]	LOS[4]
1. I-215 SB Ramps (NS) at Clinton Keith Rd (EW)	Caltrans	TS	18.8	B	15.1	B
2. I-215 NB Ramps (NS) at Clinton Keith Rd (EW)	Caltrans	TS	15.2	B	17.1	B
3. Wildomar Tr (NS) at Clinton Keith Rd (EW)	Wildomar	TS	18.3	B	19.2	B
4. Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Wildomar	TS	13.1	B	14.8	B
5. Salida Del Sol (NS) at Clinton Keith Rd (EW)	Wildomar	CSS	43.7	E	47.0	E
6. Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Wildomar	CSS	20.3	C	27.0	D
7. Jana Ln (NS) at Clinton Keith Rd (EW)	Wildomar	CSS	15.5	C	23.6	C
8. Nutmeg St (NS) at Clinton Keith Rd (EW)	Murrieta	TS	19.7	B	19.9	B

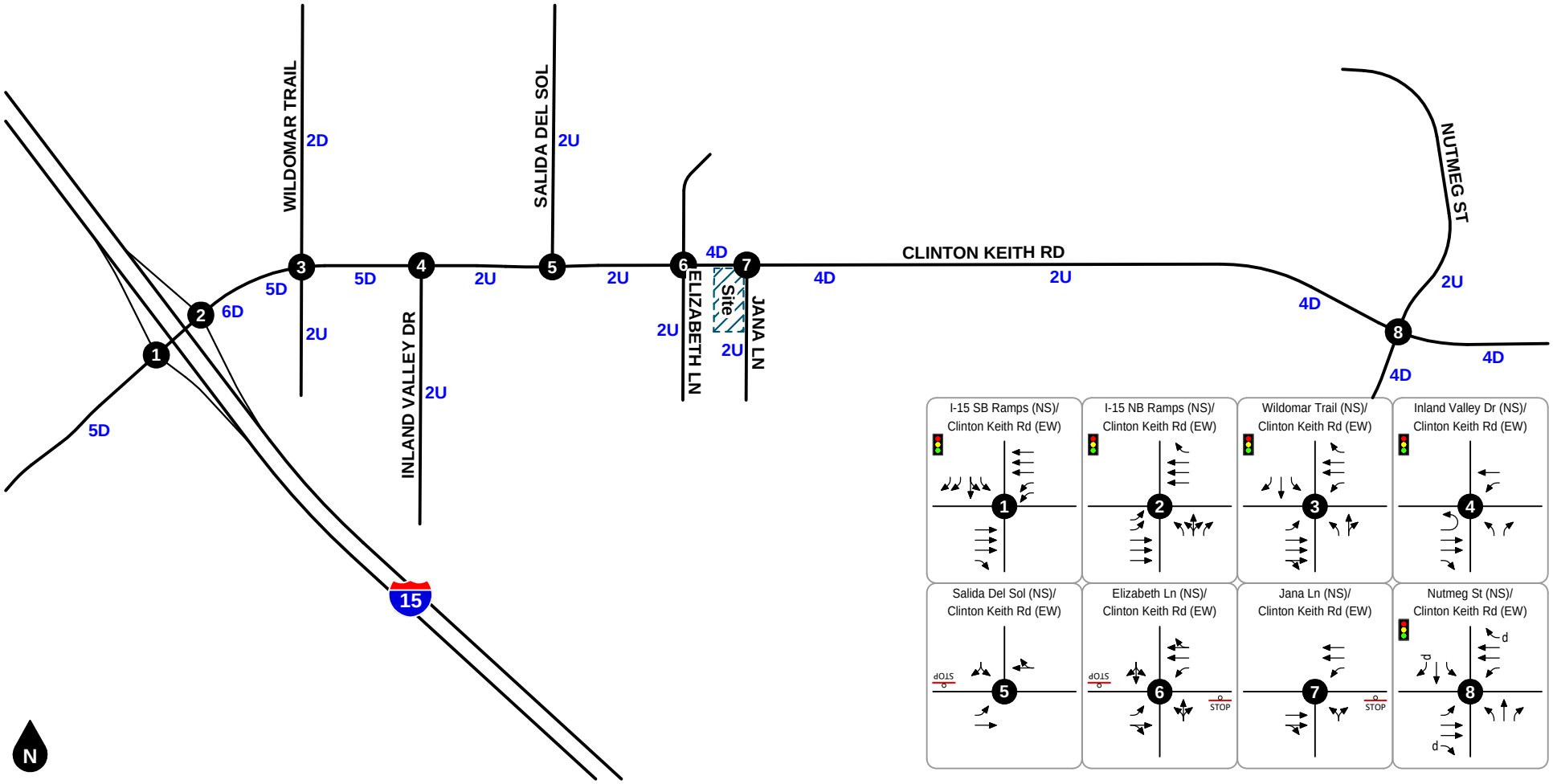
Notes:

(1) Caltrans = California Department of Transportation

(2) TS = Traffic Signal; CSS = Cross Street Stop

(3) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

(4) LOS = Level of Service



Legend

- Traffic Signal
- Stop Sign
- #D #-Lane Divided Roadway
- #U #-Lane Undivided Roadway
- Existing Lane
- d De Facto Right Turn Lane

Figure 3
Existing Lane Geometry and Intersection Traffic Controls

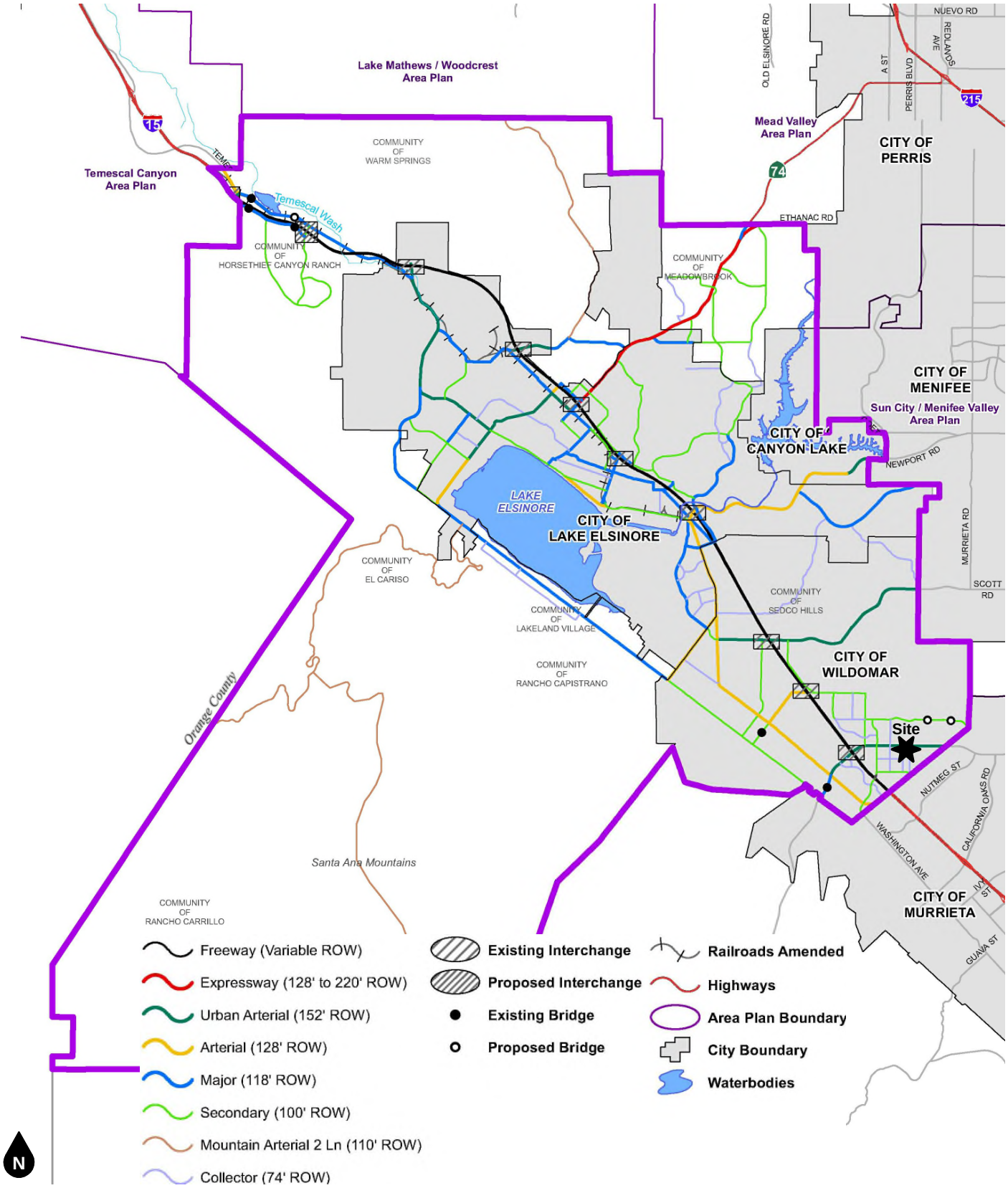
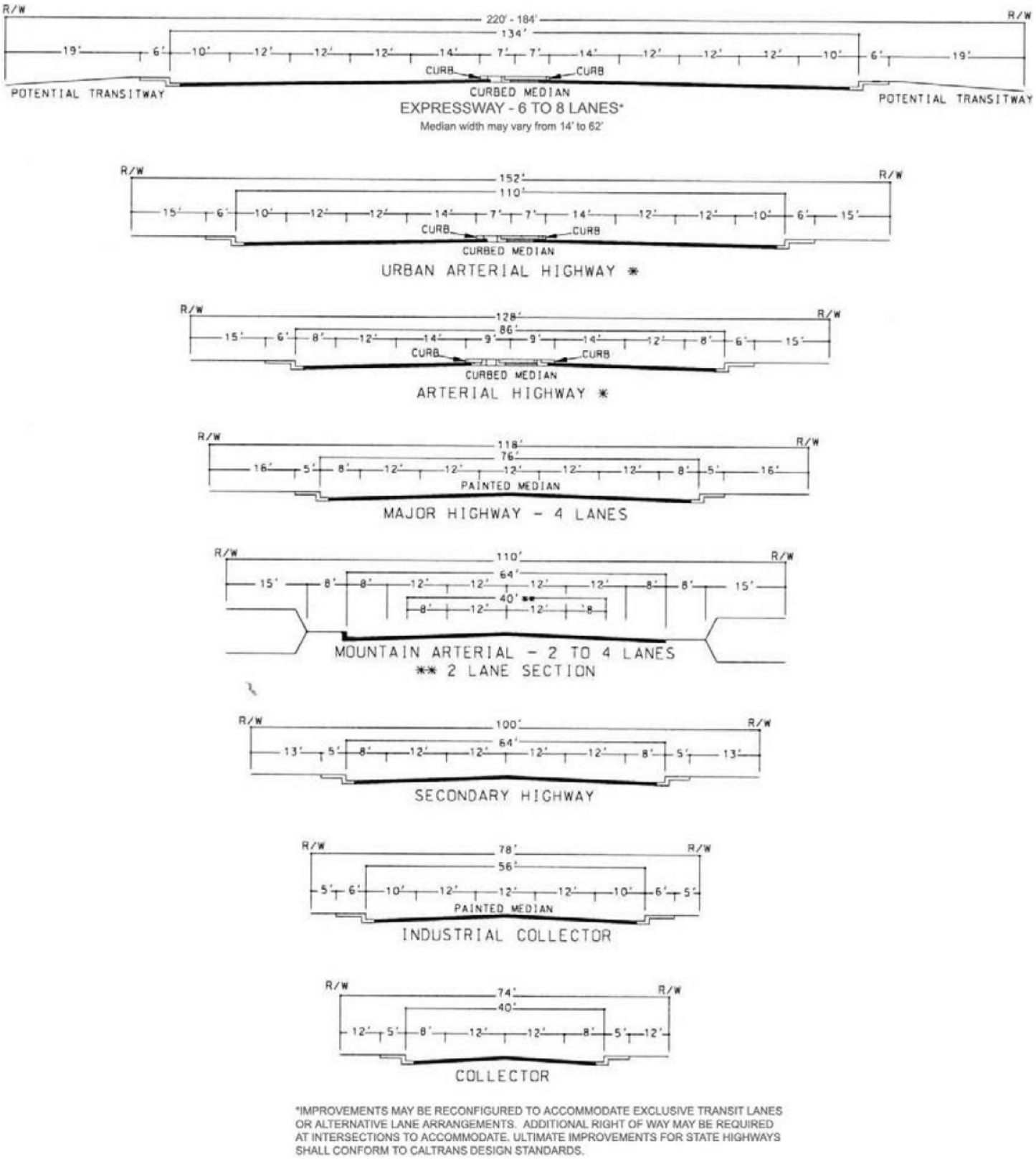


Figure 4
City of Wildomar General Plan Circulation Element

Source: City of Wildomar



*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.

Figure 5
City of Wildomar General Plan Roadway Cross-Sections

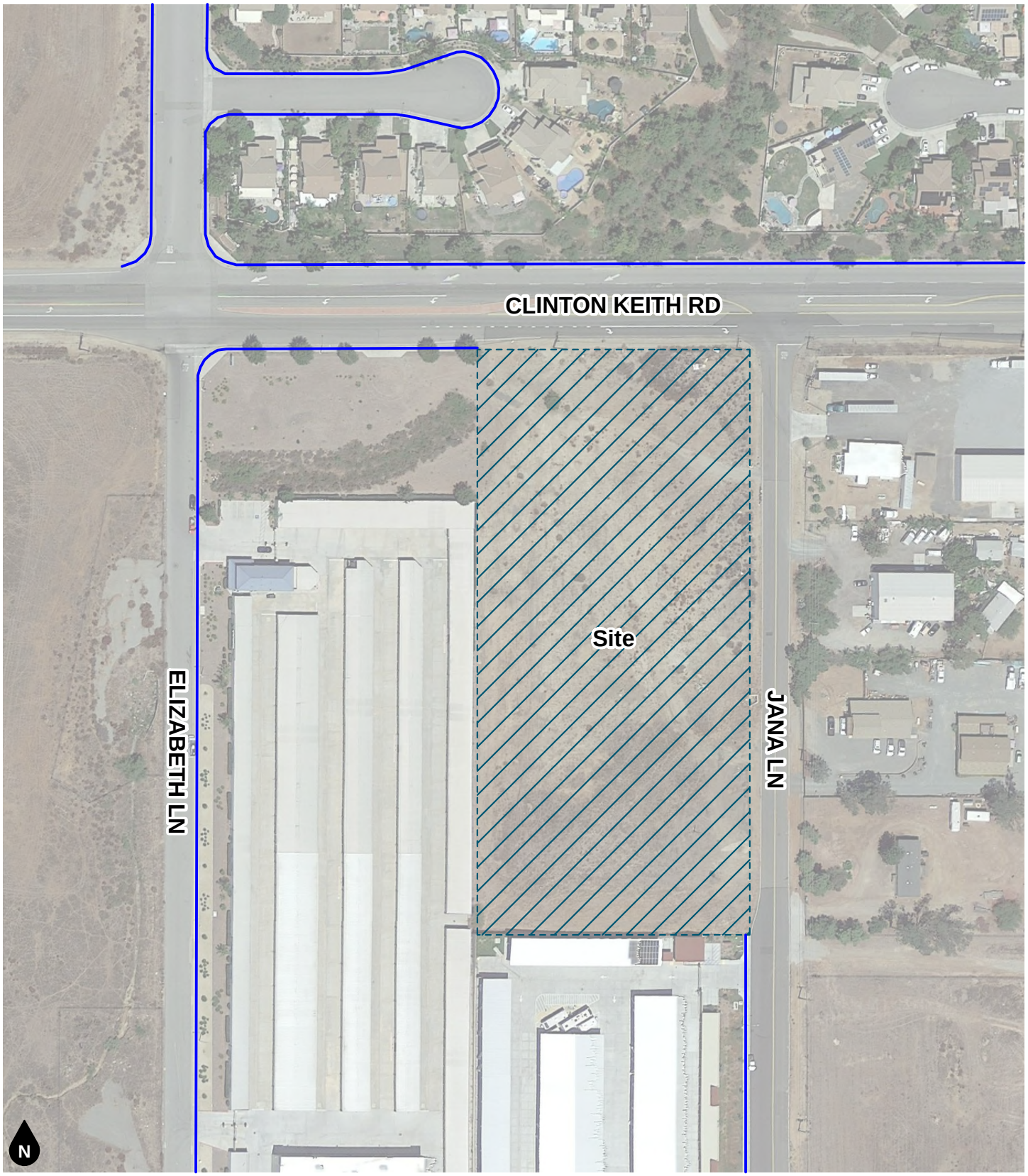
Source: County of Riverside

Figure 6
Existing Transit Routes

Source: Riverside Transit Agency

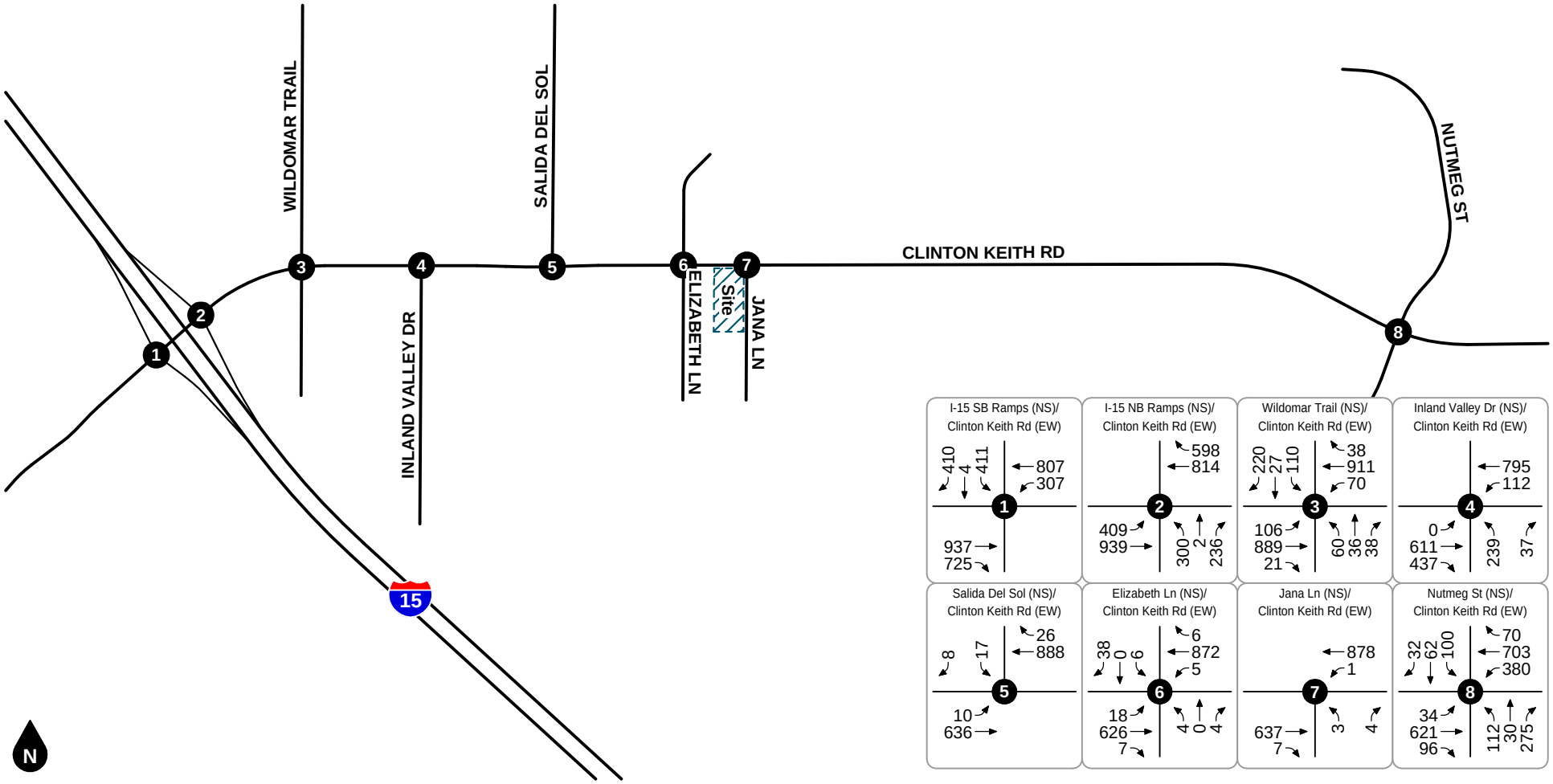
Source: City of Wildomar

Figure 7
City of Wildomar Community/Regional Roadside, Off-Road Multi-Use Trails



Legend
Sidewalk

Figure 8
Existing Pedestrian Facilities



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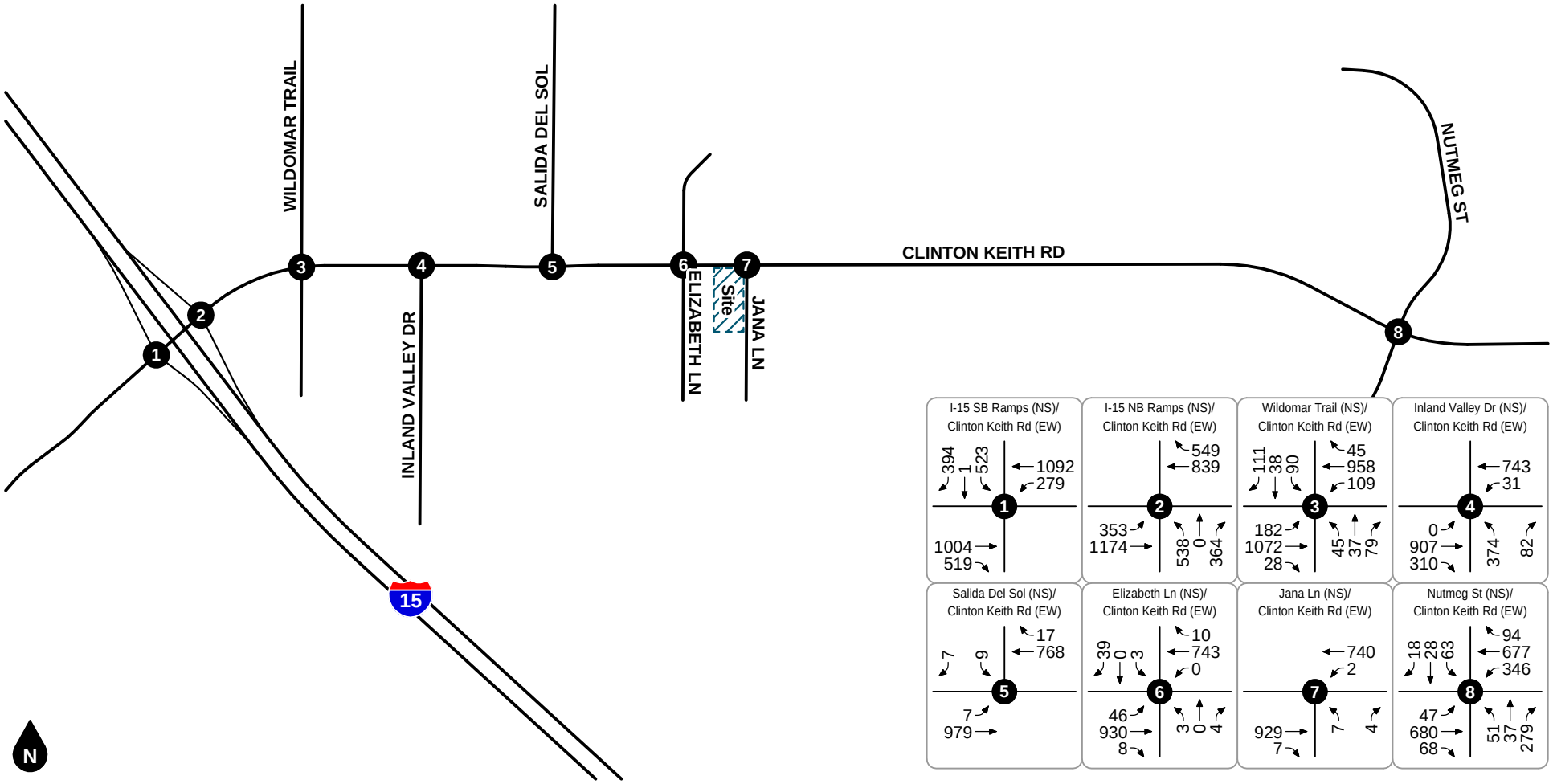
Study Intersection

Figure 9
Existing Weekday
AM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

Figure 10
Existing Weekday
PM Peak Hour Intersection Turning Movement Volumes

4. PROJECT TRIP FORECASTS

This section describes how project trip generation, trip distribution, and trip assignment forecasts were developed. The forecast project volumes are illustrated on figures contained in this section.

PROJECT TRIP GENERATION

Table 2 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021) and the *(Not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, April 2002). ITE land use code 945 (Convenience Store/Gas Station), land use code 934 (Fast-Food Restaurant with Drive-Thru, and land use code 710 (General Office) have been used to estimate the site-specific trip generation estimates for the project site land uses.

ITE land use code 948 (Automated Car Wash) provides trip generation rates for the PM peak hour but not the AM peak hour or daily. The PM peak hour rates are based on three survey sites from the 1990's and 2000's. In consultation with City staff, multiple more recent trip generation data sources were analyzed and it was determined that the automated car wash land use will be based on rates provided in the *Newport Pointe Traffic Impact Analysis Report* (Linscott, Law & Greenspan, Engineers, April 28, 2021), which was derived from traffic counts on February 7, 2014 at the Victorville Speedwash located at 12147 Industrial Boulevard. The trip generation rates land use variable is based on the linear feet of the wash tunnel. The result is that the AM peak hour trip generation is a bit higher and the daily trip generation lower than the *(Not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, April 2002). The PM peak hour trip generation is near identical to ITE land use code 948. Therefore, these rates are similar to other sources and appropriate to use for the automated car wash land use.

The project trip generation forecast shown in Table 2 also includes pass-by trip adjustments. Convenience store/gas station and restaurant land uses will often locate next to busy roadways to attract motorists already on the street. Since the trip generation rates shown in Table 2 represent vehicles entering and exiting at the site driveway(s), it is appropriate to reduce the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. Pass-by trip adjustments were applied to the existing and project trip generation in accordance with pass-by rates noted in the ITE *Trip Generation Manual* (11th Edition, 2021).

As shown in Table 2, the proposed project is forecast to generate a total of approximately 5,667 daily trips, including 270 trips during the AM peak hour and 264 trips during the PM peak hour.

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Figure 11 to Figure 13 show the forecast directional distribution patterns for the project generated trips. The project trip distribution patterns are based on review of existing volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

Project weekday AM and PM peak hour intersection turning movement volumes expected from the project are depicted on Figure 14 and Figure 15, respectively.

Site Access

This analysis assumes the following improvements will be constructed by the project to provide project site access:

- Project Driveway (NS) at Clinton Keith Road (EW)
  - Construct one inbound lane and one outbound lane with northbound stop control
  - Northbound: one right turn lane
  - Eastbound: one through lane and one shared through/right turn lane
  - Westbound: two through lanes

- Jana Lane (NS) at Project Driveway (EW) – three driveways
  - Construct one inbound lane and one outbound lane with eastbound stop control
  - Northbound: one shared left/through lane
  - Southbound: one shared through/right turn lane
  - Eastbound: one shared left/right turn lane

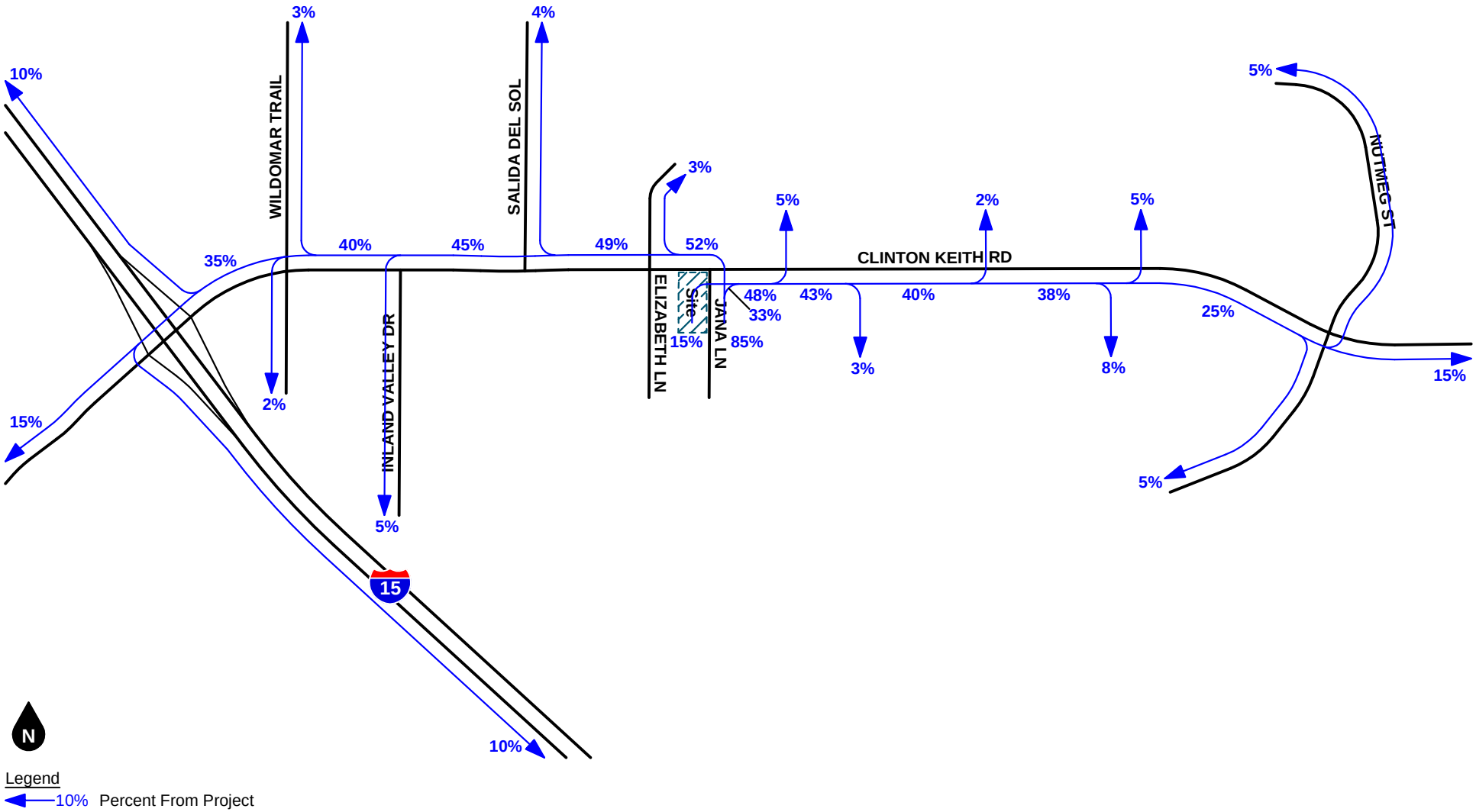
Table 2
Project Trip Generation

Trip Generation Rates									
		Land Use	AM Peak Hour			PM Peak Hour			Daily
Land Use	Source[1]	Variable[2]	% In	% Out	Rate	% In	% Out	Rate	Rate
Convenience Store/Gas Station - GFA (5.5 - 10k)	ITE 945	VFP	50%	50%	31.60	50%	50%	26.90	345.75
Automated Car Wash	[a]	LFWT	58%	42%	0.66	50%	50%	1.25	11.87
Fast-Food Restaurant with Drive-Thru	ITE 934	TSF	51%	49%	44.61	52%	48%	33.03	467.48
General Office	ITE 710	TSF	88%	12%	1.52	17%	83%	1.44	10.84

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Source	Quantity	In	Out	Total	In	Out	Total	Daily
Convenience Store/Gas Station - GFA (5.5 - 10k)	ITE 945	16 VFP	253	253	506	215	215	430	5,532
Pass-by Trips (76%AM,75%PM,38%Daily)[3]	ITE 945		*-192*	*-192*	*-384*	*-161*	*-161*	*-322*	*-2,102*
Subtotal			61	61	122	54	54	108	3,430
Automated Car Wash	[a]	63 LFWT	24	18	42	39	40	79	748
Fast-Food Restaurant with Drive-Thru	ITE 934	3.800 TSF	86	83	169	65	60	125	1,776
Pass-by Trips (50%AM,55%PM,25%Daily)[3]	ITE 934		*-43*	*-42*	*-85*	*-36*	*-33*	*-69*	*-444*
Subtotal			43	41	84	29	27	56	1,332
General Office	ITE 710	14.500 TSF	19	3	22	4	17	21	157
TOTAL TRIPS GENERATED			**147**	**123**	**270**	**126**	**138**	**264**	**5,667**

Notes:

1. ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code.
   All rates based on General Urban/Suburban setting unless otherwise noted.
   [a] Automated car wash based on rates provided in the *Newport Pointe Traffic Impact Analysis Report* (Linscott, Law & Greenspan, Engineers), April 28, 2021 which was derived from traffic counts on February 7, 2014 at the Victorville Speedwash (12147 Industrial Boulevard).
2. VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; LFWT = Linear Feet of Wash Tunnel
3. For time periods with no pass-by data provided in ITE *Trip Generation Manual* (e.g., daily), pass-by rates assumed as half of ITE peak hour rate.



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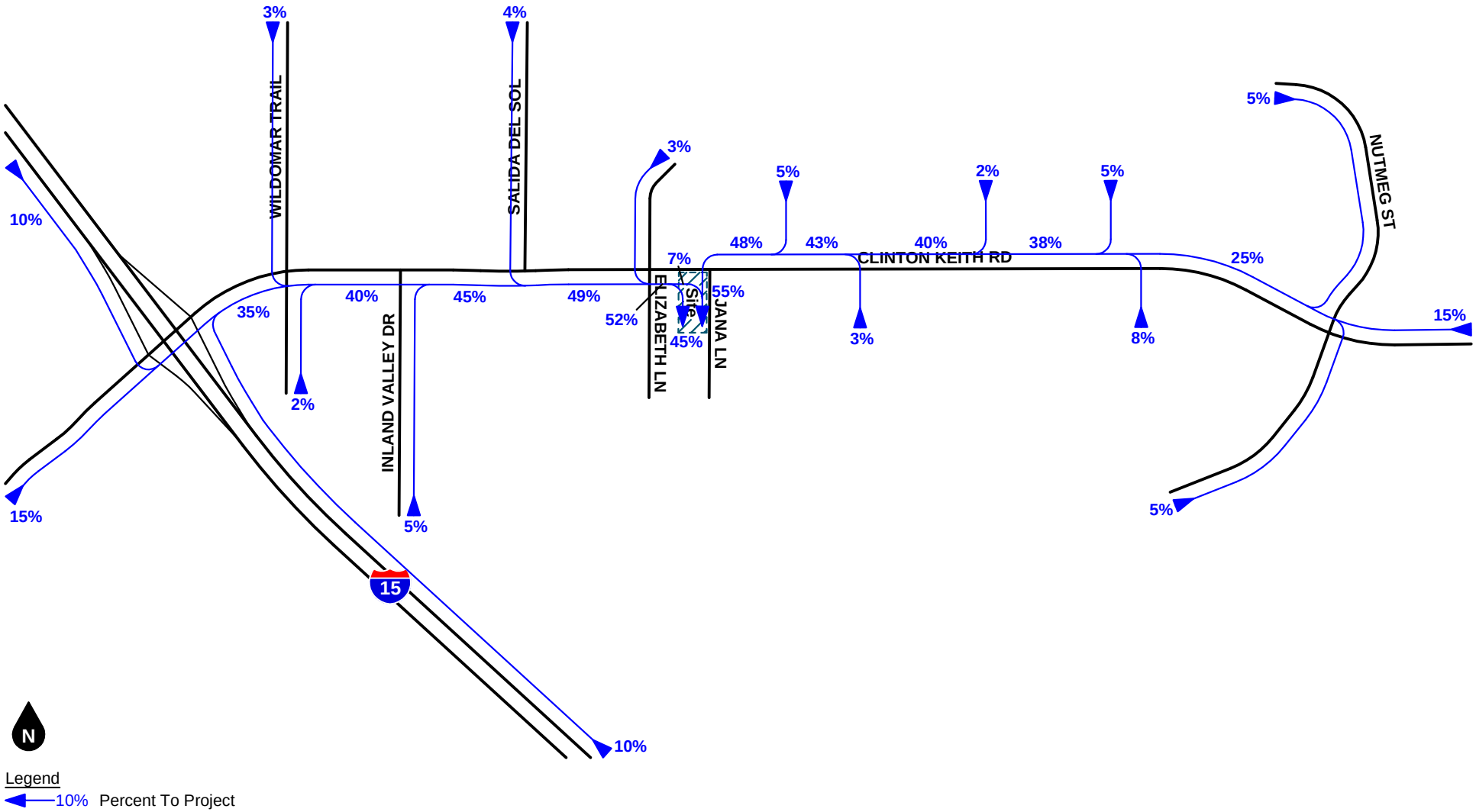
10% Percent From Project

Figure 11
Project Outbound Trip Distribution



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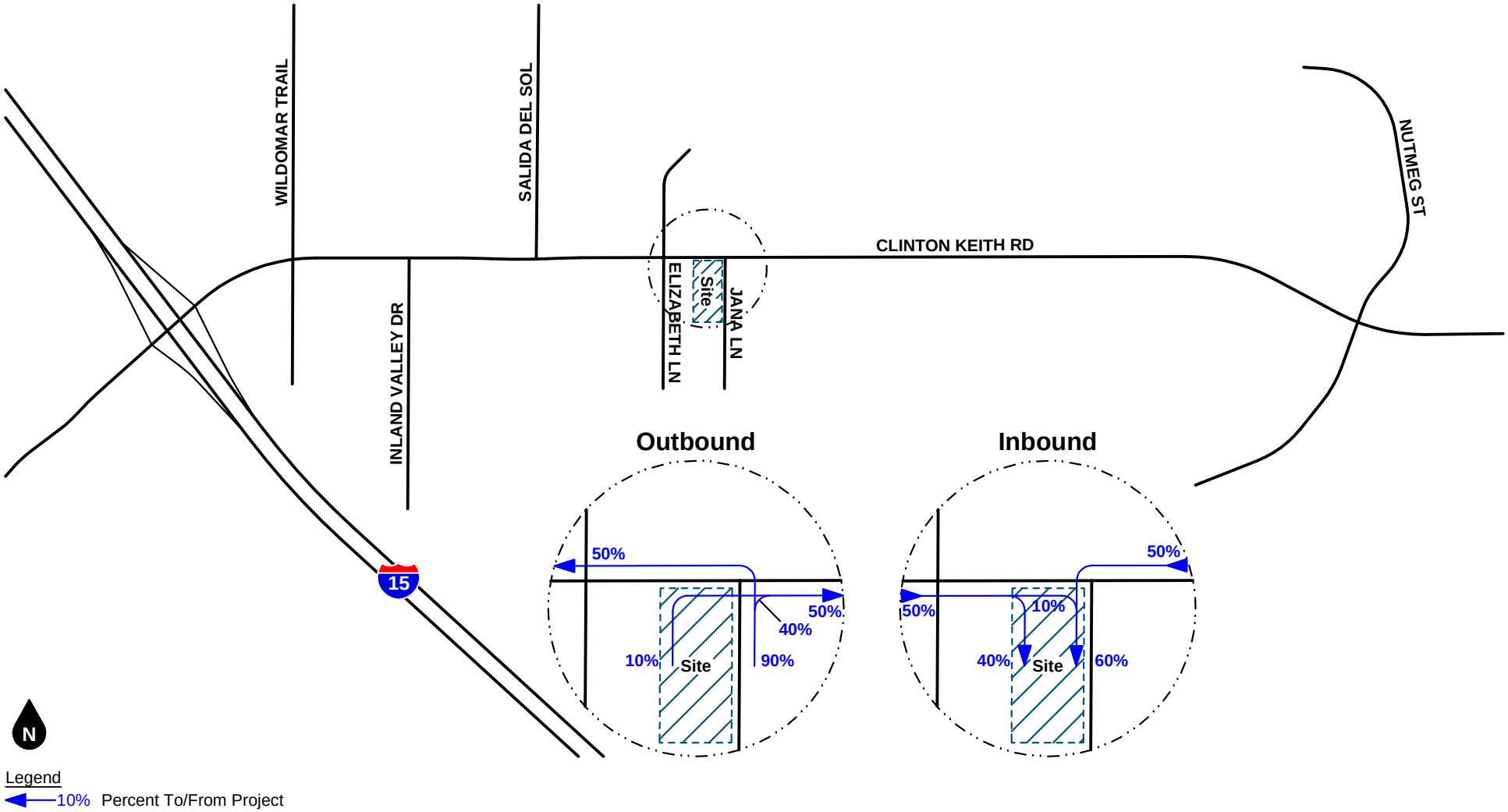
10% Percent To Project

Figure 12
Project Inbound Trip Distribution



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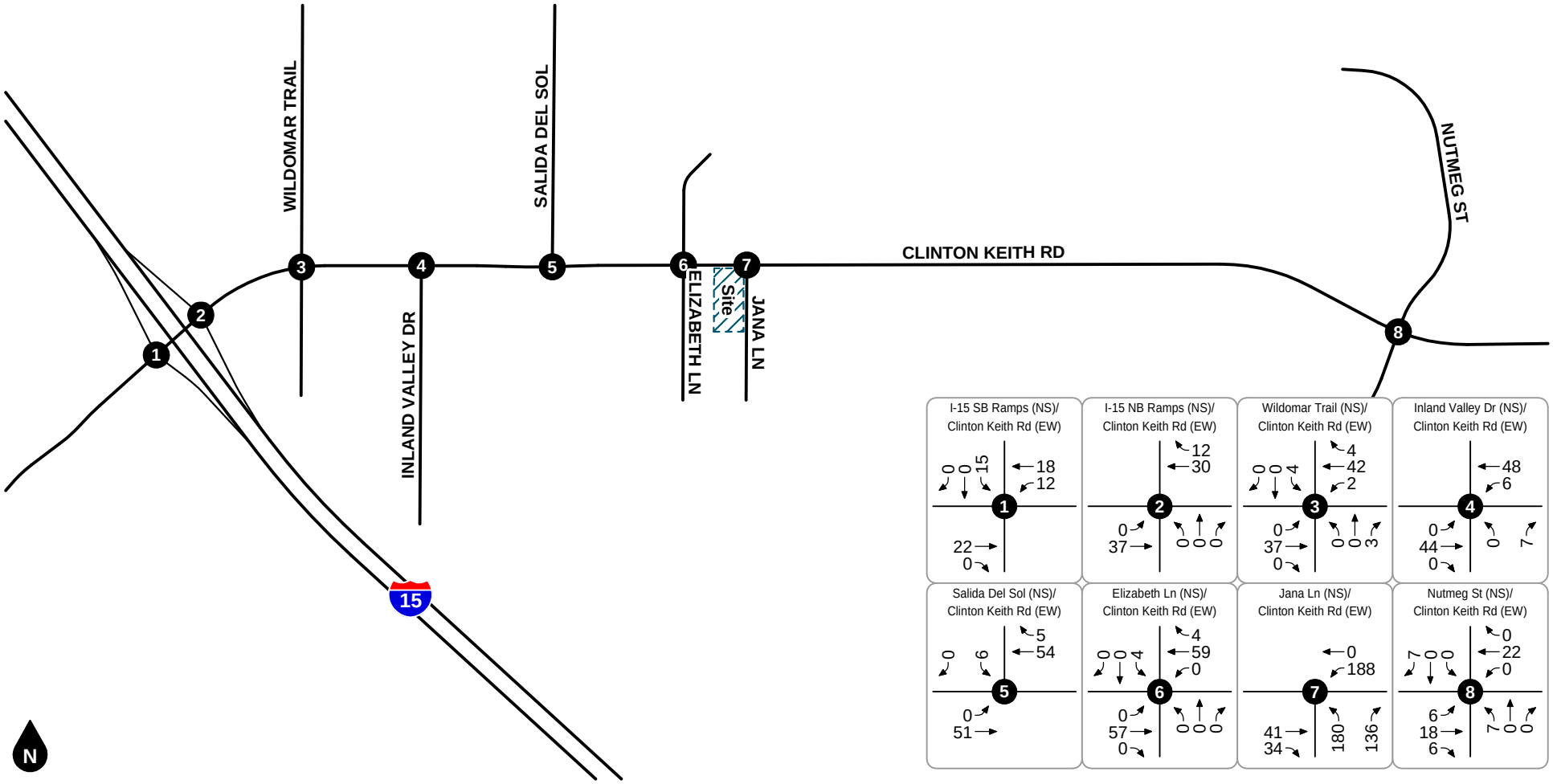
10% Percent To/From Project

Figure 13
Project Pass-By Trip Disribution



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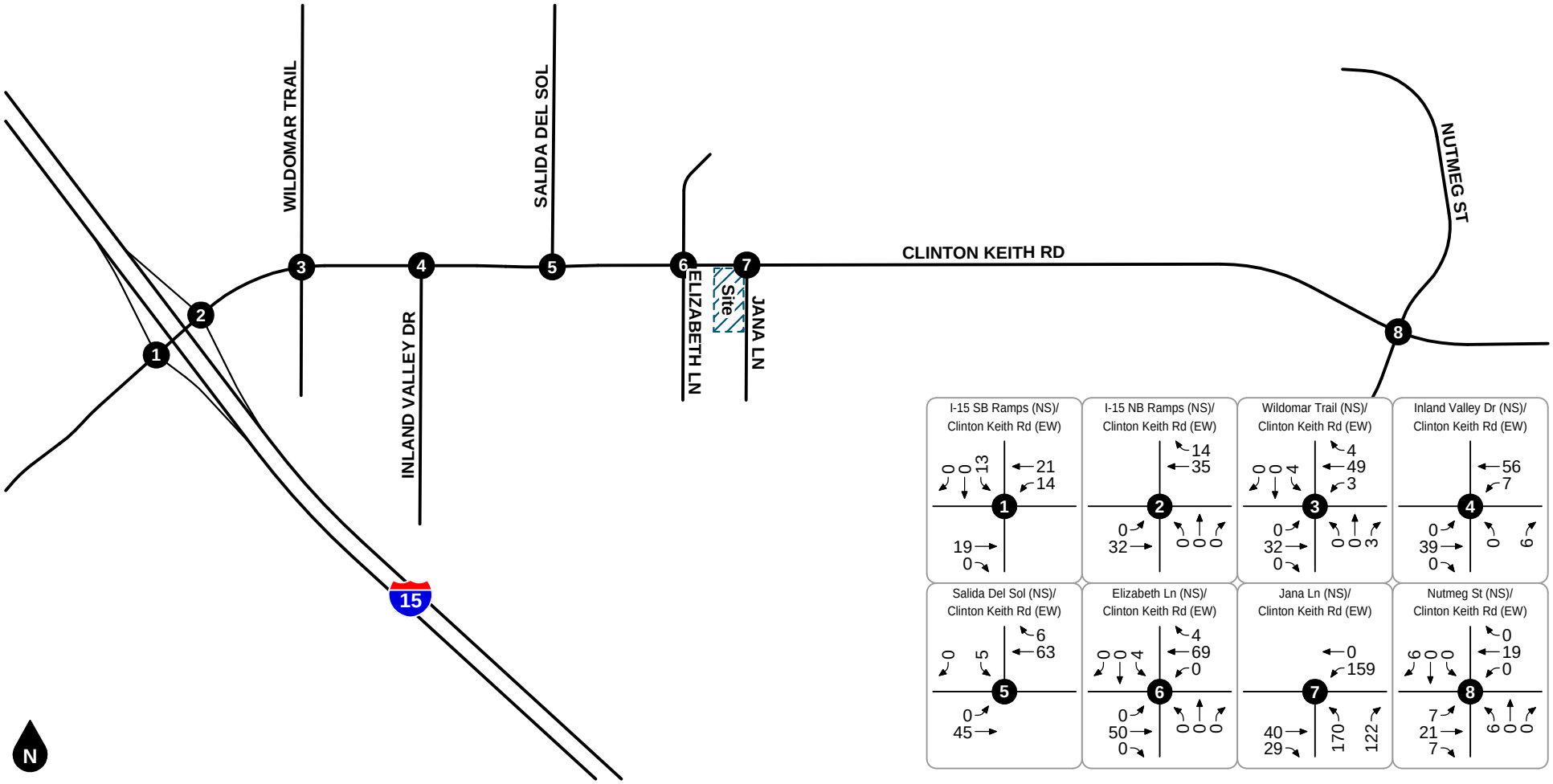
Study Intersection

Figure 14
Project Weekday
AM Peak Hour Intersection Turning Movement Volumes



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Study Intersection

Figure 15
Project Weekday
PM Peak Hour Intersection Turning Movement Volumes

5. FUTURE VOLUME FORECASTS

This section describes how future volume forecasts for each analysis scenario were developed. Forecast study area volumes are illustrated on figures contained in this section.

CUMULATIVE TRIPS

Ambient Growth Rate

To account for ambient growth on roadways, existing 2022 roadway volumes were increased by a growth rate of two percent (2%) per year over two years for Opening Year (2024) conditions. This equates to a total growth factor of approximately 1.0404. The ambient growth rate was conservatively applied to all movements at the study intersections.

Other Development

To account for trips generated by future development, trips generated by pending or approved other development projects located within a 1.5-mile radius of the project site in the City of Wildomar were added to the study area.. Table 3 shows the other development trip generation and Figure 16 exhibits the other development location map.

Figure 17 and Figure 18 show the forecast AM and PM peak hour intersection turning movement volumes for trips generated by other developments.

ANALYSIS SCENARIO VOLUME FORECASTS

Existing Plus Ambient Growth Plus Project

Existing Plus Ambient Growth Plus Project volume forecasts were derived by adding ambient growth and project generated trips to Existing volumes. Existing Plus Ambient Growth Plus Project AM and PM peak hour intersection turning movement volumes are shown on Figure 19 and Figure 20.

Existing Plus Ambient Growth Plus Project Plus Cumulative

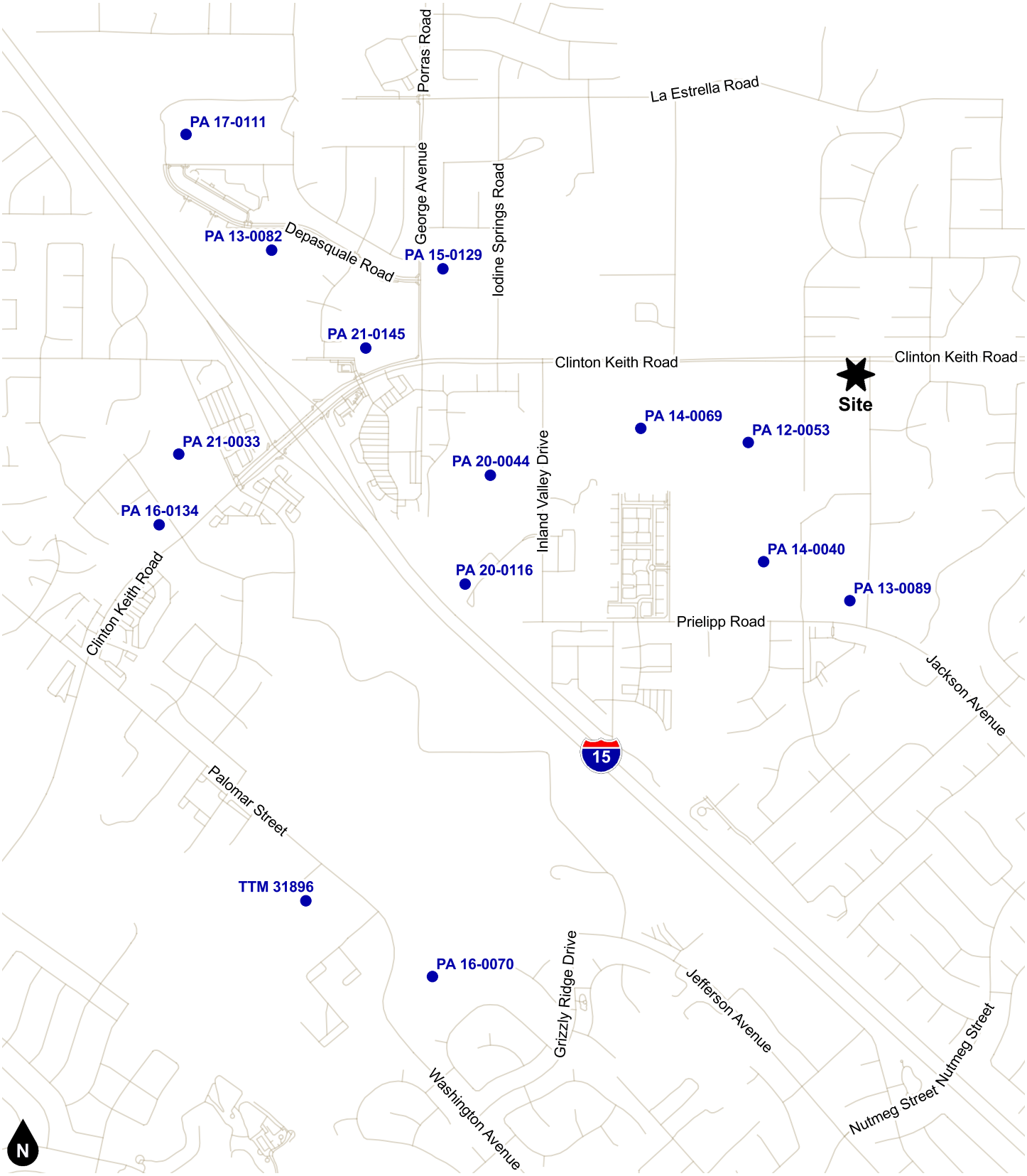
To develop Existing Plus Ambient Growth Plus Project Plus Cumulative volume forecasts, other development was added to Existing Plus Ambient Growth Plus Project volumes. Existing Plus Ambient Growth Plus Project Plus Cumulative AM and PM peak hour intersection turning movement volumes are shown on Figure 21 and Figure 22.

Table 3
Other Development Trip Generation

Map ID	Planning Application No.	Land Use	Quantity[1]	Trips Generated							
				Source[2]	AM Peak Hour			PM Peak Hour			Daily
					In	Out	Total	In	Out	Total	
1	TTM 31896	Single-Family Detached	131 DU	ITE 210	24	68	92	78	46	124	1,235
2	PA 16-0070	Condominiums	163 DU	ITE 220	16	50	66	52	31	83	1,099
3	PA 16-0134	Commercial Retail	27.000 TSF	[a]	95	63	158	74	71	145	2,377
4	PA 21-0033	Commercial Retail	71.490 TSF	[b]	169	129	298	196	191	387	4,390
5	PA 17-0111	Church	45.155 TSF	ITE 560	9	5	14	10	12	22	343
6	PA 13-0082	Condominiums	191 DU	[c]	313	275	588	644	567	1,211	13,574
		Commercial Retail	118.354 TSF								
7	PA 15-0129	Single-Family Detached	77 DU	ITE 210	14	40	54	46	27	73	726
8	PA 21-0145	Apartments	150 DU	ITE 220	14	46	60	48	28	76	1,011
		Commercial Retail	35.422 TSF	ITE 821	78	48	126	154	166	320	3,347
		Pass-By Reduction (40% PM)			--	--	--	-62	-66	-128	-128
		Total			92	94	186	140	128	268	4,230
9	PA 20-0116	Hospital	202 BEDS	ITE 210	260	101	361	113	229	342	4,509
10	PA 20-0044	Apartments	288 DU	ITE 220	28	88	116	93	54	147	1,941
11	PA 14-0069	Apartments	162 DU	ITE 220	16	49	65	52	31	83	1,092
		Commercial Retail	50.000 TSF	ITE 821	109	67	176	217	235	452	4,725
		Pass-By Reduction (40% PM)			--	--	--	-87	-94	-181	-181
		Total			125	116	241	182	172	354	5,636
12	PA 12-0053	Business Park	294.900 TSF	ITE 220	338	60	398	94	266	360	3,669
13	PA 14-0040	Condominiums	138 DU	ITE 220	13	42	55	44	26	70	930
		Assisted Living Facility	86 DU	ITE 253	4	3	7	8	8	16	190
		Total			17	45	62	52	34	86	1,120
14	PA 13-0089	Apartments	170 DU	ITE 220	16	52	68	55	32	87	1,146
Total					1,516	1,186	2,702	1,829	1,860	3,689	45,995

Notes:
(1) TSF = Thousand Square Feet; DU = Dwelling Units

(2) Trip Generation Sources:
ITE = Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
[a] *Wildomar Crossings Traffic Impact Analysis* (Urban Crossorads, May 4, 2017)
[b] *Clinton Keith Marketplace Trip Generation Assessment* (Urban Crossorads, October 21, 2021)
[c] *PA 13-0082 Westpark Promenade Final EIR Response to Comments* (ESA, October 2016)



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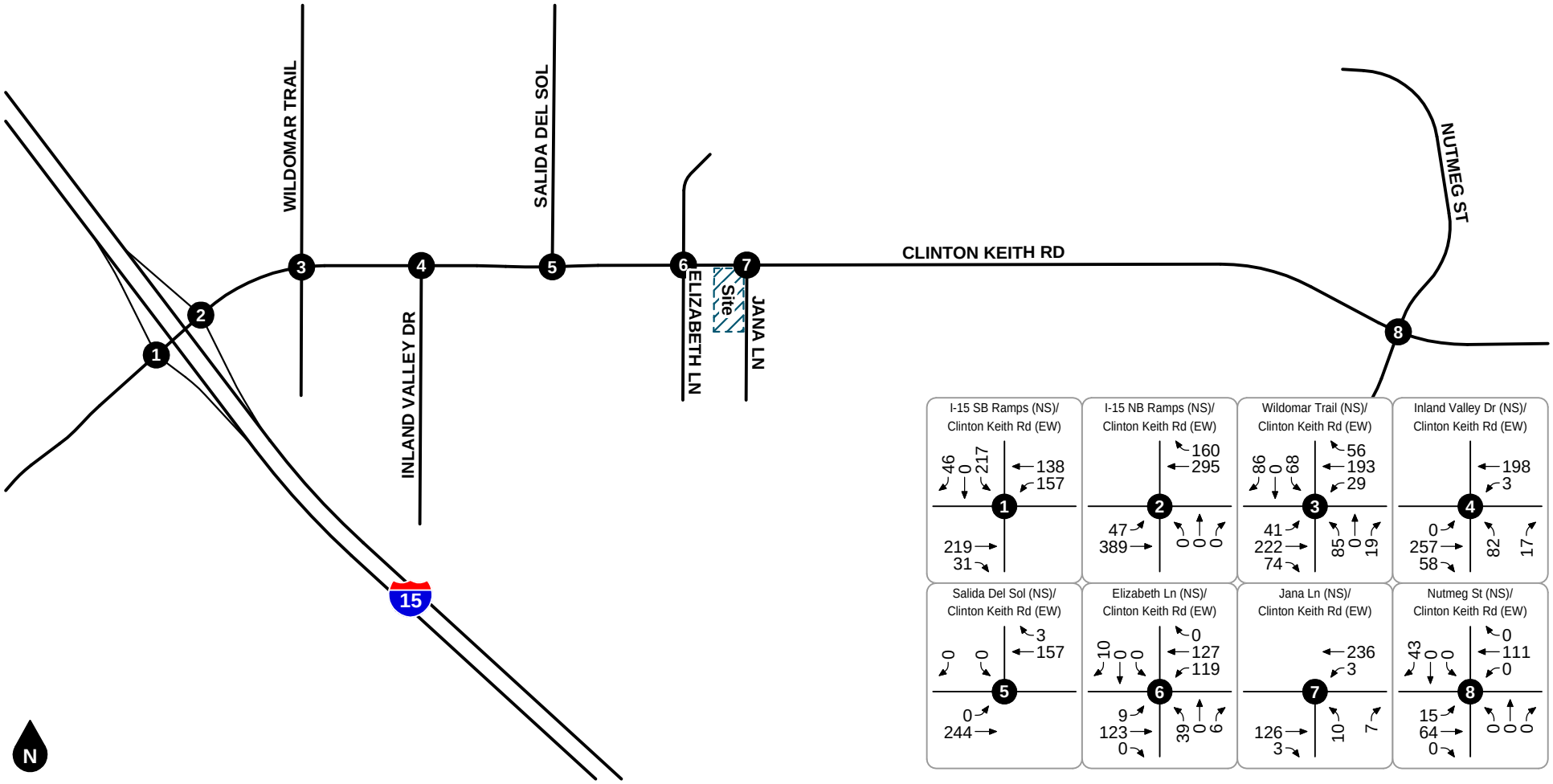
● Other Development

Figure 16
Other Development Location Map



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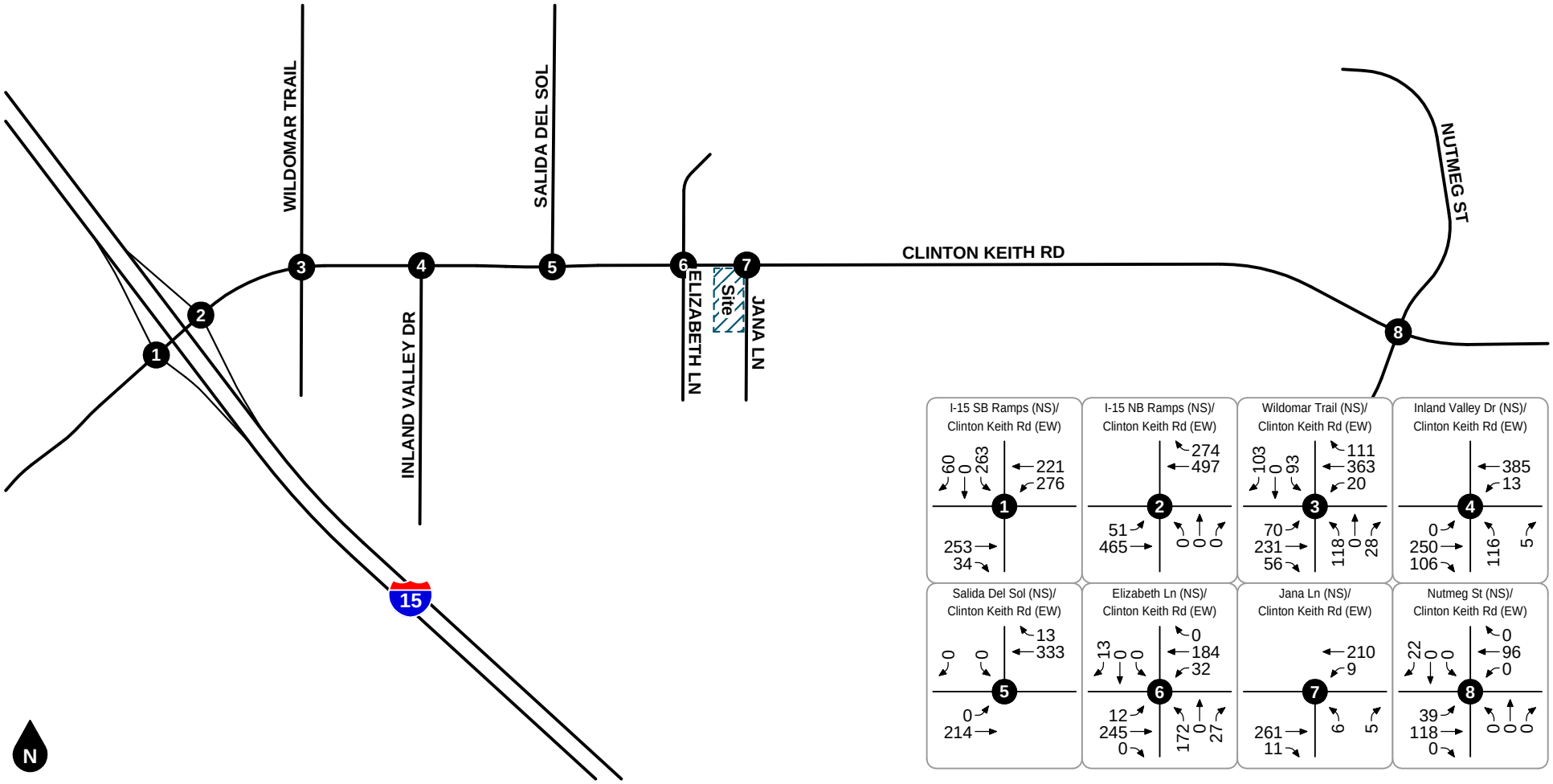
Study Intersection

Figure 17
Other Development Weekday
AM Peak Hour Intersection Turning Movement Volumes



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Study Intersection

Figure 18
Other Development Weekday
PM Peak Hour Intersection Turning Movement Volumes

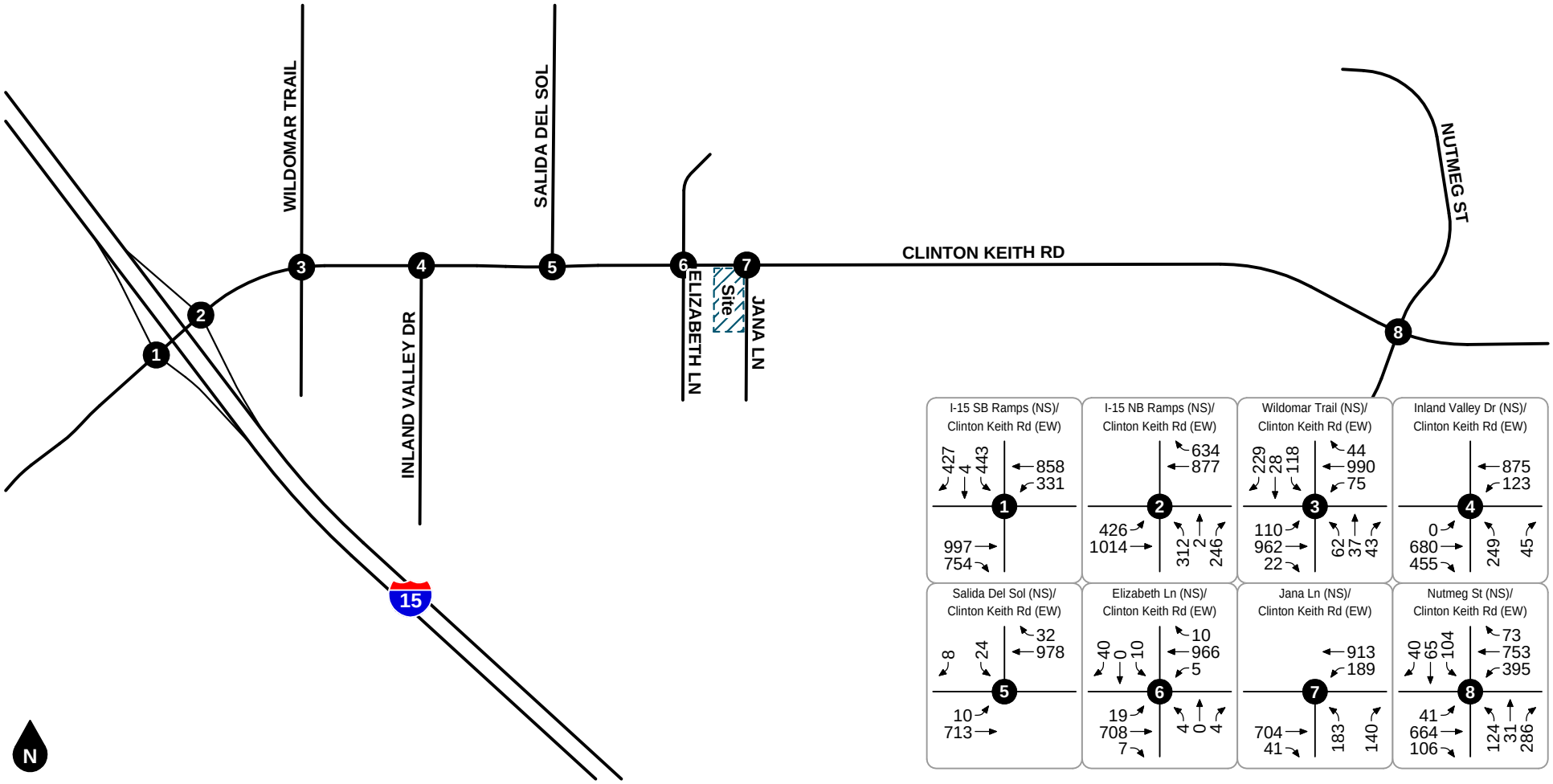
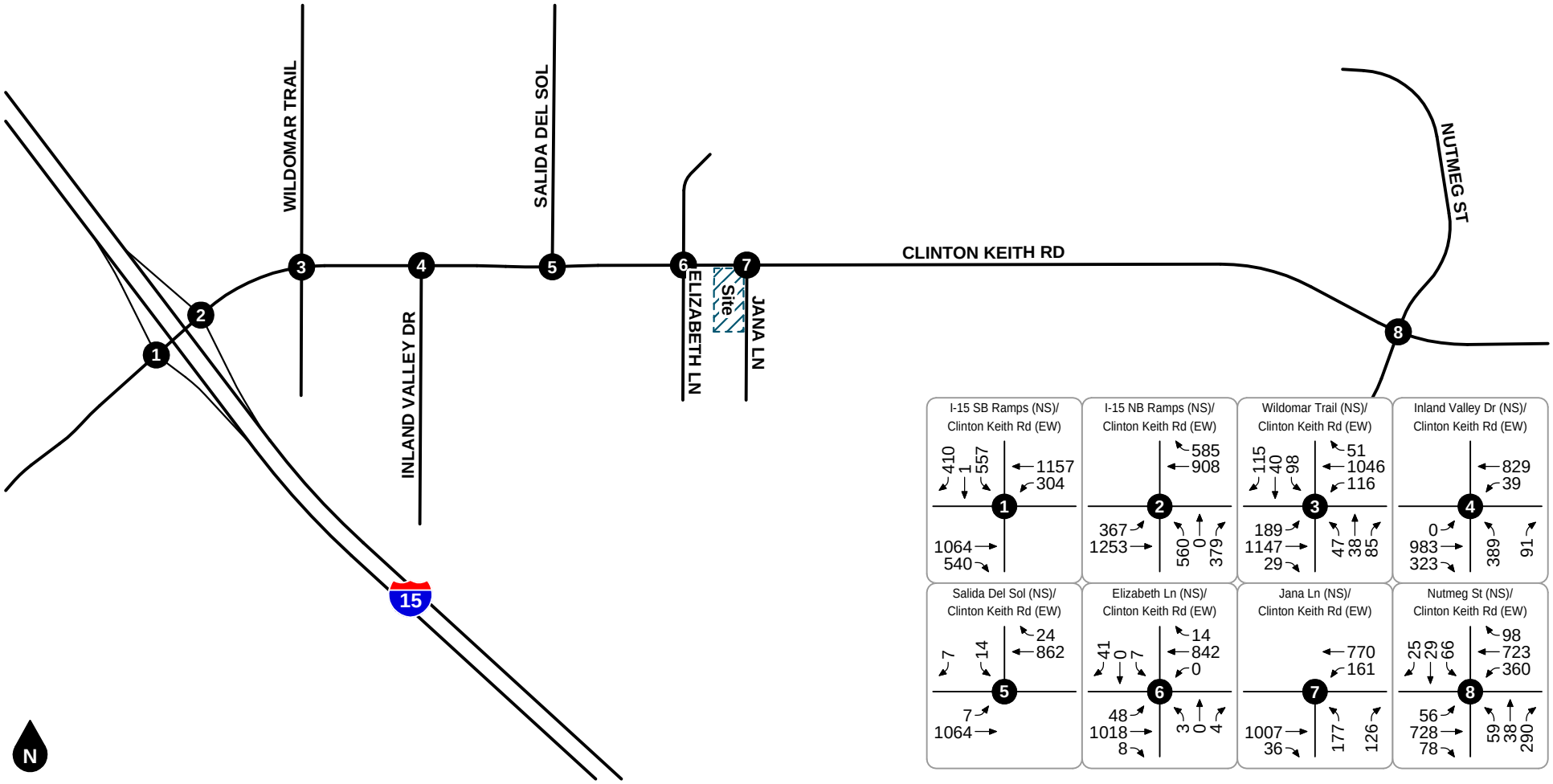


Figure 19
Existing Plus Ambient Growth Plus Project Weekday
AM Peak Hour Intersection Turning Movement Volumes



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Study Intersection

Figure 20
Existing Plus Ambient Growth Plus Project Weekday PM Peak Hour Intersection Turning Movement Volumes

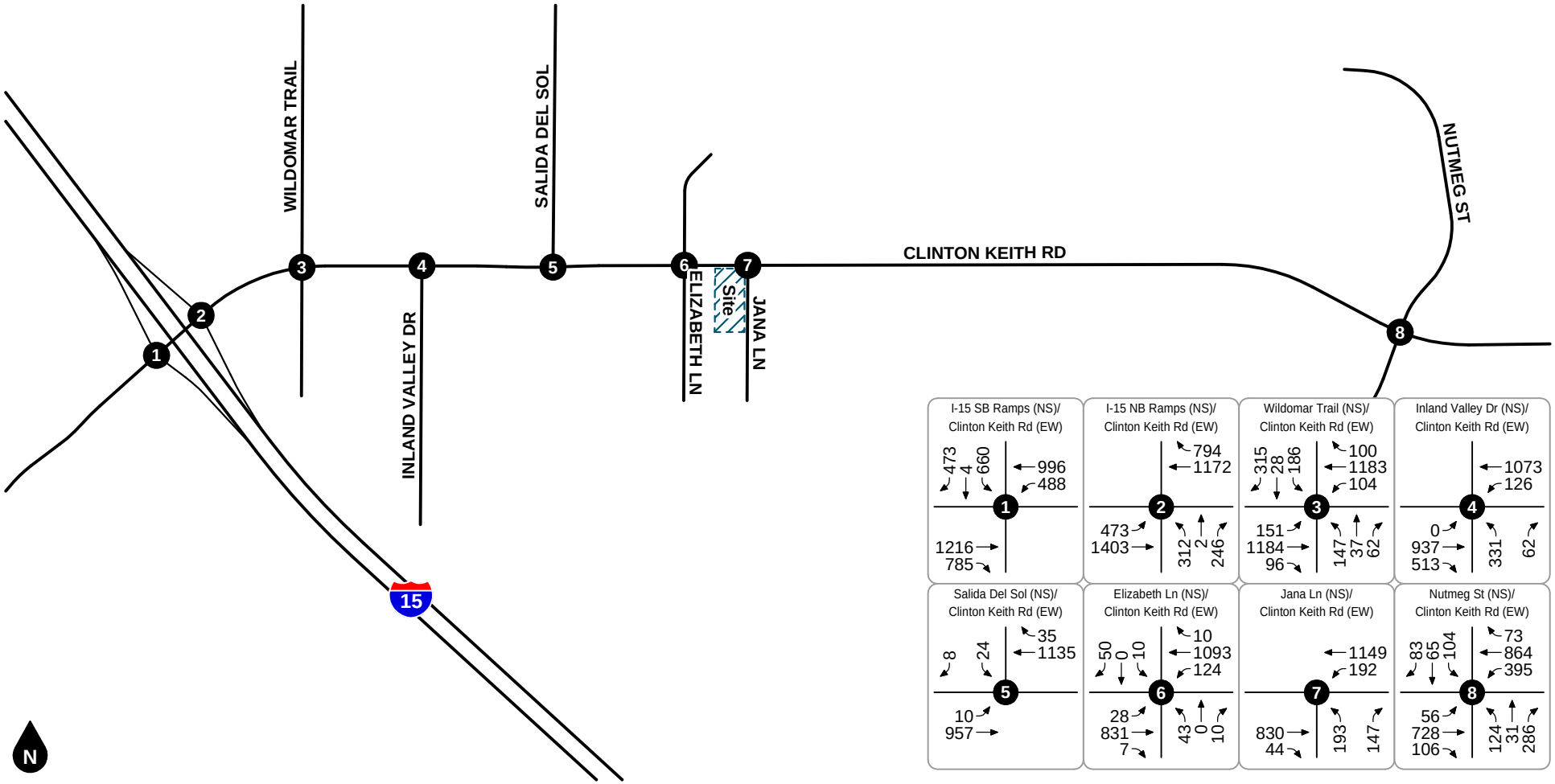


Figure 21
Existing Plus Ambient Growth Plus Project Plus Cumulative Weekday AM Peak Hour Intersection Turning Movement Volumes

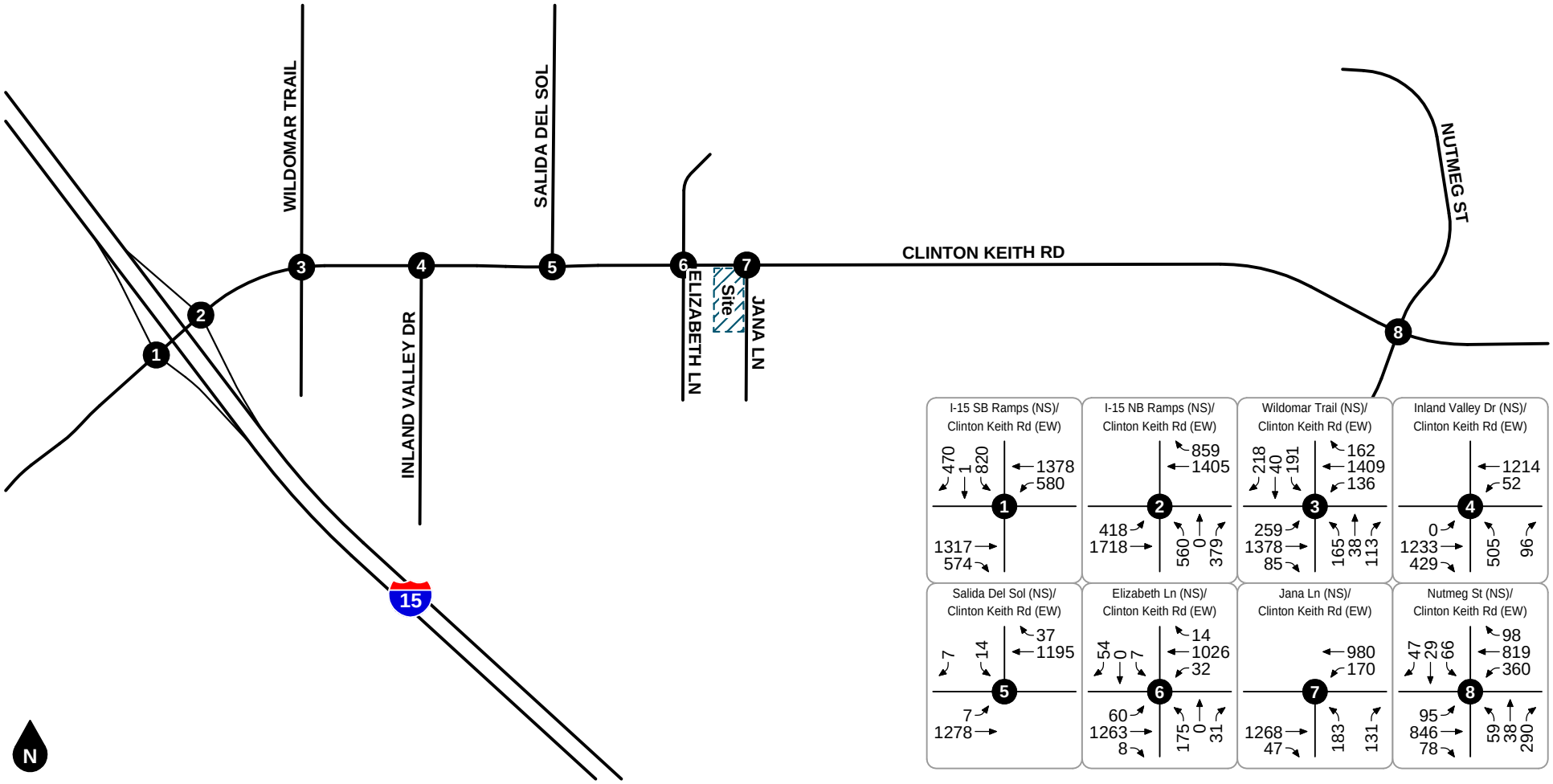


Figure 22
Existing Plus Ambient Growth Plus Project Plus Cumulative Weekday PM Peak Hour Intersection Turning Movement Volumes

6. FUTURE OPERATIONAL ANALYSIS

Detailed intersection Level of Service calculation worksheets for each of the following analysis scenarios are provided in Appendix D.

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT

The intersection Levels of Service for Existing Plus Ambient Growth Plus Project conditions are shown in Table 4. As shown in Table 4, the study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Existing Plus Ambient Growth Plus Project conditions, except for the following study intersections which are projected to operate at unacceptable Levels of Service (E or F) during the peak hours:

- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5 (AM/PM Peak Hours – LOS F)
- Jana Lane (NS) at Clinton Keith Road (EW) - #7 (AM/PM Peak Hours – LOS F)

The following improvements are recommended for Existing Plus Ambient Growth Plus Project conditions to maintain acceptable Level of Service:

- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5
  - Restrict the southbound approach to right turns only during weekday peak periods (7-9 AM, 4-6 PM). This intersection currently operates at unacceptable LOS. Based on the HCM delay methodology, the deficient LOS reported is primarily associated with left turns from the minor street (Salida Del Sol); east-west approaches along the major street (Clinton Keith Road) are uncontrolled and would operate within acceptable LOS. The intersection is not forecast to satisfy the MUTCD peak hour volume warrant; therefore, installation of a traffic signal is not warranted.

- Jana Lane (NS) at Clinton Keith Road (EW) - #7
  - Install a traffic signal
  - Construct northbound left turn lane
  - Restripe northbound shared left/right turn lane to right turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Existing Plus Ambient Growth Plus Project conditions with implementation of the recommended improvements.

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE

The intersection Levels of Service for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions are shown in Table 5. As shown in Table 5, the study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions, except for the following study intersections which are projected to operate at unacceptable Levels of Service (E or F) during the peak hours:

- Inland Valley Drive (NS) at Clinton Keith Road (EW) - #4 (PM Peak Hour – LOS E)
- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5 (AM/PM Peak Hours – LOS F)
- Elizabeth Lane (NS) at Clinton Keith Road (EW) - #6 (AM/PM Peak Hours – LOS F)
- Jana Lane (NS) at Clinton Keith Road (EW) - #7 (AM/PM Peak Hours – LOS F)

The following improvements are recommended for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions to maintain acceptable Level of Service:

- Inland Valley Drive (NS) at Clinton Keith Road (EW) - #4.
  - Construct additional eastbound through lane receiving lane
  - Construct additional westbound through lane

- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5
  - Install a traffic signal.
  - Construct northbound, southbound, and westbound left turn lanes.
  - Restripe northbound, southbound, and westbound shared left/through/right turn lane to shared through/right turn lane.

- Elizabeth Lane (NS) at Clinton Keith Road (EW) - #6
  - Install a traffic signal.
  - Construct northbound and southbound left turn lanes.
  - Restripe northbound and southbound shared left/through/right turn lane to shared through/right turn lane.
  - Construct additional eastbound through lane.

- Jana Lane (NS) at Clinton Keith Road (EW) - #7
  - Install a traffic signal.
  - Construct northbound left turn lane.
  - Restripe northbound shared left/right turn lane to right turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions with implementation of the recommended improvements.

FUTURE TRAFFIC SIGNAL WARRANTS

The need for a traffic control signal at the currently unsignalized study intersections of Salida Del Sol at Clinton Keith Road (Int #5), Elizabeth Lane at Clinton Keith Road (Int #6), and Jana Lane at Clinton Keith Road (Int #7) have been evaluated using the peak hour traffic signal warrant criteria (Warrant 3) in accordance with the California Manual on Uniform Traffic Control Devices (2014 Revision 6, March 30, 2021). Traffic signal warrant analysis worksheets are provided in Appendix E.

The peak hour traffic signal warrant (Warrant 3) is forecast to be satisfied at the currently unsignalized study intersection of Jana Lane at Clinton Keith Road (Int #7) for Existing Plus Ambient Growth Plus Project conditions.

The peak hour traffic signal warrant (Warrant 3) is forecast to be satisfied at the currently unsignalized study intersections of Salida Del Sol at Clinton Keith Road (Int #5) and Elizabeth Lane at Clinton Keith Road (Int #6), for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions.

QUEUING ANALYSIS

A turn pocket queuing analysis has been conducted at the study intersections at the request of City staff for turning movements that are projected to operate at unacceptable Levels of Service for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions. This analysis has been done regardless of whether the intersection is projected to operate at acceptable Levels of Service. To provide a conservative estimate, the 95th percentile queue was used to calculate required storage lengths.

Typically, when an exclusive left turn lane is required, a minimum length for two passenger cars should be provided at 25 feet per vehicle (i.e., 50 feet minimum storage length). Where possible, the recommended minimum pocket length used on roadways should be 100 feet where the speed is 30 miles per hour and 150 feet for arterials with speeds of 40 miles per hour or more. The recommended maximum single turn lane storage length is 300 feet; therefore, dual left turn lanes should be used when over 300 feet of storage is required or when necessary to provide acceptable levels of service at the intersection. For local streets and driveways, smaller storage lengths are permitted when volumes permit.

Table 6 summarizes results of the queuing analyses for turning movements conducted at the study area intersections to determine if adequate storage length is provided for individual movements that are projected to operate at unacceptable Levels of Service. The values represent the projected queue length necessary for satisfactory operations. It is recommended that the ultimate turn bay length exceed the projected queue length. The queuing analysis reports are based on the 95th percentile queue length conducted as part of the Highway Capacity Manual intersection delay analysis using the Vistro software (see Appendix D).

As shown in Table 6, existing storage lengths/intersection spacing is forecast to adequately serve the turning movements except for the eastbound dual left turn lanes and westbound right turn lanes at the intersection of I-215 NB Ramps at Clinton Keith Road, and the southbound left turn lane at the intersection of Wildomar Trail at Clinton Keith Road.

The I-215 Northbound Ramps at Clinton Keith Road intersection (#2) is entirely within Caltrans' jurisdiction and increasing the turn lane storage lengths is not feasible due to opposing left turn lanes for the SB ramps. Further, traffic from the proposed project is considered part of the background development growth assumed in all traffic analyses because it is consistent with the general plan and zoning for the City, and in another jurisdiction. Payment of the Transportation Uniform Mitigation Fee (TUMF) by the project as required by Wildomar Municipal Code Section 3.4, addresses the project's proportionate share of regional transportation improvements.

Deficient queuing can be improved either with striping modifications at intersections or through Intelligent Transportation Systems (ITS). The City of Wildomar has adopted ITS program which would improve deficient queuing operations to satisfactory operations. As a Condition of Approval, the project would be required to contribute to the ITS program. ITS uses various methods, such as intersection cameras, loop detection, and timing modifications to optimize intersection operations in real time.

The City of Wildomar implements development standards designed to ensure standard engineering practices are used for all improvements. These features of the proposed project would be reviewed for compliance with these standards as part of the City's review process. Additionally, the implementation of the recommended roadway improvements and adherence to all applicable standards would ensure that roadway hazards are reduced, and impacts are less than significant.

The southbound left turn lane at the intersection of Wildomar Trail at Clinton Keith Road can be extended from 95 feet to a minimum of 250 feet to provide for adequate storage.

PROJECT FAIR SHARE CONTRIBUTION

Table 7 shows the project fair share contributions and summary of improvements recommended for cumulative conditions. The project fair share contribution is based on the proportion of project peak hour intersection turning movement volumes contributed to the improvement location relative to the total new peak hour intersection turning movement volumes. The intersection fair share cost calculations are typically based on the higher of the AM or PM peak hour traffic volumes. The fair share calculations are intended only for the discussion purposes of this traffic impact analysis, and do not imply any legal responsibility or formula for contributions or mitigation.

Table 4
Existing Plus Ambient Growth Plus Project Intersection Levels of Service

Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
			Delay[3]	LOS[4]	Delay[3]	LOS[4]
1. I-215 SB Ramps (NS) at Clinton Keith Rd (EW)	Caltrans	TS	20.9	C	15.6	B
2. I-215 NB Ramps (NS) at Clinton Keith Rd (EW)	Caltrans	TS	16.0	B	17.8	B
3. Wildomar Tr (NS) at Clinton Keith Rd (EW)	Wildomar	TS	18.5	B	19.1	B
4. Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Wildomar	TS	14.1	B	16.5	B
5. Salida Del Sol (NS) at Clinton Keith Rd (EW)	Wildomar	CSS	72.4	F	82.6	F
6. Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Wildomar	CSS	24.0	C	33.0	D
7. Jana Ln (NS) at Clinton Keith Rd (EW)	Wildomar	CSS	2780.2	F	4079.2	F
- With Improvements[5]		CSS	11.6	B	11.8	B
8. Nutmeg St (NS) at Clinton Keith Rd (EW)	Murrieta	TS	19.9	B	20.0	B

Notes:

(1) Caltrans = California Department of Transportation

(2) TS = Traffic Signal; CSS = Cross Street Stop

(3) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

(4) LOS = Level of Service

(5) Although the intersection is projected to operate at unacceptable LOS during the peak hours, mitigation is not recommended. The minor street approach volumes do not meet the minimum requirements to warrant the installation of a traffic signal and additional travel lanes would not reduce the LOS to an acceptable level.

Table 5
Existing Plus Ambient Growth Plus Project Plus Cumulative Intersection Levels of Service

Study Intersection	Jurisdiction[1]	Traffic Control[2]	AM Peak Hour		PM Peak Hour	
			Delay[3]	LOS[4]	Delay[3]	LOS[4]
1. I-215 SB Ramps (NS) at Clinton Keith Rd (EW)	Caltrans	TS	42.2	D	30.7	C
2. I-215 NB Ramps (NS) at Clinton Keith Rd (EW)	Caltrans	TS	18.7	B	32.0	C
3. Wildomar Trl (NS) at Clinton Keith Rd (EW)	Wildomar	TS	21.1	C	30.7	C
4. Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Wildomar	TS	21.2	C	69.6	E
- With Improvements		TS	12.9	B	19.2	B
5. Salida Del Sol (NS) at Clinton Keith Rd (EW)	Wildomar	CSS	1742.6	F	10000.0	F
- With Improvements		TS	13.3	B	23.9	C
6. Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Wildomar	CSS	410.6	F	9540.4	F
- With Improvements		TS	9.4	A	14.4	B
7. Jana Ln (NS) at Clinton Keith Rd (EW)	Wildomar	CSS	5388.9	F	10000.0	F
- With Improvements		TS	11.5	B	12.6	B
8. Nutmeg St (NS) at Clinton Keith Rd (EW)	Murrieta	TS	20.1	C	20.4	C

Notes:

(1) Caltrans = California Department of Transportation

(2) TS = Traffic Signal; CSS = Cross Street Stop

(3) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

(4) LOS = Level of Service

Table 6
Queuing Analysis[1]

Study Intersection	Turning Movement	Existing Plus Ambient Growth Plus Project Plus Cumulative		Available Storage Length[2]	Adequate Storage
		AM Peak Hour	PM Peak Hour		
I-215 SB Ramps (NS) at Clinton Keith Rd (EW)	Southbound Left Turn Lane	617.09 Feet	484.57 Feet	>1,000 Feet	Yes
	Southbound Left/Through Lane	615.81 Feet	484.49 Feet	680 Feet	Yes
	Southbound Dual Right Turn Lanes	336.40 Feet	n/a[3]	600 Feet	Yes
I-215 NB Ramps (NS) at Clinton Keith Rd (EW)	Northbound Left Turn Lane	n/a[3]	354.42 Feet	>1,000 Feet	Yes
	Northbound Left/Through/Right Turn Lane	n/a[3]	364.31 Feet	650 Feet	Yes
	Northbound Right Turn Lane	n/a[3]	417.44 Feet	650 Feet	Yes
	Eastbound Dual Left Turn Lanes	n/a[3]	241.04 Feet	200 Feet	No
	Westbound Right Turn Lane	n/a[3]	864.68 Feet	280 Feet	No
Wildomar Trl (NS) at Clinton Keith Rd (EW)	Southbound Left Turn Lane	n/a[3]	247.74 Feet	95 Feet	No
Salida Del Sol (NS) at Clinton Keith Rd (EW)	Northbound Left Turn Lane	62.37 Feet	95.73 Feet	150 Feet[4]	Yes
	Southbound Left Turn Lane	33.05 Feet	19.10 Feet	150 Feet[4]	Yes
	Eastbound Left Turn Lane	15.86 Feet	11.66 Feet	150 Feet	Yes
	Westbound Left Turn Lane	24.22 Feet	34.01 Feet	150 Feet[4]	Yes

Notes:

(1) Queuing analysis based on 95th-Percentile Queue Length. See Appendix D.

(2) Available storage lengths based on field observations.

(3) n/a = not applicable. Turning movement projected to operate at an acceptable LOS.

(4) Turn lanes are recommended improvements. A 150 foot storage length is recommended.

Table 7
Project Fair Share Contribution

Study Intersection	Jurisdiction[1]	Peak Hour	Intersection Turning Movement Volumes				
			Existing	Existing Plus Ambient Plus Project Plus Cumulative	Project Trips	Total New Trips	Project Share of Total New Trips
4. Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Wildomar	AM	2,231	3,042	105	811	12.9%
		PM	2,447	3,529	108	1,082	10.0%
5. Salida Del Sol (NS) at Clinton Keith Rd (EW)	Wildomar	AM	1,585	2,248	116	663	17.5%
		PM	1,787	2,654	119	867	13.7%
6. Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Wildomar	AM	1,586	2,206	124	620	20.0%
		PM	1,786	2,670	127	884	14.4%
7. Jana Ln (NS) at Clinton Keith Rd (EW)	Wildomar	AM	1,530	2,555	579	1,025	56.5%
		PM	1,689	2,779	520	1,090	47.7%

Study Intersection	Improvements
4. Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Construct additional WB through lane and EB through lane receiving lane.
5. Salida Del Sol (NS) at Clinton Keith Rd (EW)	Install traffic signal. Construct NB, SB, and WB left turn lanes. Restripe NB, SB, and WB shared left/through/right turn lane to shared through/right turn lane.
6. Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Install traffic signal. Construct NB and SB left turn lanes. Restripe NB and SB shared left/through/right turn lane to shared through/right turn lane. Construct additional EB through lane.
7. Jana Ln (NS) at Clinton Keith Rd (EW)	Install traffic signal. Construct NB left turn lane. Restripe NB shared left/right turn lane to right turn lane.

7. SITE ACCESS AND CIRCULATION

This section includes a description of project improvements necessary to provide site access.

PROJECT DESIGN FEATURES

This analysis assumes the proposed project shall construct one right turn in/out only access driveway on Clinton Keith Road and three full access driveways on Jana Lane to provide site access.

Figure 23 shows a conceptual striping plan for the project frontage on Clinton Keith Road and Jana Lane. Driveways on the east side of Jana Lane have been included to show how they line up with the driveways for the proposed project.

Figure 24 exhibits truck turning templates for a delivery truck navigating to/from the project site.

This analysis also assumes the project shall comply with the following conditions as part of the City of Wildomar standard development review process:

- A construction work site traffic control plan shall comply with State standards set forth in the California Manual of Uniform Traffic Control Devices and shall be submitted to the City for review and approval prior to the issuance of a grading permit or start of construction. The plan shall identify any roadway, sidewalk, bike route, or bus stop closures and detours as well as haul routes and hours of operation. All construction related trips shall be restricted to off-peak hours to the extent possible.

- All on-site and off-site roadway design, traffic signing and striping, and traffic control improvements relating to the proposed project shall be constructed in accordance with applicable State/Federal engineering standards and to the satisfaction of the City of Wildomar.

- Site-adjacent roadways shall be constructed or repaired at their ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise required by the City of Wildomar.

- Adequate emergency vehicle access shall be provided to the satisfaction of the Riverside County Fire Authority.

- The final grading, landscaping, and street improvement plans shall demonstrate that sight distance requirements are met in accordance with applicable City of Wildomar/California Department of Transportation sight distance standards.

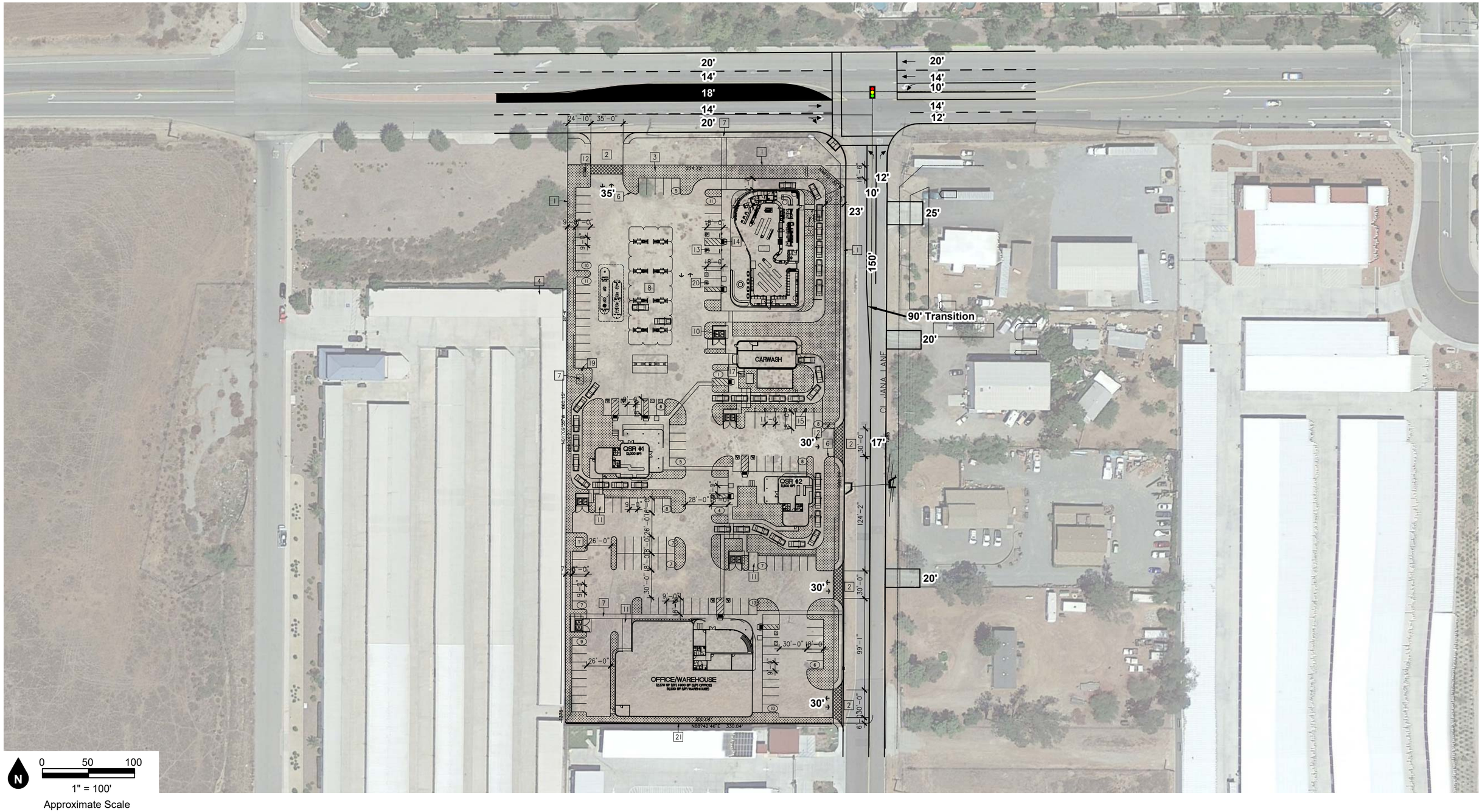
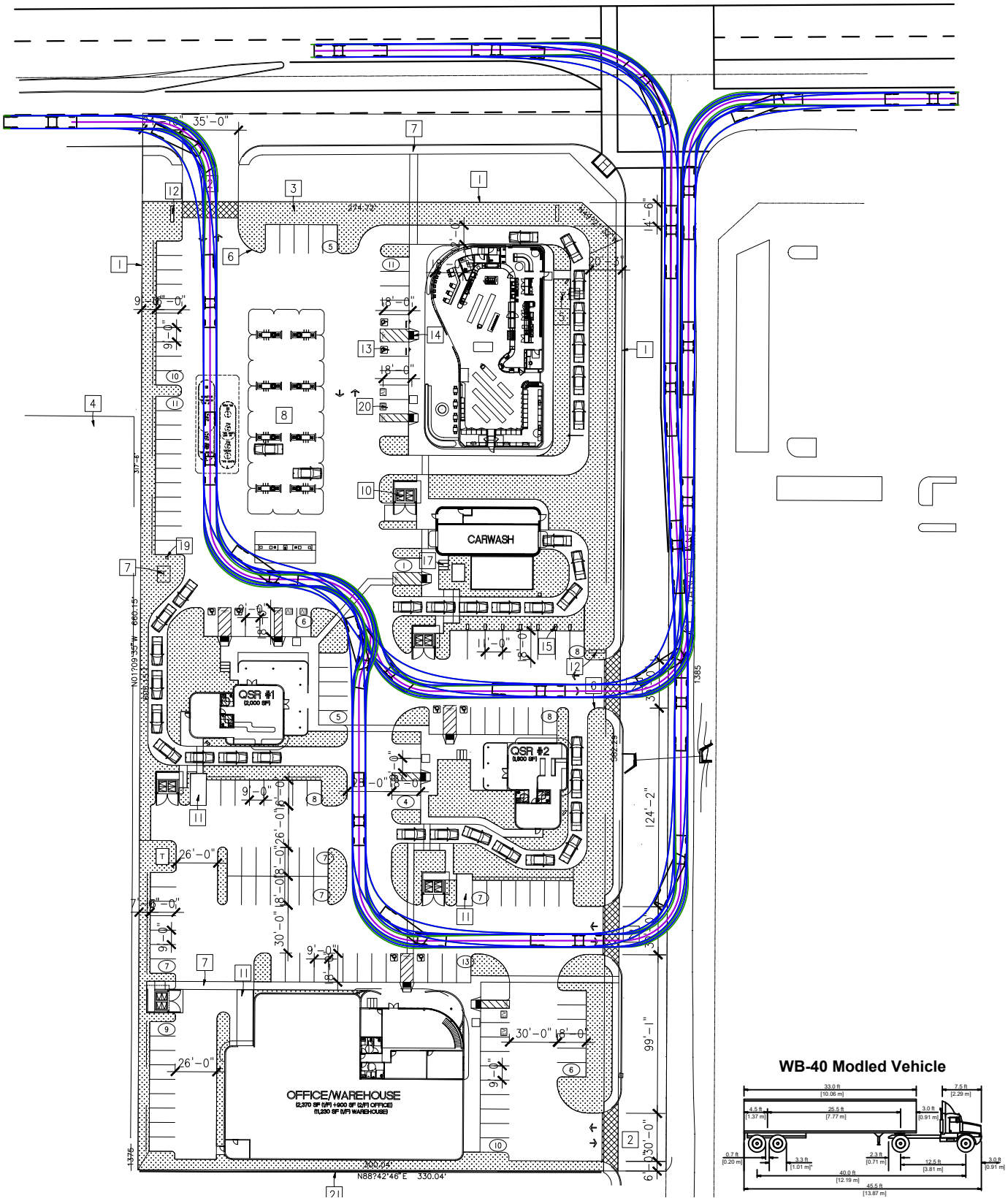


Figure 23
Conceptual Striping Plan



Legend
- Vehicle Wheel Path
- Vehicle Overhang
- Vehicle Centerline

Figure 24
Truck Turning Template

8. VEHICLES MILES TRAVELED (VMT)

BACKGROUND

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) ["OPR Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

VMT ASSESSMENT AND SCREENING

The June 10, 2020 City Council meeting adopted a resolution which provided guidelines for VMT thresholds of significance for analyzing traffic impacts under CEQA. Exhibit 1 of this resolution provides project screening criteria which exempts projects from conducting a detailed VMT analysis. The project screening includes a land use type screening whereas locally serving retail 50,000 square feet or less and 10,000 square feet or less of office is screened out and not required to conduct a VMT analysis.

The WRCOG VMT Screening Tool was used to access the project site. The project site is located within APN: 380290002 (TAZ: 3,297). According to the WRCOG VMT Screening Tool, the project is not located within a Transit Priority Area (TPA). The project TAZ 2022 daily home-based work VMT per worker is 16.2, whereas the jurisdictional average 2022 daily total home-based work VMT per worker is 17.1. Therefore, the project TAZ 2022 daily home-based work VMT per worker is 5.17% less than the jurisdictional average 2022 daily home-based work VMT per worker. Exhibit A shows the results of the WRCOG VMT Screening Tool.

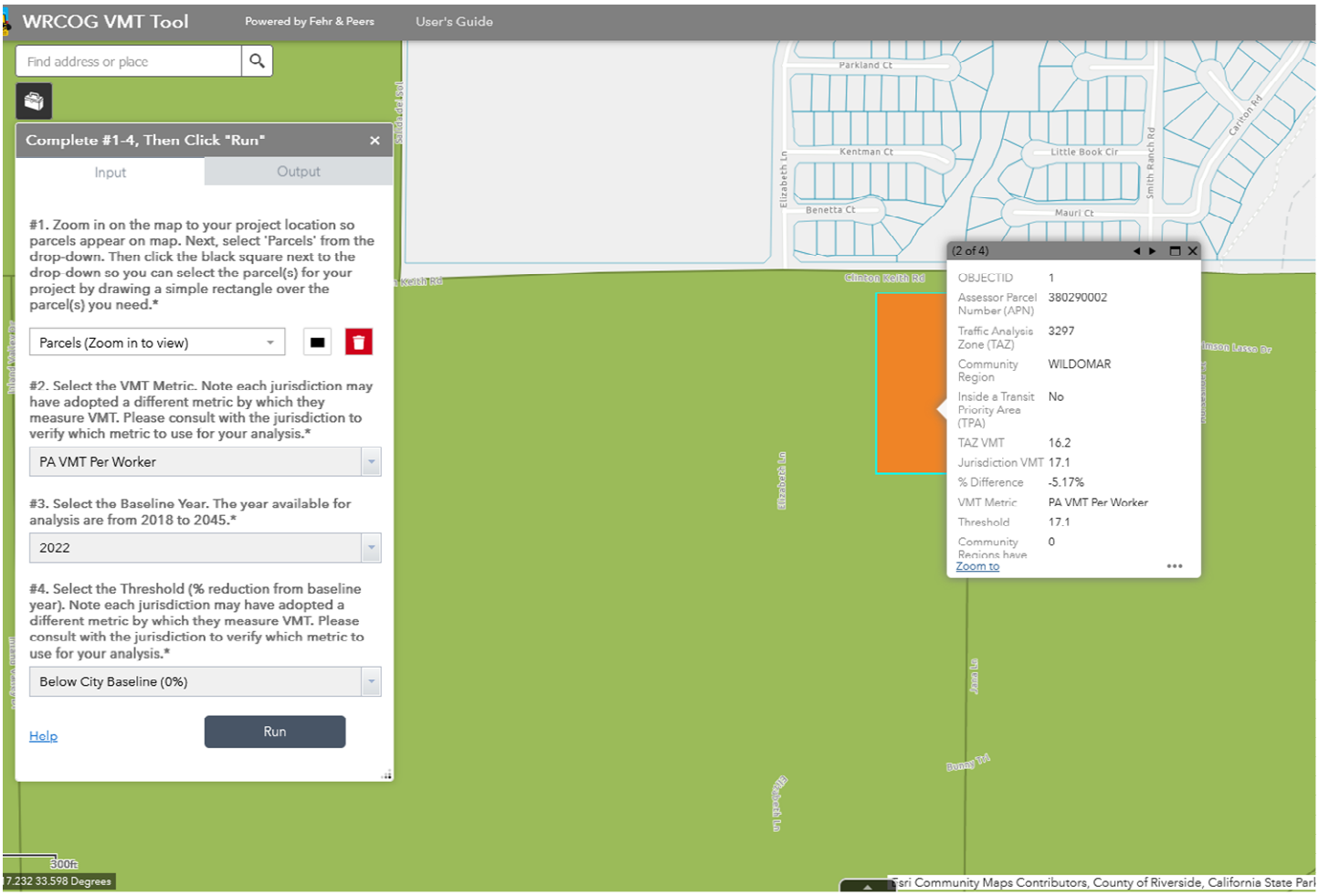


Exhibit A – WRCOG1 VMT Screening Tool Results for the Project

The June 10, 2020 City Council adopted resolution recommends that future projects demonstrate that they will reduce existing VMT by at least 3 percent. Since the project TAZ 20222 daily home-based VMT per worker is 5.17% less than the jurisdictional average 2022 daily home-based work VMT per worker, the proposed development meets the requirement to reduce VMT by at least 3 percent.

The commercial retail portion of the proposed project is screened out and exempt from a detailed VMT analysis since the commercial retail portion of the proposed project consists of locally serving retail 50,000 square feet or less. The 14,500 square feet of office is greater than the screening threshold of 10,000 square feet of office or less. Based on the WRCOG VMT Screening Tool, the 14,500 square feet of office will reduce the City required VMT by at least 3 percent. Therefore, the project meets the City established VMT screening criteria for locally serving retail 50,000 square feet or less (commercial retail portion of the project site) and the requirement of reducing VMT by at least 3 percent (office portion of the project site) and can be presumed to result in a less than significant impact.

9. CONCLUSIONS

This section summarizes the findings and recommended improvements, or mitigation measures (if any) identified in previous sections of this study.

PROJECT TRIP GENERATION

The proposed project is forecast to generate a total of approximately 5,667 daily trips, including 270 trips during the AM peak hour and 264 trips during the PM peak hour.

LEVELS OF SERVICE/OPERATIONAL ANALYSIS FINDINGS (NON-CEQA)

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Existing Plus Ambient Growth Plus Project conditions, except for the following study intersections which are projected to operate at unacceptable Levels of Service (E or F) during the peak hours:

- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5 (AM/PM Peak Hours – LOS F)
- Jana Lane (NS) at Clinton Keith Road (EW) - #7 (AM/PM Peak Hours – LOS F)

The following improvements are recommended for Existing Plus Ambient Growth Plus Project conditions to maintain acceptable Level of Service:

- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5
  - Restrict the southbound approach to right turns only during weekday peak periods (7-9 AM, 4-6 PM). This intersection currently operates at unacceptable LOS. Based on the HCM delay methodology, the deficient LOS reported is primarily associated with left turns from the minor street (Salida Del Sol); east-west approaches along the major street (Clinton Keith Road) are uncontrolled and would operate within acceptable LOS. The intersection is not forecast to satisfy the MUTCD peak hour volume warrant; therefore, installation of a traffic signal is not warranted.

- Jana Lane (NS) at Clinton Keith Road (EW) - #7
  - Install a traffic signal
  - Construct northbound left turn lane
  - Restripe northbound shared left/right turn lane to right turn lane.

The proposed project is forecast to result in <u>no</u> substantial operational deficiencies at the study intersections for Existing Plus Ambient Growth Plus Project conditions with implementation of the recommended improvements.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions, except for the following study intersections which are projected to operate at unacceptable Levels of Service (E or F) during the peak hours:

- Inland Valley Drive (NS) at Clinton Keith Road (EW) - #4 (PM Peak Hour – LOS E)
- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5 (AM/PM Peak Hours – LOS F)
- Elizabeth Lane (NS) at Clinton Keith Road (EW) - #6 (AM/PM Peak Hours – LOS F)
- Jana Lane (NS) at Clinton Keith Road (EW) - #7 (AM/PM Peak Hours – LOS F)

The following improvements are recommended for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions to maintain acceptable Level of Service:

- Inland Valley Drive (NS) at Clinton Keith Road (EW) - #4
  - Construct additional eastbound through lane receiving lane
  - Construct additional westbound through lane

- Salida Del Sol (NS) at Clinton Keith Road (EW) - #5
  - Install a traffic signal
  - Construct northbound, southbound, and westbound left turn lanes.
  - Restripe northbound, southbound, and westbound shared left/through/right turn lane to shared through/right turn lane.

- Elizabeth Lane (NS) at Clinton Keith Road (EW) - #6
  - Install a traffic signal
  - Construct northbound and southbound left turn lanes.
  - Restripe northbound and southbound shared left/through/right turn lane to shared through/right turn lane.
  - Construct additional eastbound through lane.

- Jana Lane (NS) at Clinton Keith Road (EW) - #7
  - Install a traffic signal
  - Construct northbound left turn lane
  - Restripe northbound shared left/right turn lane to right turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Existing Plus Ambient Growth Plus Project Plus Cumulative conditions with implementation of the recommended improvements.

VMT Analysis Findings (CEQA)

The proposed project consists of locally serving retail 50,000 square feet or less, with 14,500 square feet of office. The 14,500 square feet of office is greater than the screening threshold of 10,000 square feet of office or less. The proposed project is screened out and exempt from a VMT since the proposed project meets the screening criteria for locally serving retail 50,000 square feet or less, and the 14,500 square feet of office will reduce the City required VMT by at least 3 percent. Therefore, the project meets the City established VMT screening criteria and can be presumed to result in a less than significant impact.

APPENDICES

Appendix A Glossary
Appendix B Scoping Agreement
Appendix C Volume Count Worksheets
Appendix D Level of Service Worksheets
Appendix E Traffic Signal Warrant Worksheets

Appendix A

Glossary

ACRONYMS

AC	Acres
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
DU	Dwelling Unit
ICU	Intersection Capacity Utilization
GFA	Gross Floor Area
LOS	Level of Service
PCE	Passenger Car Equivalent
SP	Service Population
TSF	Thousand Square Feet
V/C	Volume/Capacity
VMT	Vehicle Miles Traveled

TERMS

ACTUATED SIGNAL CONTROL: A type of traffic signal control in which display of each phase depends on whether the corresponding phase detector has registered a service call or the phase is on recall.

ACTUATION: Detection of a roadway user that is forwarded to the signal controller.

AVERAGE DAILY TRAFFIC: The average 24-hour volume for a stated period divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A point of constriction along a roadway that limits the amount of traffic that can proceed downstream from its location.

CALL: An indication within a signal controller that a particular phase is waiting for service, either through actuation from a roadway user or phase recall.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass through a roadway facility during a specified period.

CHANNELIZATION: The separation of conflicting traffic movements by use of pavement markings, raised curbs, or other suitable means to facilitate free flow movement.

CLEARANCE INTERVAL: Equal to the yellow plus all-red time, if any, when a traffic signal changes between phases (i.e., the amount of time between the end of a green light from one movement to the beginning of a green light for the next).

COORDINATED SIGNAL CONTROL: A type of traffic signal control in which non-coordinated phases associated with minor movements are constrained such that the coordinated phases are served at a specific time during the signal cycle, thus maintaining the efficient progression of traffic flow along the major roadway.

CONTROL DELAY: The portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign). It includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay.

CORDON: An imaginary boundary line around or across a study area across which vehicles, persons, or other information can be collected for survey and analytical purposes.

CORNER SIGHT DISTANCE: The minimum sight distance required by the driver of a vehicle to cross or enter the lanes of the major roadway without requiring approaching traffic traveling at a given speed to radically alter their speed or trajectory.

CYCLE: A complete sequence of signal indications for all phases.

CYCLE LENGTH: The total time for a traffic signal to complete one full cycle.

DAILY CAPACITY: A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.

DELAY: The total additional travel time experienced by a roadway user (driver, passenger, bicyclist, or pedestrian) beyond that required to travel at a desired speed.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device used to count or determine the presence of a roadway user.

DESIGN SPEED: A speed used for purposes of designing horizontal and vertical alignments of a highway.

DIRECTIONAL SPLIT: The percent of two-way traffic traveling in a specified direction.

DIVERSION: The rerouting of traffic from a normal path of travel between two points, such as to avoid congestion or perform a secondary trip.

FREE FLOW: Traffic flow that is unaffected by a traffic control and/or or upstream or downstream conditions.

GAP: Time or distance between two vehicles measured from rear bumper of the front vehicle to front bumper of the second vehicle.

GAP ACCEPTANCE: The method by which a driver accepts an available gap in traffic to enter or cross the road.

HEADWAY: Time or distance between two successive vehicles measured from same point on both vehicles (i.e., front bumper to front bumper).

LEVEL OF SERVICE: A grading scale of quantitative performance measures representing the quality of service of a transportation facility or service from an average traveler's perspective.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MULTI-MODAL: More than one mode, such as automobile, transit, bicycle, and pedestrian.

OFFSET: The time interval between the beginning of a traffic signal cycle at one intersection and the beginning of signal cycle an adjacent intersection.

PLATOON: A set of vehicles traveling at similar speed and moving as a general group with clear separation between other vehicles ahead and behind.

PASSENGER CAR EQUIVALENT: A metric used to assess the impact of larger vehicles, such as trucks, recreational vehicles, and buses, by converting the traffic volume of larger vehicles to an equivalent number of passenger cars.

PEDESTRIAN CLEARANCE INTERVAL: Also known as the "Flashing Don't Walk" interval, it signals the end of pedestrian entry into the crosswalk following the "Walk" indication and provides time for pedestrians who have already entered the crosswalk to finishing crossing.

PEAK HOUR: The hour within a day in which the maximum volume occurs.

PEAK HOUR FACTOR: The peak hour volume divided by the four times the peak 15-minute flow rate.

PHASE: In traffic signals, the green, yellow, and red clearance intervals assigned to a specified traffic movement.

PRETIMED SIGNAL: A traffic signal operation in which the cycle length, phasing sequence, and phasing times are predetermined and fixed, regardless of actual demand for any given traffic movement. Also known as a fixed time signal.

PROGRESSION: The coordinated movement of vehicles through signalized intersections along a corridor.

QUEUE: The number of vehicles waiting at a service area such as a traffic signal, stop sign, or access gate.

QUEUE LENGTH: The length of vehicle queue, typically expressed in feet, waiting at a service area such as a traffic signal, stop sign, or access gate.

RECALL: A signal phasing operation in which a specified phase places a call to the signal controller each time a conflicting phase is served, thus ensuring the specified phase will be serviced again.

SEMI-ACTUATED CONTROL: A type of traffic signal control in which only the minor movements are provided detection.

SIGHT DISTANCE: The continuous length of roadway visible to a driver or roadway user.

STACKING DISTANCE: The length of area available behind a service area, such as a traffic signal or gate, for vehicle queuing to occur.

STOPPING SIGHT DISTANCE: The minimum distance required by the driver of a vehicle traveling at a given speed to bring the vehicle to a stop after an object on the road becomes visible, including reaction and response time.

TRIP OR TRIP END: The one-directional movement of a person or vehicle. Every trip has an origin and a destination at its respective ends (i.e., trip ends). In terms of site trip generation, the same vehicle entering and exiting a site generates two trips: one inbound trip and one outbound trip.

TRIP GENERATION RATE: The rate at which a land use generates trips per the specified land use variable, such per dwelling unit or per thousand square feet.

TRUCK: A heavy motor vehicle generally used for transporting goods.

VEHICLE MILES TRAVELED: A measure of the amount and distance of automobile travel essentially calculated as the sum of each trip times the trip length.

APPENDIX B

SCOPING AGREEMENT

MEMORANDUM OF UNDERSTANDING

TO: CITY OF WILDOMAR

FROM: Bryan Crawford, Senior Transportation Planner | GANDDINI GROUP, INC.

DATE: June 27, 2022

SUBJECT: Beyond Food Mart (Clinton Keith Road and Jana Lane) Traffic Impact Analysis Scoping

INTRODUCTION

The purpose of this traffic study scoping document is to outline the proposed traffic analysis parameters and assumptions for review/concurrence by City of Wildomar staff.

PROJECT DESCRIPTION

Figure 1 shows the project location map. The project site is located on the southeast corner of Jana Lane and Clinton Keith Road in the City of Wildomar, as exhibited in Figure 2.

The site plan is show in Figure 2. The 4.35-acre project site is proposed to include a 16 fueling position convenience store/gas station, and automated car wash, 3,800 square feet of fast-food restaurant with drive-thru, and 14,500 square feet of general office. The proposed project is anticipated to be constructed and fully operational by year 2024.

The project site is proposed to provide one access driveway to Clinton Keith Road and three access driveways to Jana Lane. The project driveway on Clinton Keith Road will be restricted to right turns in/out only. The three project driveways on Jana Lane will be full access.

PROJECT TRIP GENERATION

Table 1 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021) and the *(Not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, April 2002). ITE land use code 945 (Convenience Store/Gas Station), land use code 934 (Fast-Food Restaurant with Drive-Thru, and land use code 710 (General Office) have been used to estimate the site-specific trip generation estimates for the project site land uses.

ITE land use code 948 (Automated Car Wash) provides trip generation rates for the PM peak hour but not the AM peak hour or daily. The PM peak hour rates are based on three survey sites from the 1990's and 2000's. In consultation with City staff, multiple more recent trip generation data sources were analyzed and it was determined that the automated car wash land use will be based on rates provided in the Newport Pointe Traffic Impact Analysis Report (Linscott, Law & Greenspan, Engineers, April 28, 2021), which was derived from traffic counts on February 7, 2014 at the Victorville Speedwash located at 12147 Industrial Boulevard. The trip generation rates land use variable is based on the linear feet of the wash tunnel. The result is that the AM peak hour trip generation is a bit higher and the daily trip generation lower than the *(Not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, April 2002). The PM peak hour trip

generation is near identical to ITE land use code 948. Therefore, these rates are similar to other sources and appropriate to use for the automated car wash land use.

The project trip generation forecast shown in Table 1 also includes pass-by trip adjustments. Convenience store/gas station and restaurant land uses will often locate next to busy roadways to attract motorists already on the street. Since the trip generation rates shown in Table 1 represent vehicles entering and exiting at the site driveway(s), it is appropriate to reduce the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. Pass-by trip adjustments were applied to the existing and project trip generation in accordance with pass-by rates noted in the ITE *Trip Generation Manual* (11th Edition, 2021).

As shown in Table 1, the proposed project is forecast to generate approximately 5,667 daily trips, including 270 trips during the AM peak hour and 264 trips during the PM peak hour.

PROJECT TRIP DISTRIBUTION

Figure 3 to Figure 5 illustrate the forecast outbound and inbound directional distribution patterns of project-generated trips.

STUDY AREA

Based on the County of Riverside *Transportation Analysis Guidelines for Level of Service Vehicle Miles Traveled* (December 2020), a TIS (Traffic Impact Study) for LOS (Level of Service) evaluation is required for projects which will add 50 or more peak hour trips to any intersection of 2 or more "Collector" or higher classification streets. Since the project is anticipated to generate more than 50 peak hour trips to intersections of 2 or more "Collector" or higher classification streets, a full TIA (Traffic Impact Analysis) is required.

Intersections identified for analysis typically include classified intersections at which a project is forecast to contribute 50 or more trips during the AM or PM peak hours. The study area is proposed to consist of the following eight (8) study intersections, even if the project may not contribute 50 or more trips during either the AM or PM peak hours but are the adjacent or primary intersections impacted by the proposed project.

<u>Study Intersections</u> (Figure 1)

1. I-15 SB Ramps (NS) at Clinton Keith Road (EW)
2. I-15 NB Ramps (NS) at Clinton Keith Road (EW)
3. Wildomar Trail (NS) at Clinton Keith Road (EW)
4. Inland Valley Road (NS) at Clinton Keith Road (EW)
5. Salida Del Sol (NS) at Clinton Keith Road (EW)
6. Elizabeth Lane (NS) at Clinton Keith Road (EW)
7. Jana Lane (NS) at Clinton Keith Road (EW)
8. Nutmeg Street (NS) at Clinton Keith Road (EW)

TRAFFIC COUNTS

Intersection turning movement counts will be used at the study intersections during the AM peak period (7:00 AM – 9:00 AM) and PM peak period (4:00 PM – 6:00 PM) on a typical weekday (Tuesday, Wednesday, or Thursday).

ANALYSIS SCENARIOS

The traffic study shall evaluate the following analysis scenarios for weekday AM and PM peak hour conditions:

- Existing [2022]
- Existing Plus Ambient Growth Plus Project [2024]
- Existing Plus Ambient Growth Plus Project Plus Cumulative [2024]

FORECASTING METHODOLOGY

Ambient Growth Rate

To account for area-wide ambient growth, the Opening Year 2024 will include a 2% annual growth for 2 years (total growth factor = 1.04) over the 2022 base volumes. The 2% annual growth rate is consistent to other traffic studies conducted in the area as well as County of Riverside standards. However, City staff shall confirm that this growth rate is still applicable and refine as necessary.

Other Cumulative Projects

A list of pending and approved cumulative development projects will been obtained from City of Wildomar staff. This list will be narrowed down to include projects within a 1.5-mile radius of the project site.

Trip forecasts for other development projects within the project study area will be determined based on the Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, 2021 and will be added to existing roadway volumes for the applicable analysis scenarios.

VEHICLES MILES TRAVELED (VMT) ANALYSIS

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. Agencies may currently opt-in to applying the updated CEQA guidelines for VMT analysis and implementation is required State-wide by July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Technical Advisory on Evaluating Transportation Impacts in CEQA (State of California, December 2018) ["Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

The June 10, 2020 City Council meeting adopted a resolution which provided guidelines for VMT thresholds of significance for analyzing traffic impacts under CEQA. Exhibit 1 of this resolution provides project screening criteria which exempts projects from conducting a detailed VMT analysis. The project screening includes a

land use type screening whereas locally serving retail 50,000 square feet or less and 10,000 square feet or less of office is screened out and not required to conduct a VMT analysis.

The WRCOG VMT Screening Tool was used to access the project site. The project site is located within APN: 380290002 (TAZ: 3,297). According to the WRCOG VMT Screening Tool, the project is not located within a Transit Priority Area (TPA). The project TAZ 2022 daily home-based work VMT per worker is 16.2, whereas the jurisdictional average 2022 daily total home-based work VMT per worker is 17.1. Therefore, the project TAZ 2022 daily home-based work VMT per worker is 5.17% less than the jurisdictional average 2022 daily home-based work VMT per worker. Exhibit A shows the results of the WRCOG VMT Screening Tool

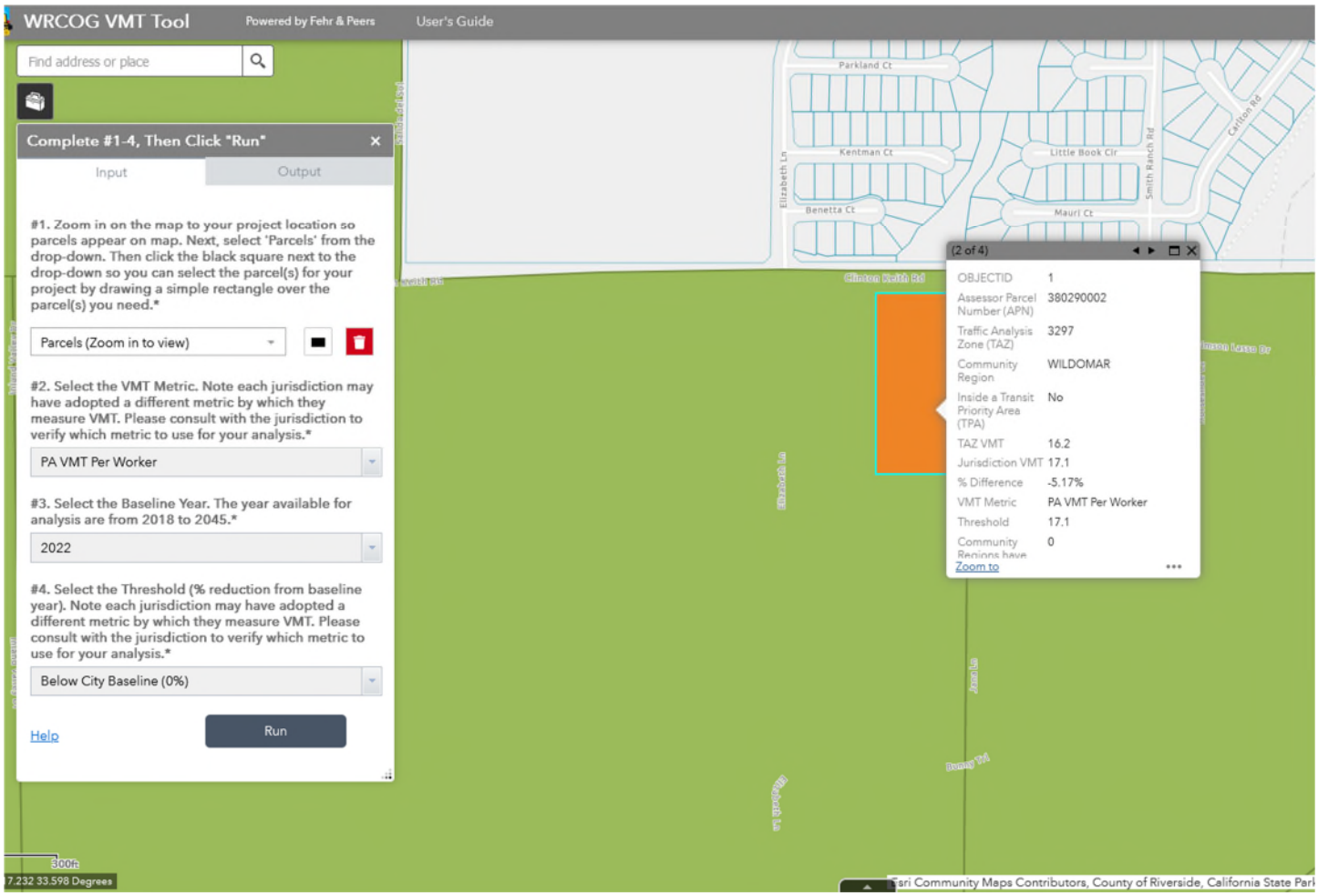


Exhibit A – WRCOG VMT Screening Tool Results for the Project

The June 10, 2020 City Council adopted resolution recommends that future projects demonstrate that they will reduce existing VMT by at least 3 percent. Since the project TAZ 20222 daily home-based VMT per worker is 5.17% less than the jurisdictional average 2022 daily home-based work VMT per worker, the proposed development meets the requirement to reduce VMT by at least 3 percent.

The proposed project consists of locally serving retail 50,000 square feet or less, with 14,500 square feet of office. The 14,500 square feet of office is greater than the screening threshold of 10,000 square feet of office or less. The proposed project is screened out and exempt from a VMT since the proposed project meets the

screening criteria for locally serving retail 50,000 square feet or less, and the 14,500 square feet of office will reduce the City required VMT by at least 3 percent. Therefore, the project meets the City established VMT screening criteria and can be presumed to result in a less than significant impact.

CONCLUSION

We appreciate the opportunity to provide this scoping document for your review. Should you have any questions or comments regarding the proposed scope, please contact Bryan Crawford at (714) 795-3100 x 104 or bryan@ganddini.com.

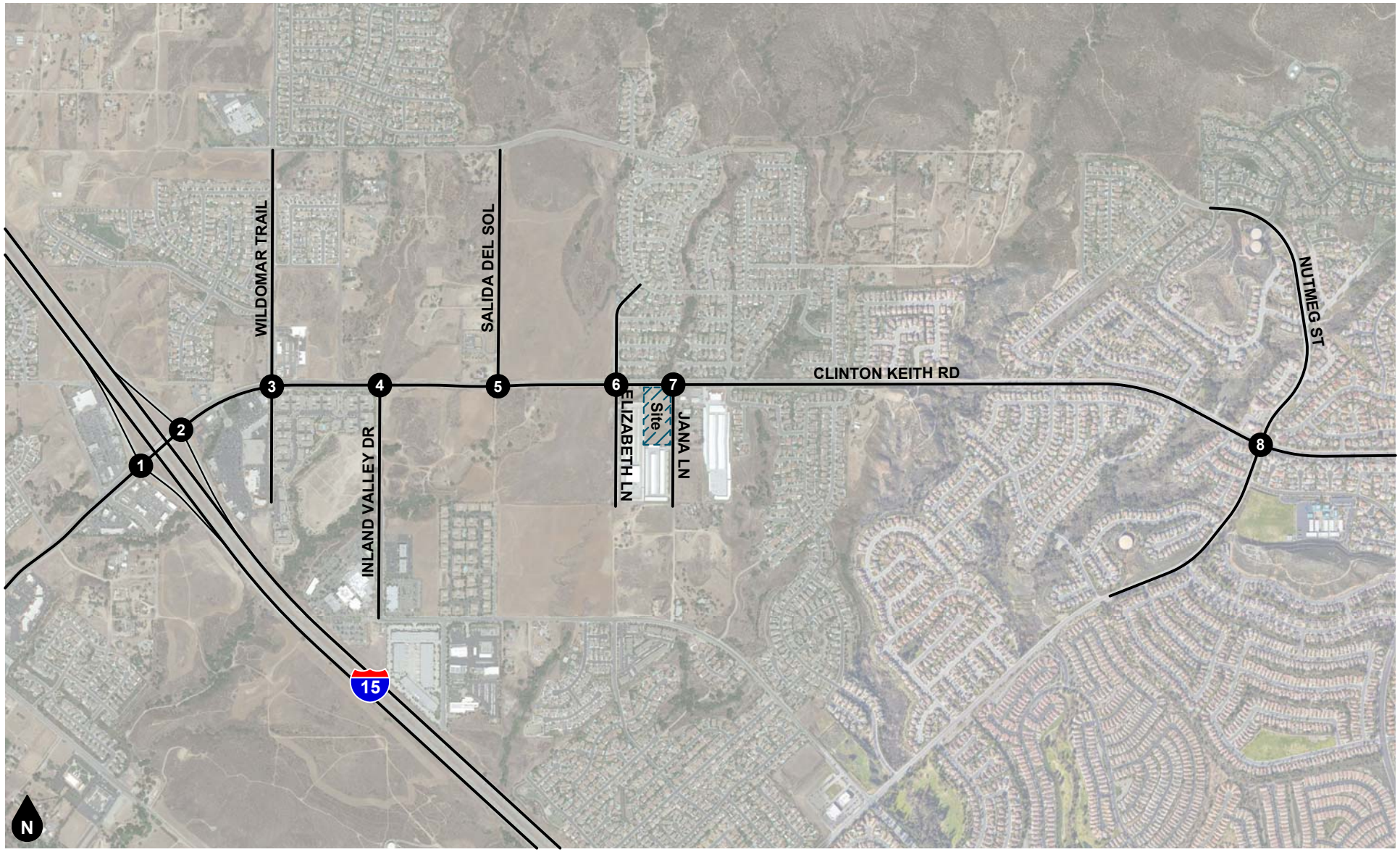
Table S-1
Draft Project Trip Generation

Trip Generation Rates									
Land Use	Source[1]	Land Use Variable[2]	AM Peak Hour			PM Peak Hour			Daily Rate
			% In	% Out	Rate	% In	% Out	Rate	
Convenience Store/Gas Station - GFA (5.5 - 10k)	ITE 945	FP	50%	50%	31.60	50%	50%	26.90	345.75
Automated Car Wash	[a]	LFWT	58%	42%	0.66	50%	50%	1.25	11.87
Fast-Food Restaurant with Drive-Thru	ITE 934	TSF	51%	49%	44.61	52%	48%	33.03	467.48
General Office	ITE 710	TSF	88%	12%	1.52	17%	83%	1.44	10.84

Trips Generated									
Land Use	Source	Quantity	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Convenience Store/Gas Station - GFA (5.5 - 10k)	ITE 945	16 FP	253	253	506	215	215	430	5,532
Pass-by Trips (76%AM,75%PM,38%Daily)[3]	ITE 945		*-192*	*-192*	*-384*	*-161*	*-161*	*-322*	*-2,102*
Subtotal			61	61	122	54	54	108	3,430
Automated Car Wash	[a]	63 LFWT	24	18	42	39	40	79	748
Fast-Food Restaurant with Drive-Thru	ITE 934	3.800 TSF	86	83	169	65	60	125	1,776
Pass-by Trips (50%AM,55%PM,25%Daily)[3]	ITE 934		*-43*	*-42*	*-85*	*-36*	*-33*	*-69*	*-444*
Subtotal			43	41	84	29	27	56	1,332
General Office	ITE 710	14.500 TSF	19	3	22	4	17	21	157
TOTAL TRIPS GENERATED			**147**	**123**	**270**	**126**	**138**	**264**	**5,667**

Notes:

1. ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code.
   All rates based on General Urban/Suburban setting unless otherwise noted.
   [a] Automated car wash based on rates provided in the *Newport Pointe Traffic Impact Analysis Report* (Linscott, Law & Greenspan, Engineers), April 28, 2021 which was derived from traffic counts on February 7, 2014 at the Victorville Speedwash (12147 Industrial Boulevard).
2. FP = Fueling Positions; TSF = Thousand Square Feet; LFWT = Linear Feet of Wash Tunnel
3. For time periods with no pass-by data provided in ITE *Trip Generation Manual* (e.g., daily), pass-by rates assumed as half of ITE peak hour rate.



Legend

Study Intersection

Figure 1
Project Location Map

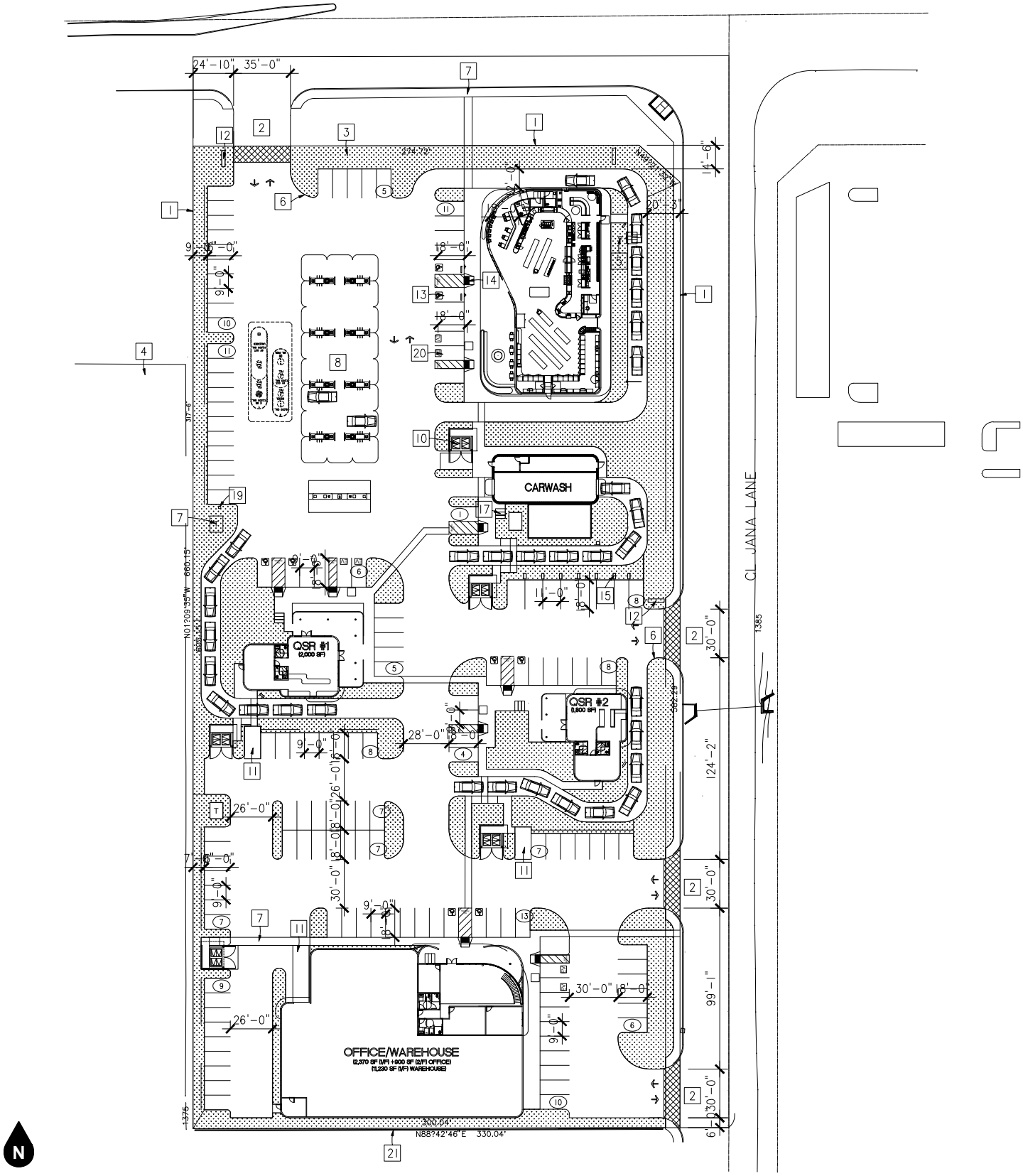
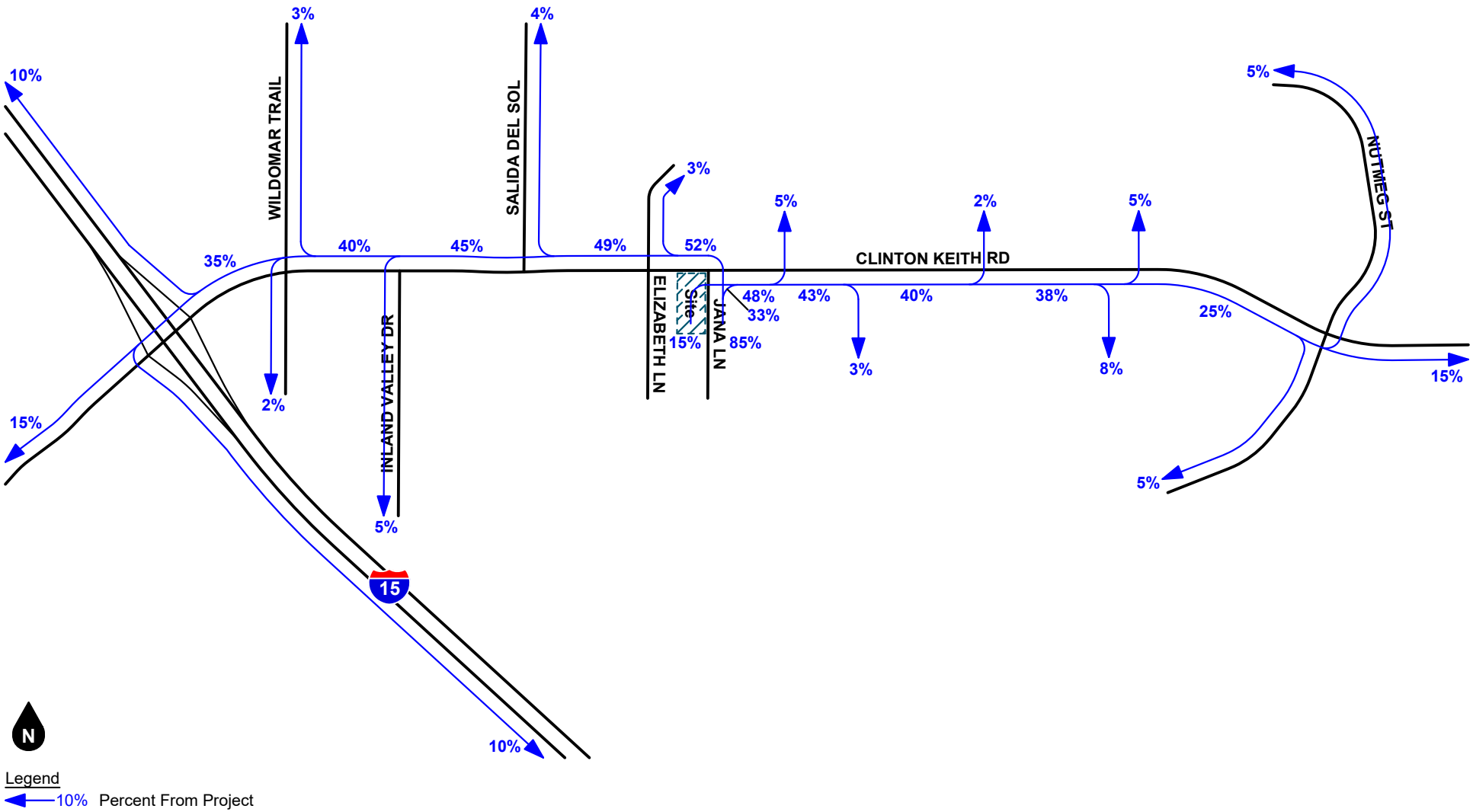


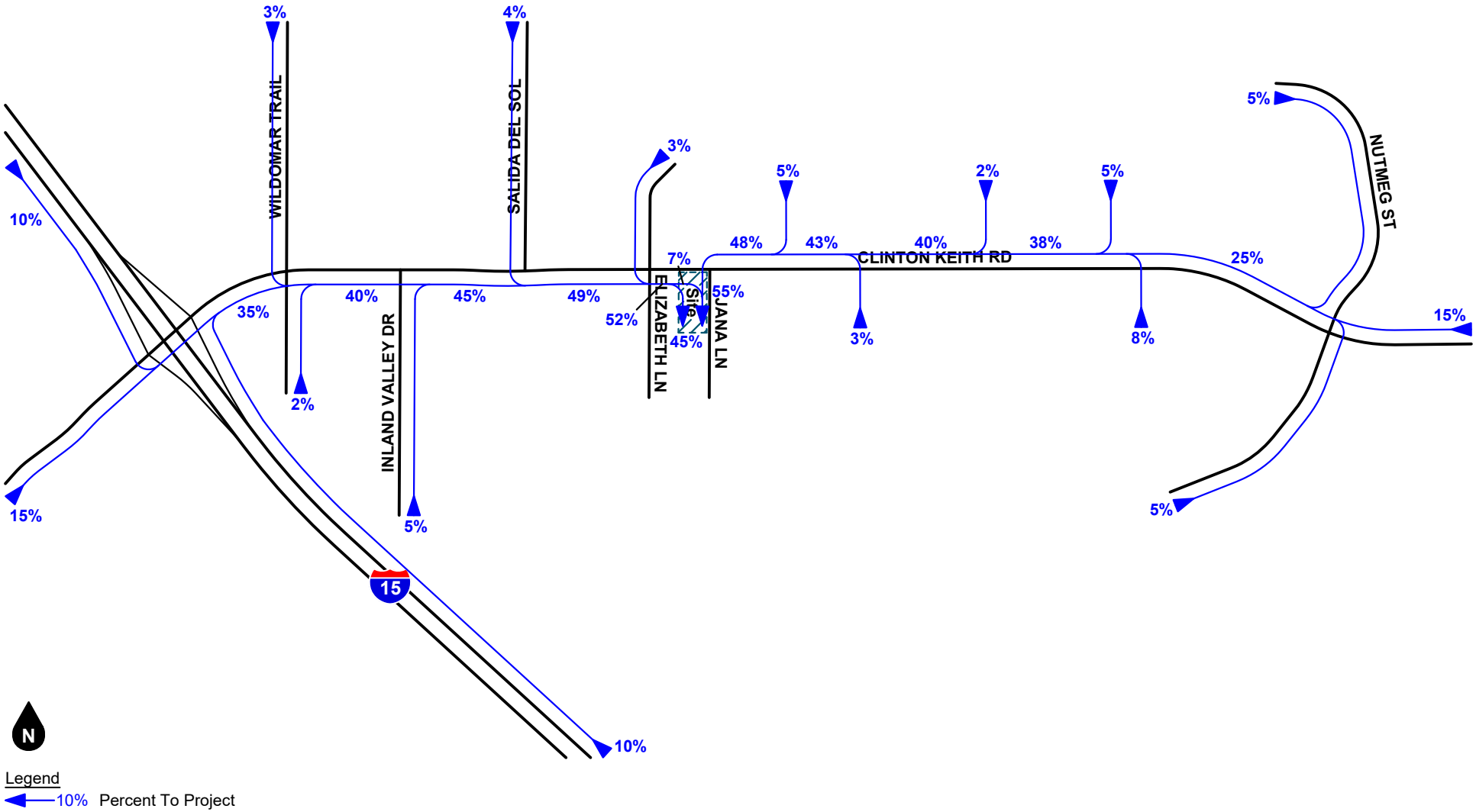
Figure 2
Site Plan



Legend

10% Percent From Project

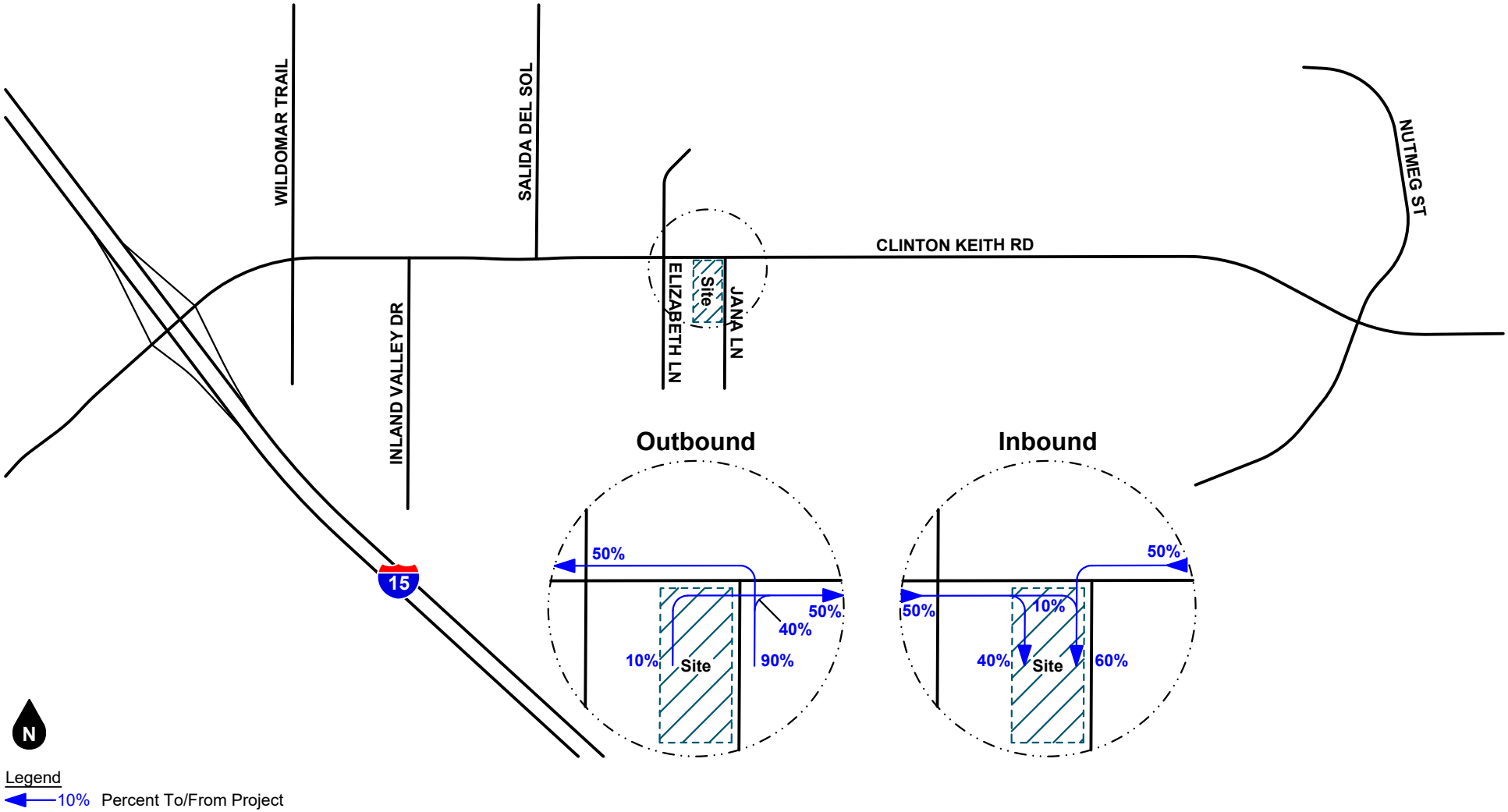
Figure 3
Project Outbound Trip Distribution



Legend

10% Percent To Project

Figure 4
Project Inbound Trip Distribution



Legend

10% Percent To/From Project

Figure 5
Project Pass-By Trip Disribution

APPENDIX C

VOLUME COUNT WORKSHEETS

T218

INTERSECTION TURNING MOVEMENT COUNTS

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

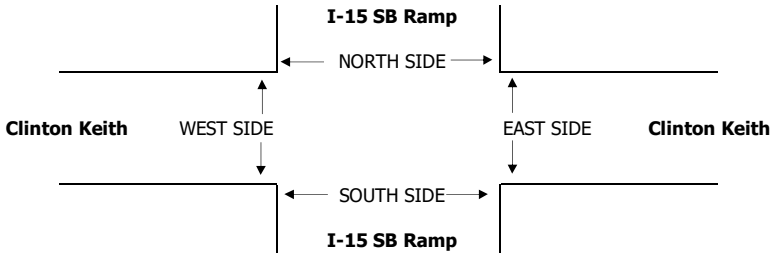
DATE:				
Thu, May 26, 22	LOCATION:	Murrieta	PROJECT #:	SC3467
	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	8
	EAST & WEST:	Clinton Keith	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

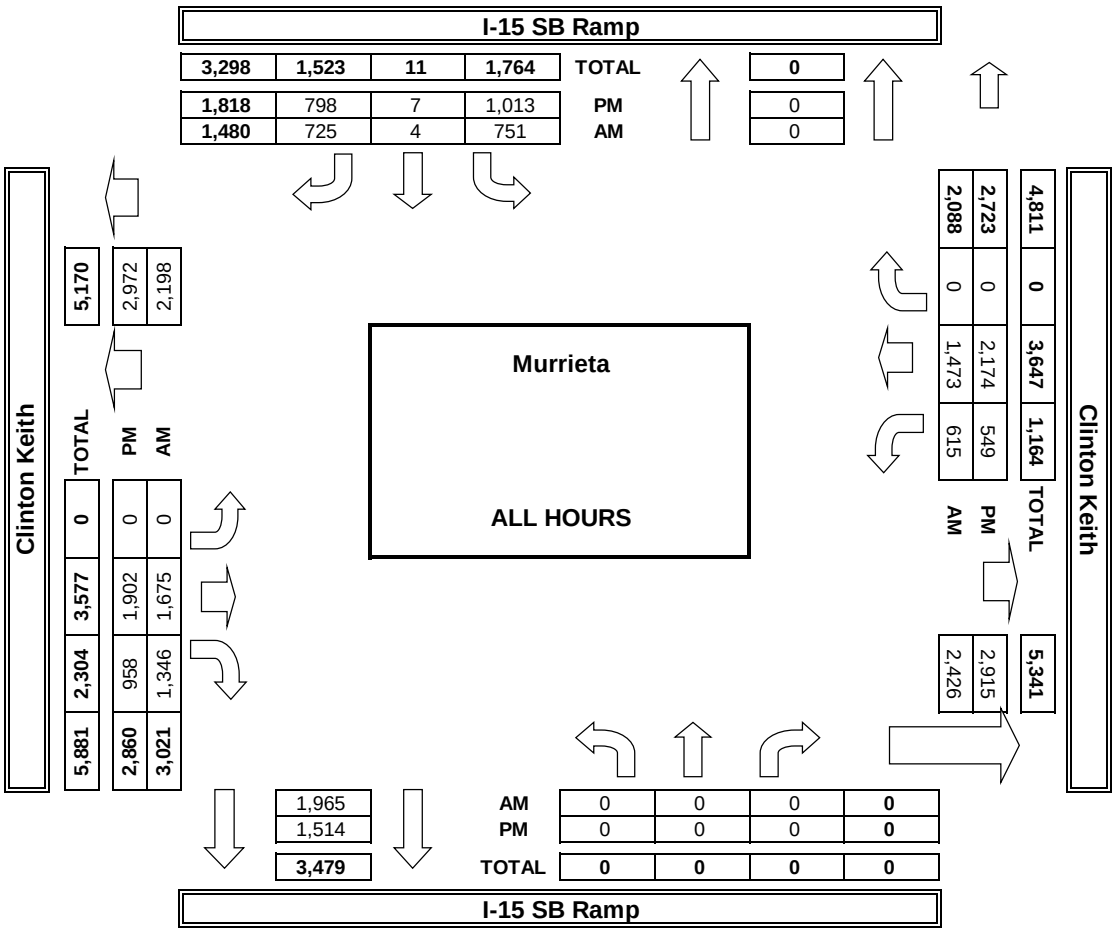
☑ Add U-Turns to Left Turns

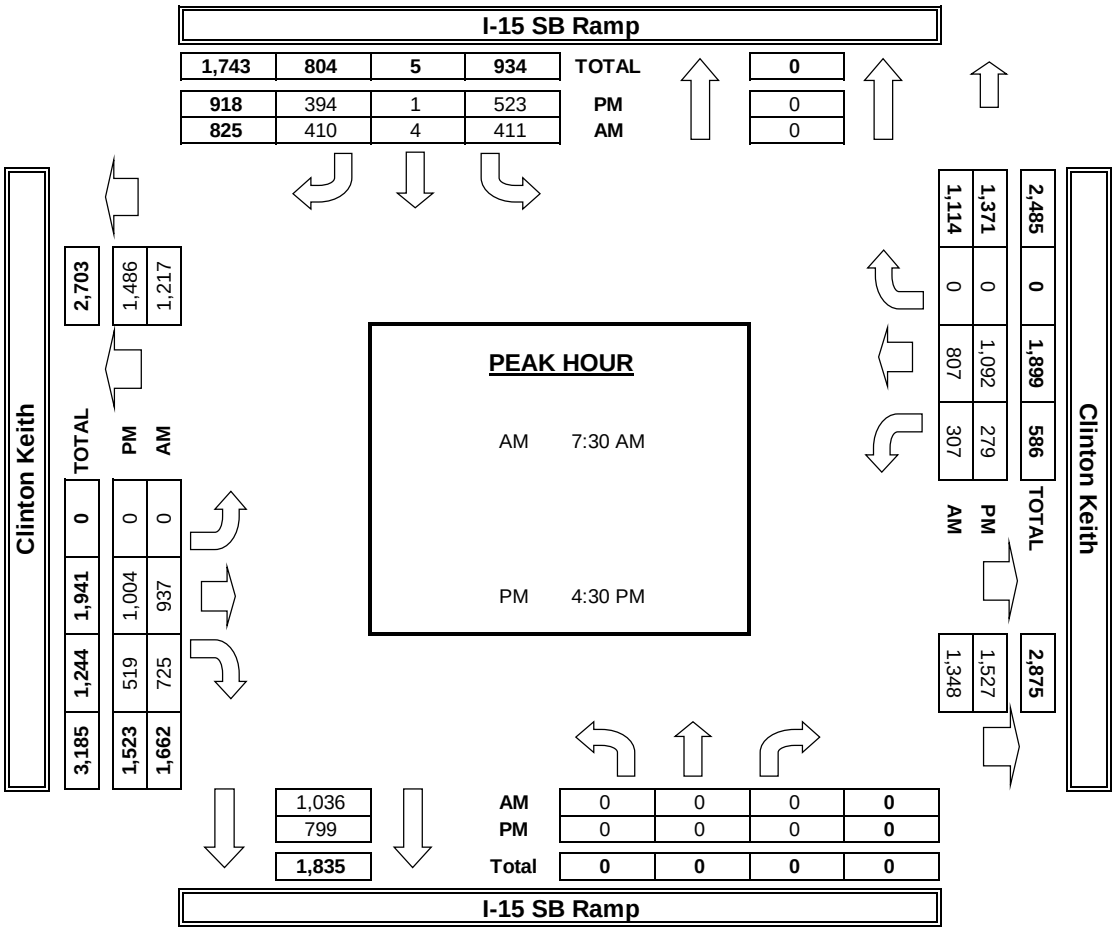
		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Clinton Keith			WESTBOUND Clinton Keith				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	X	X	X	1.5	0.5	2	X	3	1	2	3	X		0	0	0	0	
AM	7:00 AM	0	0	0	70	0	89	0	159	132	76	130	0	656	0	0	0	0	0
	7:15 AM	0	0	0	75	0	64	0	156	152	66	129	0	642	0	0	0	0	0
	7:30 AM	0	0	0	118	2	102	0	246	192	74	193	0	927	0	0	0	0	0
	7:45 AM	0	0	0	86	1	101	0	251	173	68	224	0	904	0	0	0	0	0
	8:00 AM	0	0	0	108	0	115	0	210	184	76	200	0	893	0	0	0	0	0
	8:15 AM	0	0	0	99	1	92	0	230	176	89	190	0	877	0	0	0	0	0
	8:30 AM	0	0	0	106	0	94	0	218	167	84	185	0	854	0	0	0	0	0
	8:45 AM	0	0	0	89	0	68	0	205	170	82	222	0	836	0	0	0	0	0
	VOLUMES	0	0	0	751	4	725	0	1,675	1,346	615	1,473	0	6,589	0	0	0	0	0
	APPROACH %	0%	0%	0%	51%	0%	49%	0%	55%	45%	29%	71%	0%						
	APP/DEPART	0	/	0	1,480	/	1,965	3,021	/	2,426	2,088	/	2,198	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	411	4	410	0	937	725	307	807	0	3,601					
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	56%	44%	28%	72%	0%						
	PEAK HR FACTOR		0.000			0.925			0.949			0.954		0.971					
	APP/DEPART	0	/	0	825	/	1,036	1,662	/	1,348	1,114	/	1,217	0					
PM	4:00 PM	0	0	0	116	1	96	0	244	119	74	265	0	915	0	0	0	0	0
	4:15 PM	0	0	0	120	1	94	0	200	118	63	263	0	859	0	0	0	0	0
	4:30 PM	0	0	0	129	0	101	0	246	117	84	286	0	963	0	0	0	0	0
	4:45 PM	0	0	0	137	0	104	0	237	128	67	239	0	912	0	0	0	0	0
	5:00 PM	0	0	0	119	0	95	0	243	148	67	261	0	933	0	0	0	0	0
	5:15 PM	0	0	0	138	1	94	0	278	126	61	306	0	1,004	0	0	0	0	0
	5:30 PM	0	0	0	123	2	108	0	255	109	63	289	0	949	0	0	0	0	0
	5:45 PM	0	0	0	131	2	106	0	199	93	70	265	0	866	0	0	0	0	0
	VOLUMES	0	0	0	1,013	7	798	0	1,902	958	549	2,174	0	7,401	0	0	0	0	0
	APPROACH %	0%	0%	0%	56%	0%	44%	0%	67%	33%	20%	80%	0%						
	APP/DEPART	0	/	0	1,818	/	1,514	2,860	/	2,915	2,723	/	2,972	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	523	1	394	0	1,004	519	279	1,092	0	3,812					
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	66%	34%	20%	80%	0%						
	PEAK HR FACTOR		0.000			0.952			0.942			0.926		0.949					
	APP/DEPART	0	/	0	918	/	799	1,523	/	1,527	1,371	/	1,486	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

DATE:	LOCATION:	Murrieta	PROJECT #:	SC3467
Thu, May 26, 22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	7
	EAST & WEST:	Clinton Keith	CONTROL:	SIGNAL

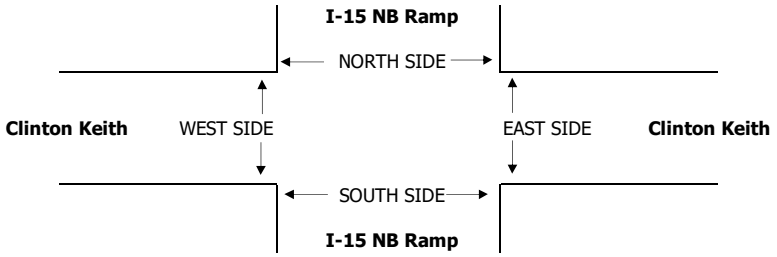
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

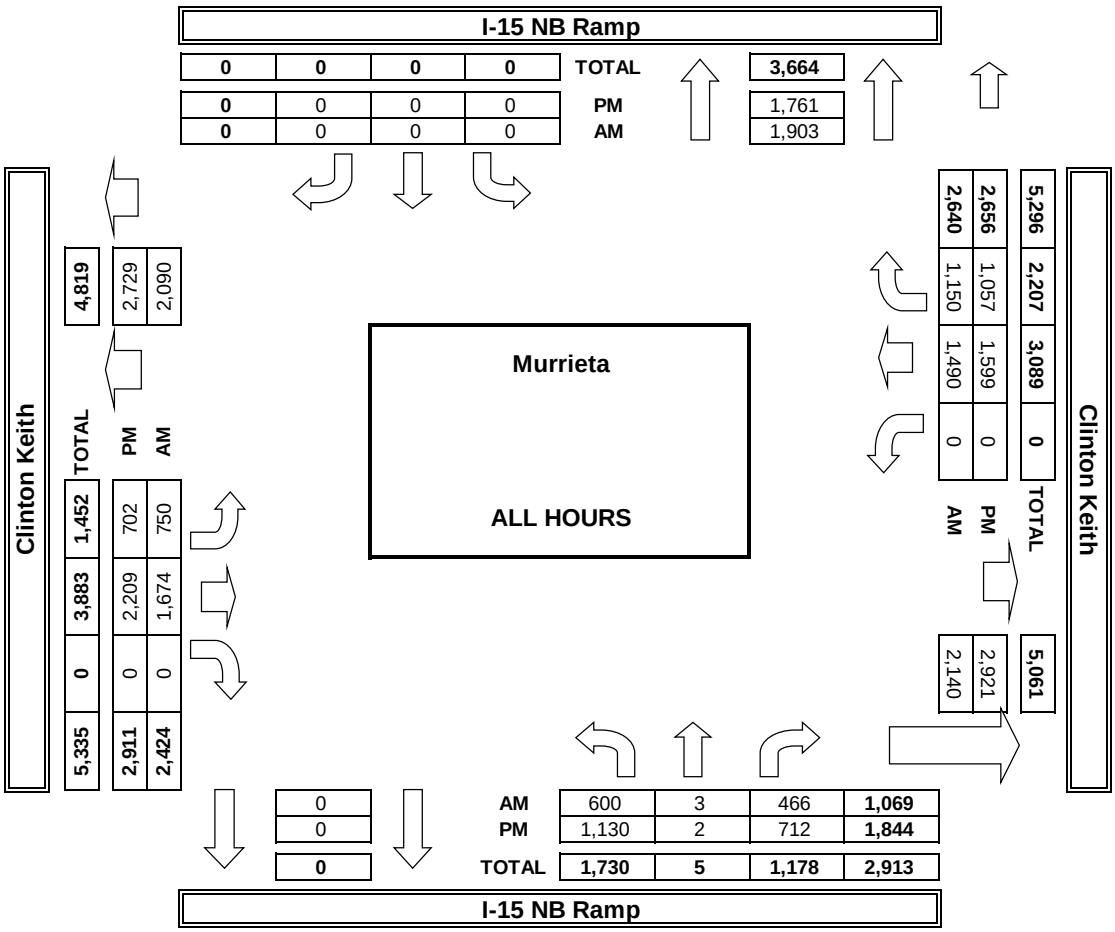
☑ Add U-Turns to Left Turns

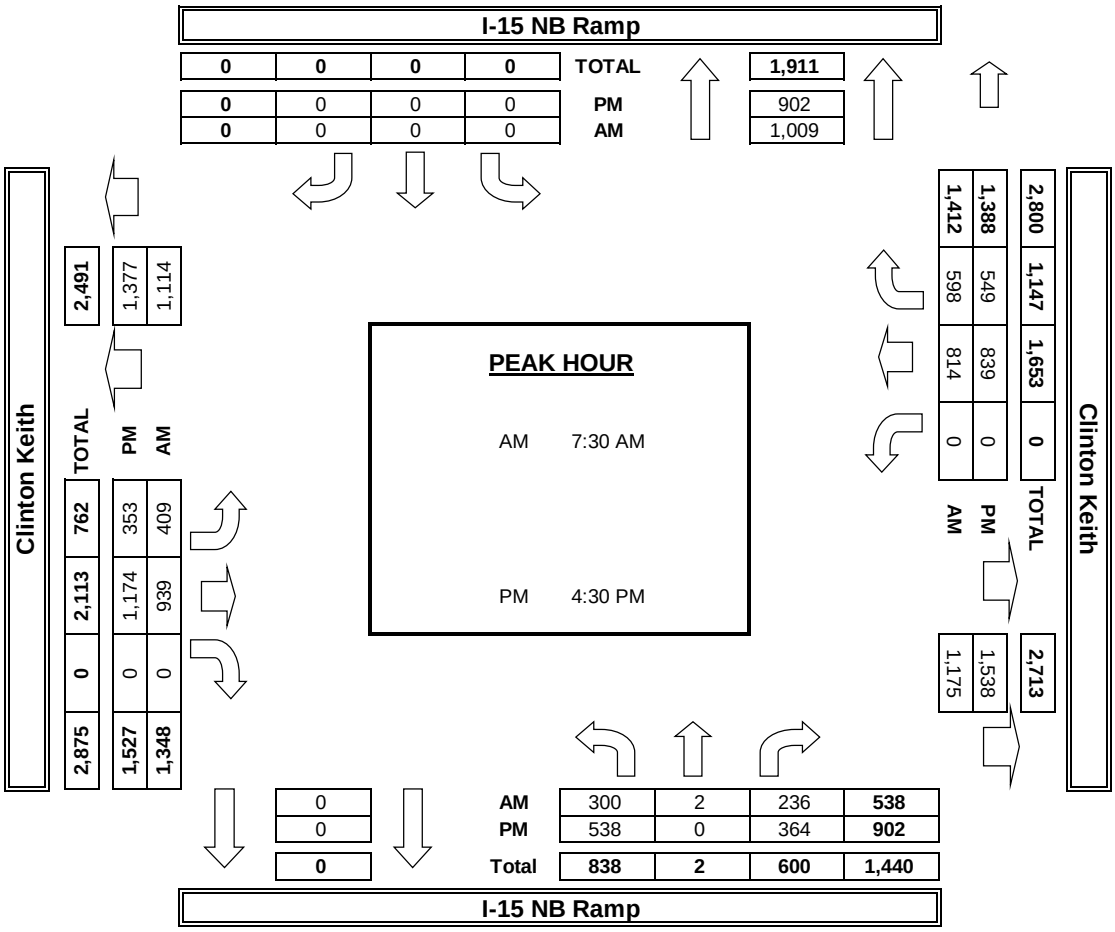
		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Clinton Keith			WESTBOUND Clinton Keith				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	1.3	0.3	1.3	X	X	X	2	3	X	X	3	1		0	0	0	0	
AM	7:00 AM	54	0	45	0	0	0	87	140	0	0	154	158	638	0	0	0	0	0
	7:15 AM	60	0	49	0	0	0	65	166	0	0	135	144	619	0	0	0	0	0
	7:30 AM	78	0	57	0	0	0	119	245	0	0	189	166	854	0	0	0	0	0
	7:45 AM	82	1	63	0	0	0	112	225	0	0	210	166	859	0	0	0	0	0
	8:00 AM	70	0	54	0	0	0	87	231	0	0	206	122	770	0	0	0	0	0
	8:15 AM	70	1	62	0	0	0	91	238	0	0	209	144	815	0	0	0	0	0
	8:30 AM	96	1	66	0	0	0	103	221	0	0	173	137	797	0	0	0	0	0
	8:45 AM	90	0	70	0	0	0	86	208	0	0	214	113	781	0	0	0	0	0
	VOLUMES	600	3	466	0	0	0	750	1,674	0	0	1,490	1,150	6,133	0	0	0	0	0
	APPROACH %	56%	0%	44%	0%	0%	0%	31%	69%	0%	0%	56%	44%						
	APP/DEPART	1,069	/	1,903	0	/	0	2,424	/	2,140	2,640	/	2,090	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	300	2	236	0	0	0	409	939	0	0	814	598	3,298					
	APPROACH %	56%	0%	44%	0%	0%	0%	30%	70%	0%	0%	58%	42%						
	PEAK HR FACTOR		0.921			0.000			0.926			0.939		0.960					
	APP/DEPART	538	/	1,009	0	/	0	1,348	/	1,175	1,412	/	1,114	0					
PM	4:00 PM	144	0	82	0	0	0	98	262	0	0	195	131	912	0	0	0	0	0
	4:15 PM	158	2	94	0	0	0	84	236	0	0	168	122	864	0	0	0	0	0
	4:30 PM	120	0	93	0	0	0	65	310	0	0	250	136	974	0	0	0	0	0
	4:45 PM	136	0	84	0	0	0	85	289	0	0	176	146	916	0	0	0	0	0
	5:00 PM	123	0	107	0	0	0	103	259	0	0	205	138	935	0	0	0	0	0
	5:15 PM	159	0	80	0	0	0	100	316	0	0	208	129	992	0	0	0	0	0
	5:30 PM	140	0	86	0	0	0	81	297	0	0	212	140	956	0	0	0	0	0
	5:45 PM	150	0	86	0	0	0	86	240	0	0	185	115	862	0	0	0	0	0
	VOLUMES	1,130	2	712	0	0	0	702	2,209	0	0	1,599	1,057	7,411	0	0	0	0	0
	APPROACH %	61%	0%	39%	0%	0%	0%	24%	76%	0%	0%	60%	40%						
	APP/DEPART	1,844	/	1,761	0	/	0	2,911	/	2,921	2,656	/	2,729	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	538	0	364	0	0	0	353	1,174	0	0	839	549	3,817					
	APPROACH %	60%	0%	40%	0%	0%	0%	23%	77%	0%	0%	60%	40%						
	PEAK HR FACTOR		0.944			0.000			0.918			0.899		0.962					
	APP/DEPART	902	/	902	0	/	0	1,527	/	1,538	1,388	/	1,377	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

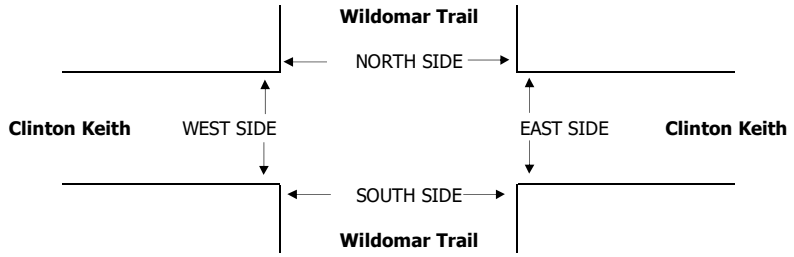
DATE:				
Tue, May 24, 22	LOCATION:	Wildomar	PROJECT #:	SC3467
	NORTH & SOUTH:	Wildomar Trail	LOCATION #:	2
	EAST & WEST:	Clinton Keith	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

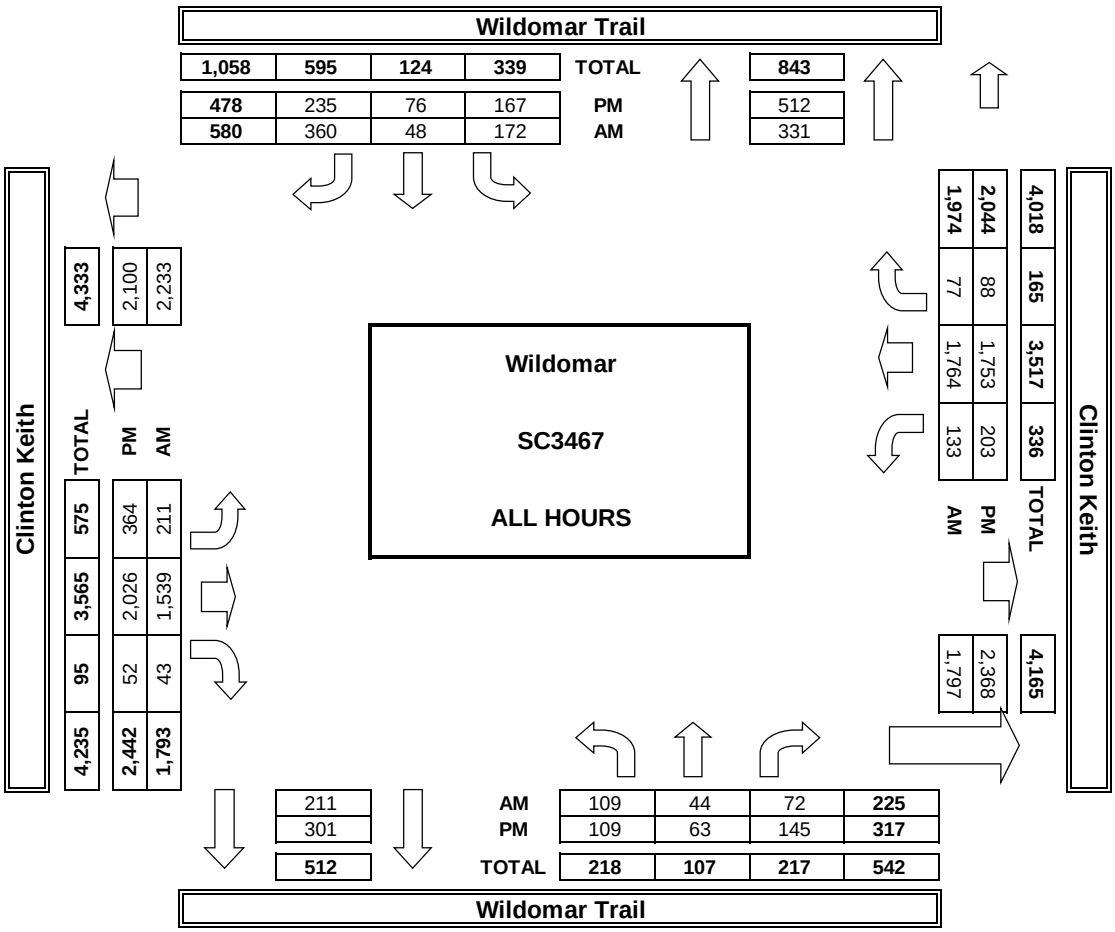
☑ Add U-Turns to Left Turns

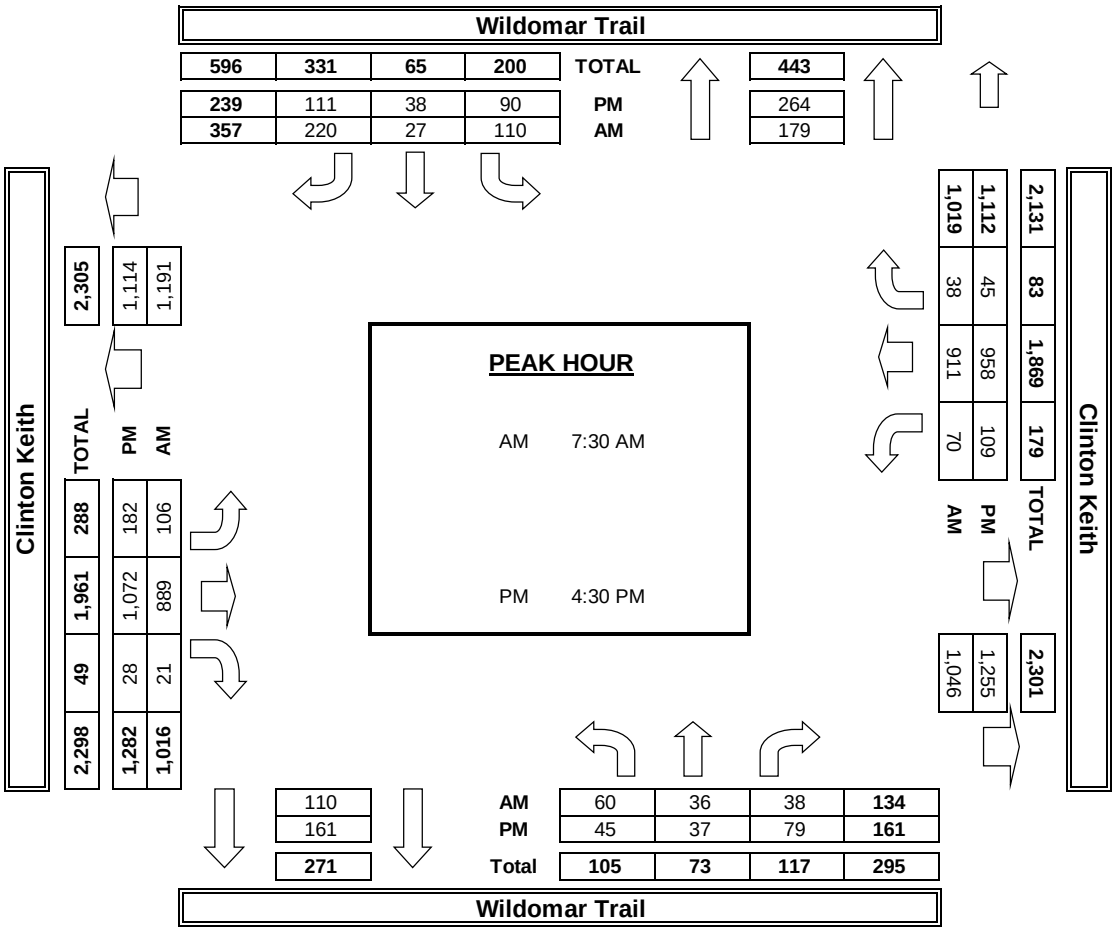
		NORTHBOUND Wildomar Trail			SOUTHBOUND Wildomar Trail			EASTBOUND Clinton Keith			WESTBOUND Clinton Keith				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 1	SR 1	EL 1	ET 2.5	ER 0.5	WL 1	WT 2	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	11	0	6	15	5	41	13	125	4	4	223	7	454	0	0	0	0	0
	7:15 AM	16	3	4	10	4	27	36	150	8	19	183	9	469	0	0	0	3	3
	7:30 AM	12	10	3	30	5	66	36	193	7	20	235	12	629	0	0	0	1	1
	7:45 AM	27	11	11	33	9	71	22	207	5	10	251	15	672	0	0	0	1	1
	8:00 AM	13	7	10	27	7	49	20	241	6	19	218	4	621	0	0	1	3	4
	8:15 AM	8	8	14	20	6	34	28	248	3	21	207	7	604	1	0	0	4	5
	8:30 AM	10	3	14	23	8	41	28	182	4	19	225	9	566	0	0	0	1	1
	8:45 AM	12	2	10	14	4	31	28	193	6	21	222	14	557	0	0	0	1	1
	VOLUMES	109	44	72	172	48	360	211	1,539	43	133	1,764	77	4,572	1	0	1	14	16
	APPROACH %	48%	20%	32%	30%	8%	62%	12%	86%	2%	7%	89%	4%						
	APP/DEPART	225	/	331	580	/	211	1,793	/	1,797	1,974	/	2,233	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	60	36	38	110	27	220	106	889	21	70	911	38	2,526					
	APPROACH %	45%	27%	28%	31%	8%	62%	10%	88%	2%	7%	89%	4%						
	PEAK HR FACTOR		0.684			0.790			0.910			0.923		0.940					
	APP/DEPART	134	/	179	357	/	110	1,016	/	1,046	1,019	/	1,191	0					
PM	4:00 PM	12	5	15	15	4	32	52	237	7	18	230	17	644	0	0	1	1	2
	4:15 PM	16	5	17	22	6	29	46	236	6	33	207	11	634	0	0	0	5	5
	4:30 PM	12	7	18	16	12	28	43	246	6	23	254	11	676	0	0	0	3	3
	4:45 PM	10	11	28	29	11	25	47	250	5	31	211	13	671	0	0	0	3	3
	5:00 PM	12	13	21	25	8	18	51	269	7	33	273	11	741	0	0	0	5	5
	5:15 PM	11	6	12	20	7	40	41	307	10	22	220	10	706	0	0	0	3	3
	5:30 PM	24	6	14	23	13	38	40	227	2	18	184	10	599	0	0	1	4	5
	5:45 PM	12	10	20	17	15	25	44	254	9	25	174	5	610	0	0	1	6	7
	VOLUMES	109	63	145	167	76	235	364	2,026	52	203	1,753	88	5,281	0	0	3	30	33
	APPROACH %	34%	20%	46%	35%	16%	49%	15%	83%	2%	10%	86%	4%						
	APP/DEPART	317	/	512	478	/	301	2,442	/	2,368	2,044	/	2,100	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	45	37	79	90	38	111	182	1,072	28	109	958	45	2,794					
	APPROACH %	28%	23%	49%	38%	16%	46%	14%	84%	2%	10%	86%	4%						
	PEAK HR FACTOR		0.821			0.892			0.895			0.877		0.943					
	APP/DEPART	161	/	264	239	/	161	1,282	/	1,255	1,112	/	1,114	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

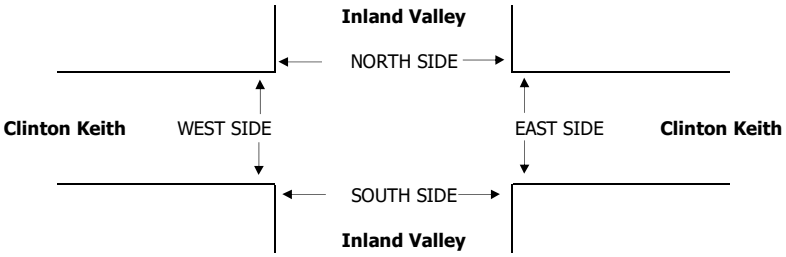
DATE:				
Tue, May 24, 22	LOCATION:	Wildomar	PROJECT #:	SC3467
	NORTH & SOUTH:	Inland Valley	LOCATION #:	3
	EAST & WEST:	Clinton Keith	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

☐ Add U-Turns to Left Turns

		NORTHBOUND Inland Valley			SOUTHBOUND Inland Valley			EASTBOUND Clinton Keith			WESTBOUND Clinton Keith				U-TURNS				
	LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 1	WL 1	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	38	0	4	0	0	0	0	114	57	8	191	0	412	0	0	3	0	3
	7:15 AM	45	0	4	0	0	0	0	115	54	20	190	0	428	0	0	1	0	1
	7:30 AM	65	0	12	0	0	0	0	145	72	21	191	0	506	0	0	1	0	1
	7:45 AM	59	0	11	0	0	0	0	145	99	27	233	0	574	0	0	1	0	1
	8:00 AM	53	0	8	0	0	0	0	186	118	29	182	0	576	0	0	4	0	4
	8:15 AM	55	0	8	0	0	0	0	133	125	29	184	0	534	0	0	0	0	0
	8:30 AM	72	0	10	0	0	0	0	147	95	27	196	0	547	0	0	1	0	1
	8:45 AM	62	0	13	0	0	0	0	134	90	13	200	0	512	0	0	4	0	4
	VOLUMES	449	0	70	0	0	0	0	1,119	710	174	1,567	0	4,104	0	0	15	0	15
	APPROACH %	87%	0%	13%	0%	0%	0%	0%	61%	39%	10%	90%	0%						
	APP/DEPART	519	/	0	0	/	884	1,844	/	1,189	1,741	/	2,031	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	239	0	37	0	0	0	0	611	437	112	795	0	2,237					
	APPROACH %	87%	0%	13%	0%	0%	0%	0%	58%	41%	12%	88%	0%						
	PEAK HR FACTOR		0.841			0.000			0.856			0.872		0.964					
	APP/DEPART	276	/	0	0	/	549	1,054	/	648	907	/	1,040	0					
PM	4:00 PM	89	0	13	0	0	0	0	194	82	18	171	0	567	0	0	4	0	4
	4:15 PM	100	0	15	0	0	0	0	189	69	7	167	0	547	0	0	3	0	3
	4:30 PM	96	0	24	0	0	0	0	215	68	6	169	0	578	0	0	3	1	4
	4:45 PM	87	0	10	0	0	0	0	224	84	11	185	0	601	0	0	4	0	4
	5:00 PM	110	0	31	0	0	0	0	215	65	6	207	0	634	0	0	3	0	3
	5:15 PM	81	0	17	0	0	0	0	253	93	8	182	0	634	0	0	4	0	4
	5:30 PM	61	0	12	0	0	0	0	224	65	6	155	0	523	0	0	2	1	3
	5:45 PM	59	0	7	0	0	0	0	208	74	12	153	0	513	0	0	0	0	0
	VOLUMES	683	0	129	0	0	0	0	1,722	600	74	1,389	0	4,622	0	0	23	2	25
	APPROACH %	84%	0%	16%	0%	0%	0%	0%	73%	26%	5%	95%	0%						
	APP/DEPART	812	/	0	0	/	674	2,345	/	1,853	1,465	/	2,095	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	374	0	82	0	0	0	0	907	310	31	743	0	2,462					
	APPROACH %	82%	0%	18%	0%	0%	0%	0%	74%	25%	4%	96%	0%						
	PEAK HR FACTOR		0.809			0.000			0.879			0.910		0.965					
	APP/DEPART	456	/	0	0	/	341	1,231	/	990	775	/	1,131	0					



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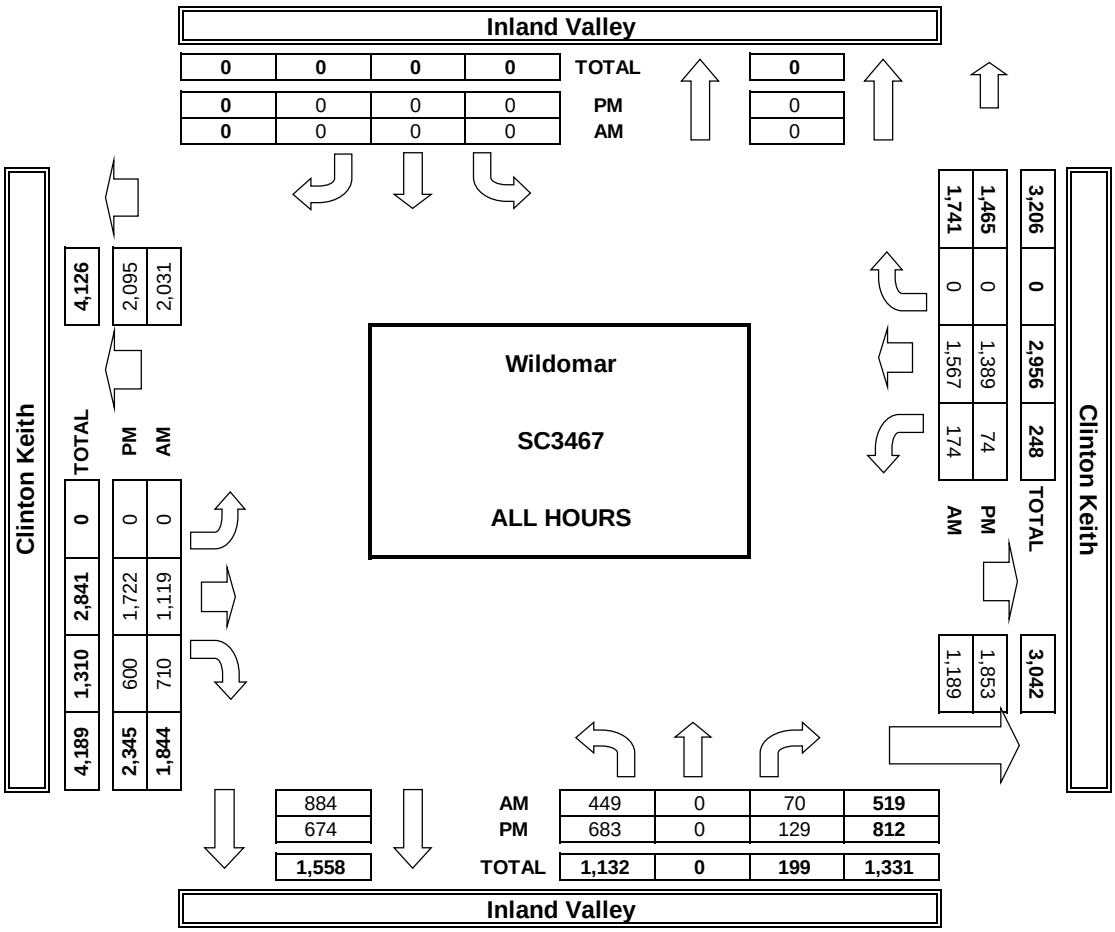
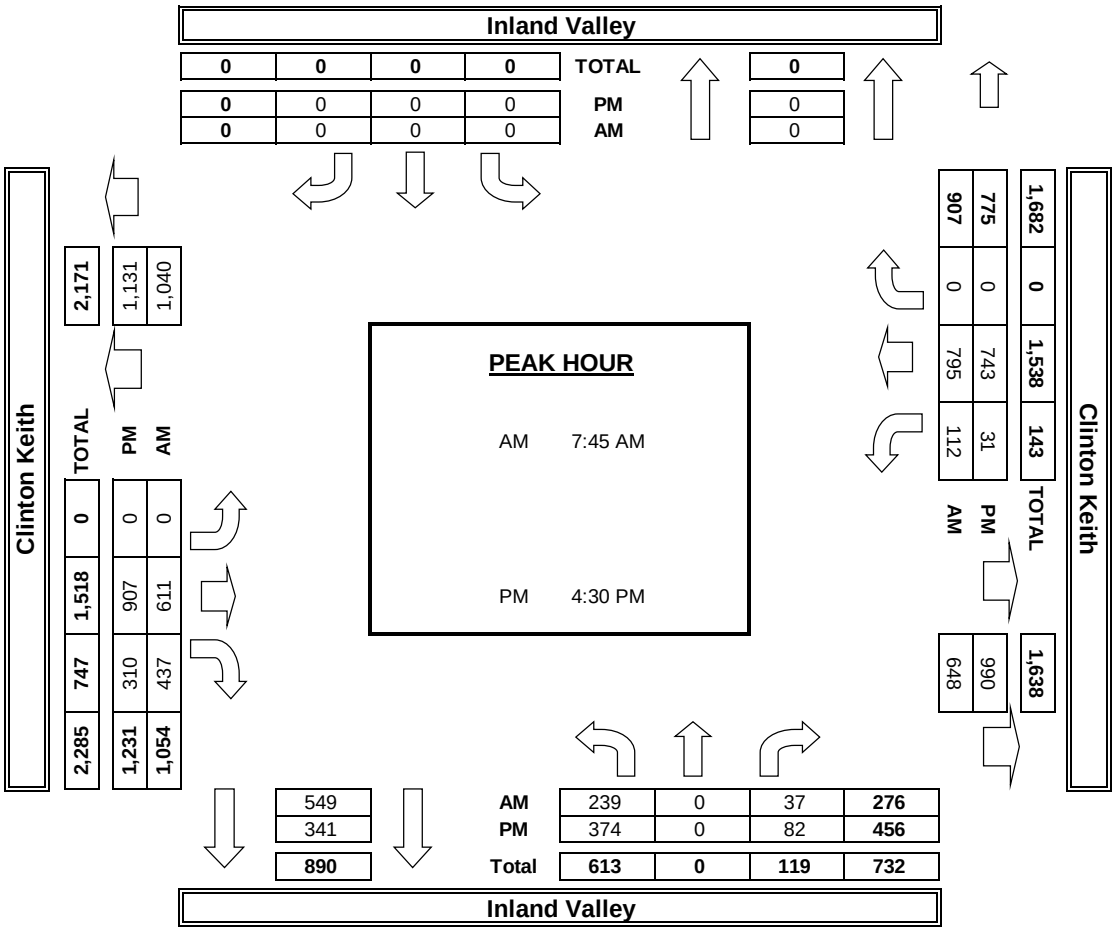
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

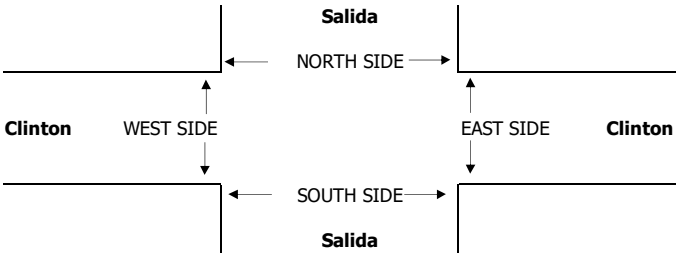
DATE:				
Tue, May 24, 22	LOCATION:	Wildomar	PROJECT #:	SC3467
	NORTH & SOUTH:	Salida	LOCATION #:	5
	EAST & WEST:	Clinton	CONTROL:	STOP S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Salida			SOUTHBOUND Salida			EASTBOUND Clinton			WESTBOUND Clinton				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	5	0	2	0	117	0	0	192	2	318	0	0	0	0	0
	7:15 AM	0	0	0	3	0	1	1	110	0	0	212	4	331	0	0	0	0	0
	7:30 AM	0	0	0	4	0	1	5	150	0	0	221	10	391	0	0	0	0	0
	7:45 AM	0	0	0	3	0	3	0	174	0	0	238	6	424	0	0	0	0	0
	8:00 AM	0	0	0	5	0	2	4	173	0	0	219	5	408	0	0	0	0	0
	8:15 AM	0	0	0	5	0	2	1	139	0	0	210	5	362	0	0	0	0	0
	8:30 AM	0	0	0	3	0	1	3	157	0	0	216	4	384	0	0	0	0	0
	8:45 AM	0	0	0	1	0	2	2	144	0	0	208	3	360	0	0	0	0	0
	VOLUMES	0	0	0	29	0	14	16	1,164	0	0	1,716	39	2,978	0	0	0	0	0
	APPROACH %	0%	0%	0%	67%	0%	33%	1%	99%	0%	0%	98%	2%						
	APP/DEPART	0	/	55	43	/	0	1,180	/	1,193	1,755	/	1,730	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	17	0	8	10	636	0	0	888	26	1,585					
	APPROACH %	0%	0%	0%	68%	0%	32%	2%	98%	0%	0%	97%	3%						
	PEAK HR FACTOR		0.000			0.893			0.912			0.936		0.935					
	APP/DEPART	0	/	36	25	/	0	646	/	653	914	/	896	0					
PM	4:00 PM	0	0	0	2	0	4	6	201	0	0	174	5	392	0	0	1	0	1
	4:15 PM	0	0	0	3	0	4	5	200	0	0	178	3	393	0	0	0	0	0
	4:30 PM	0	0	0	3	0	5	1	253	0	0	167	4	433	0	0	0	0	0
	4:45 PM	0	0	0	3	0	1	2	220	0	0	195	4	425	0	0	0	0	0
	5:00 PM	0	0	0	2	0	0	2	252	0	0	211	5	472	0	0	0	0	0
	5:15 PM	0	0	0	1	0	1	2	254	0	0	195	4	457	0	0	0	0	0
	5:30 PM	0	0	0	4	0	4	5	243	0	0	161	5	422	0	0	0	0	0
	5:45 PM	0	0	0	4	0	4	2	198	0	0	157	5	370	0	0	0	0	0
	VOLUMES	0	0	0	22	0	23	25	1,821	0	0	1,438	35	3,364	0	0	1	0	1
	APPROACH %	0%	0%	0%	49%	0%	51%	1%	99%	0%	0%	98%	2%						
	APP/DEPART	0	/	59	45	/	0	1,846	/	1,843	1,473	/	1,462	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	9	0	7	7	979	0	0	768	17	1,787					
	APPROACH %	0%	0%	0%	56%	0%	44%	1%	99%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.000			0.500			0.963			0.909		0.947					
	APP/DEPART	0	/	24	16	/	0	986	/	988	785	/	775	0					



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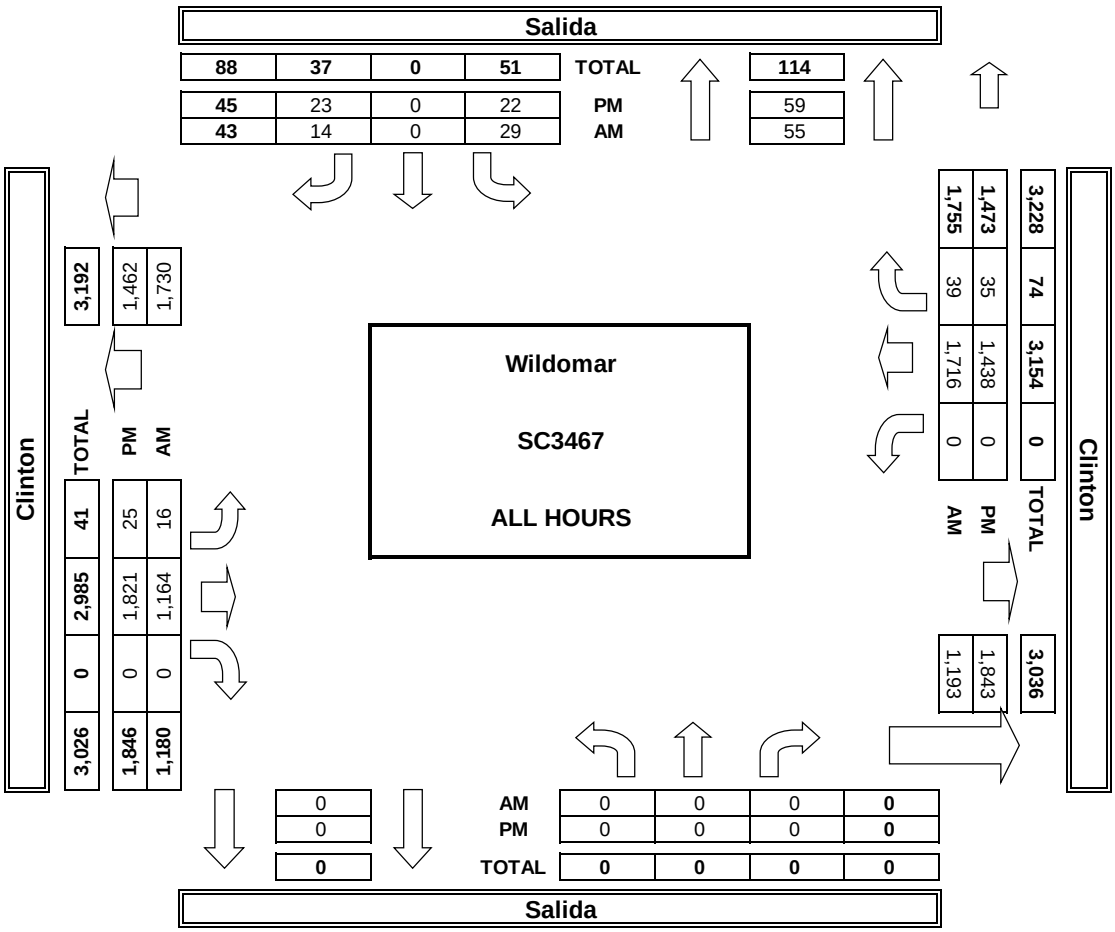
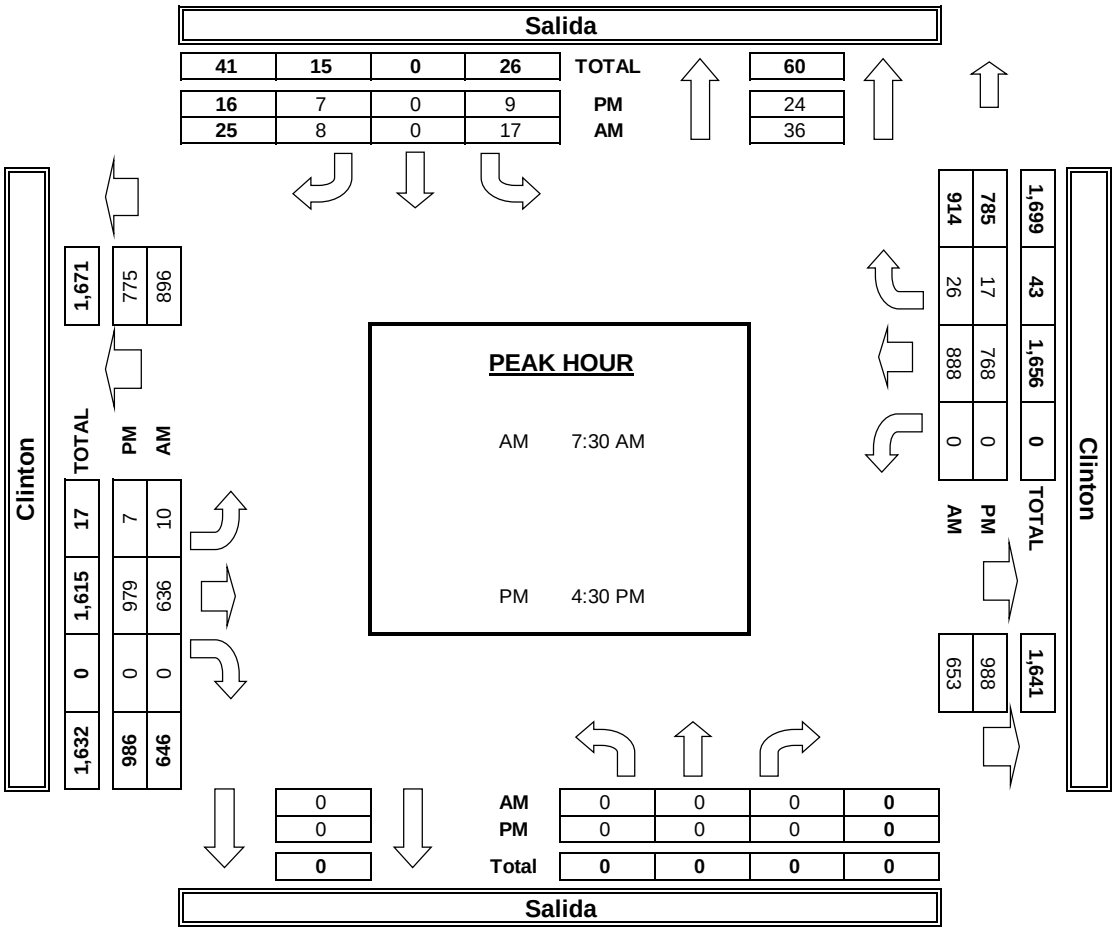
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

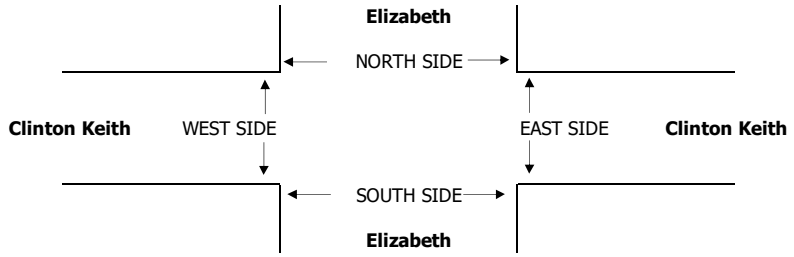
DATE:				
Tue, May 24, 22	LOCATION:	Wildomar	PROJECT #:	SC3467
	NORTH & SOUTH:	Elizabeth	LOCATION #:	4
	EAST & WEST:	Clinton Keith	CONTROL:	STOP N/S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Elizabeth			SOUTHBOUND Elizabeth			EASTBOUND Clinton Keith			WESTBOUND Clinton Keith				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	0	0	1	0	21	1	119	2	1	168	1	315	0	0	0	0	0
	7:15 AM	1	0	1	2	0	9	1	110	2	0	206	1	333	0	0	0	0	0
	7:30 AM	1	0	1	0	0	13	9	142	3	0	217	0	386	0	0	0	0	0
	7:45 AM	1	0	2	3	0	11	2	172	1	2	232	1	427	0	0	0	0	0
	8:00 AM	1	0	1	2	0	6	1	175	2	1	217	4	410	0	0	0	0	0
	8:15 AM	1	0	0	1	0	8	6	137	1	2	206	1	363	0	0	0	0	0
	8:30 AM	0	0	0	3	0	12	8	151	1	0	208	1	384	0	0	0	0	0
	8:45 AM	2	0	3	1	0	16	6	137	2	0	193	1	361	0	0	0	0	0
	VOLUMES	8	0	8	13	0	96	34	1,143	14	6	1,647	10	2,979	0	0	0	0	0
	APPROACH %	50%	0%	50%	12%	0%	88%	3%	96%	1%	0%	99%	1%						
	APP/DEPART	16	/	44	109	/	20	1,191	/	1,164	1,663	/	1,751	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	4	0	4	6	0	38	18	626	7	5	872	6	1,586					
	APPROACH %	50%	0%	50%	14%	0%	86%	3%	96%	1%	1%	99%	1%						
	PEAK HR FACTOR		0.667			0.786			0.914			0.939		0.929					
	APP/DEPART	8	/	24	44	/	12	651	/	636	883	/	914	0					
PM	4:00 PM	2	0	0	0	0	11	11	191	1	0	166	2	384	0	0	0	0	0
	4:15 PM	1	0	1	1	0	9	8	193	2	0	171	0	386	0	0	0	0	0
	4:30 PM	2	0	1	0	0	7	17	232	3	0	162	4	428	0	0	0	0	0
	4:45 PM	1	0	0	3	0	13	11	210	2	0	185	3	428	0	0	0	0	0
	5:00 PM	0	0	2	0	0	11	7	247	0	0	205	1	473	0	0	0	0	0
	5:15 PM	0	0	1	0	0	8	11	241	3	0	191	2	457	0	0	0	0	0
	5:30 PM	3	0	3	1	0	8	13	234	0	1	158	4	425	0	0	0	0	0
	5:45 PM	2	0	0	2	0	10	10	191	1	0	150	1	367	0	0	0	0	0
	VOLUMES	11	0	8	7	0	77	88	1,739	12	1	1,388	17	3,348	0	0	0	0	0
	APPROACH %	58%	0%	42%	8%	0%	92%	5%	95%	1%	0%	99%	1%						
	APP/DEPART	19	/	105	84	/	13	1,839	/	1,754	1,406	/	1,476	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	3	0	4	3	0	39	46	930	8	0	743	10	1,786					
	APPROACH %	43%	0%	57%	7%	0%	93%	5%	95%	1%	0%	99%	1%						
	PEAK HR FACTOR		0.583			0.656			0.965			0.914		0.944					
	APP/DEPART	7	/	56	42	/	8	984	/	937	753	/	785	0					



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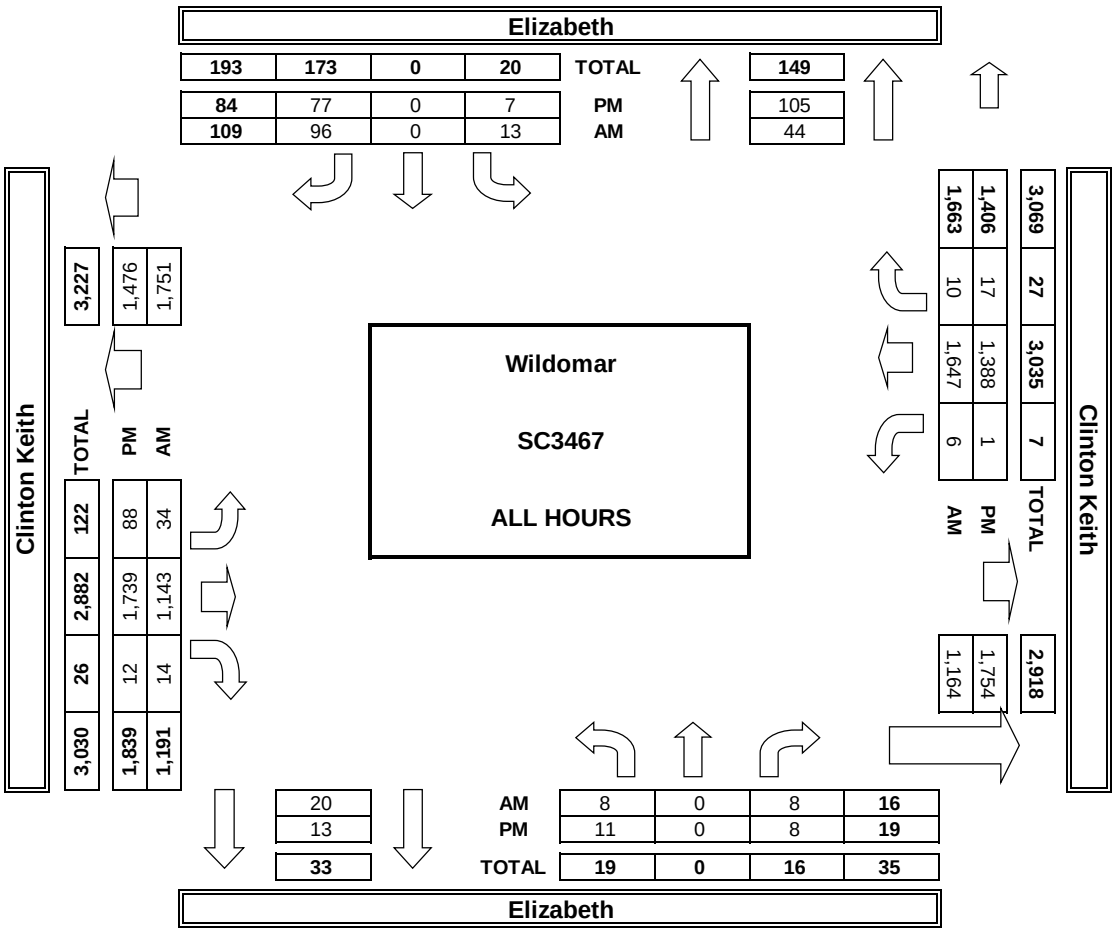
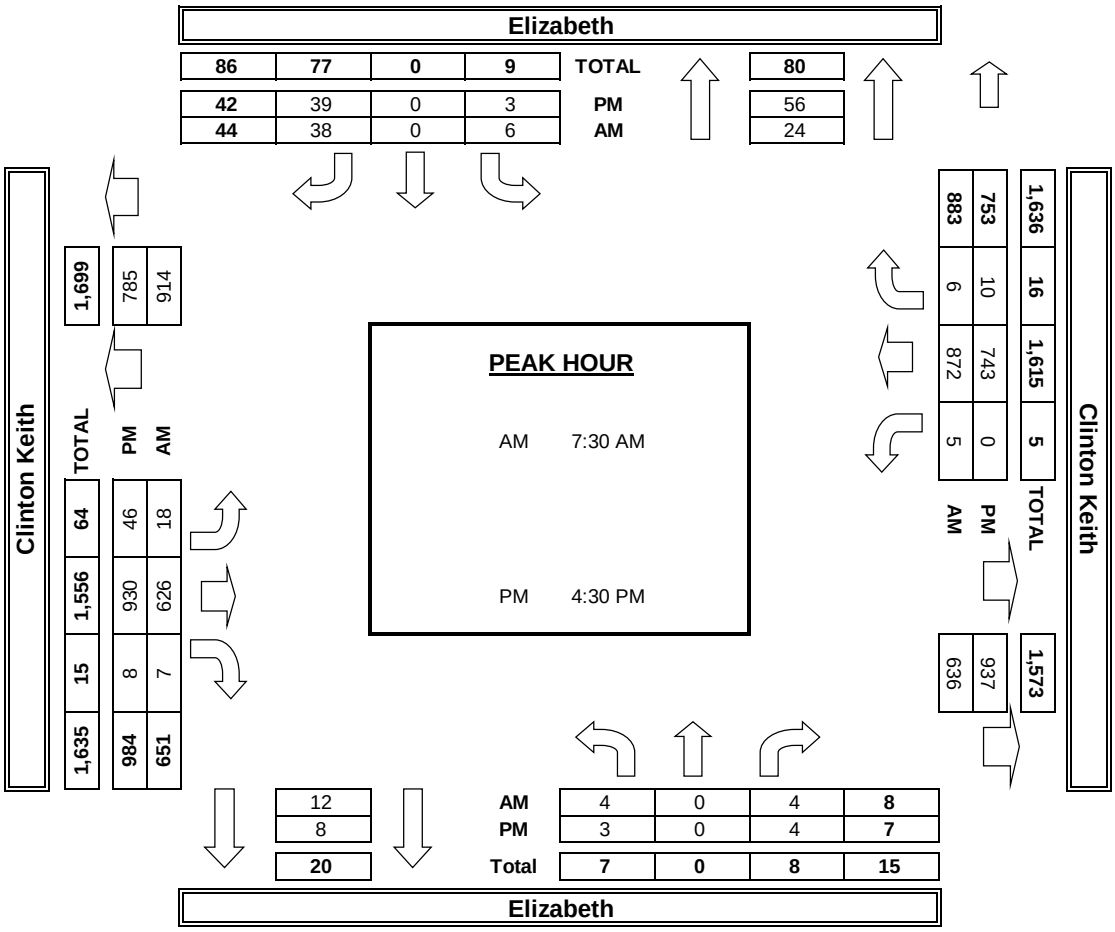
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

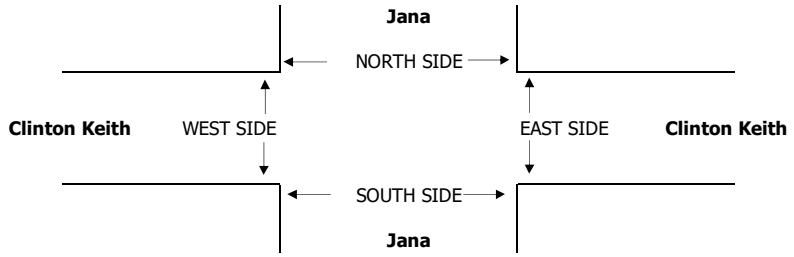
DATE:				
Tue, May 24, 22	LOCATION:	Wildomar	PROJECT #:	SC3467
	NORTH & SOUTH:	Jana	LOCATION #:	1
	EAST & WEST:	Clinton Keith	CONTROL:	STOP N

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

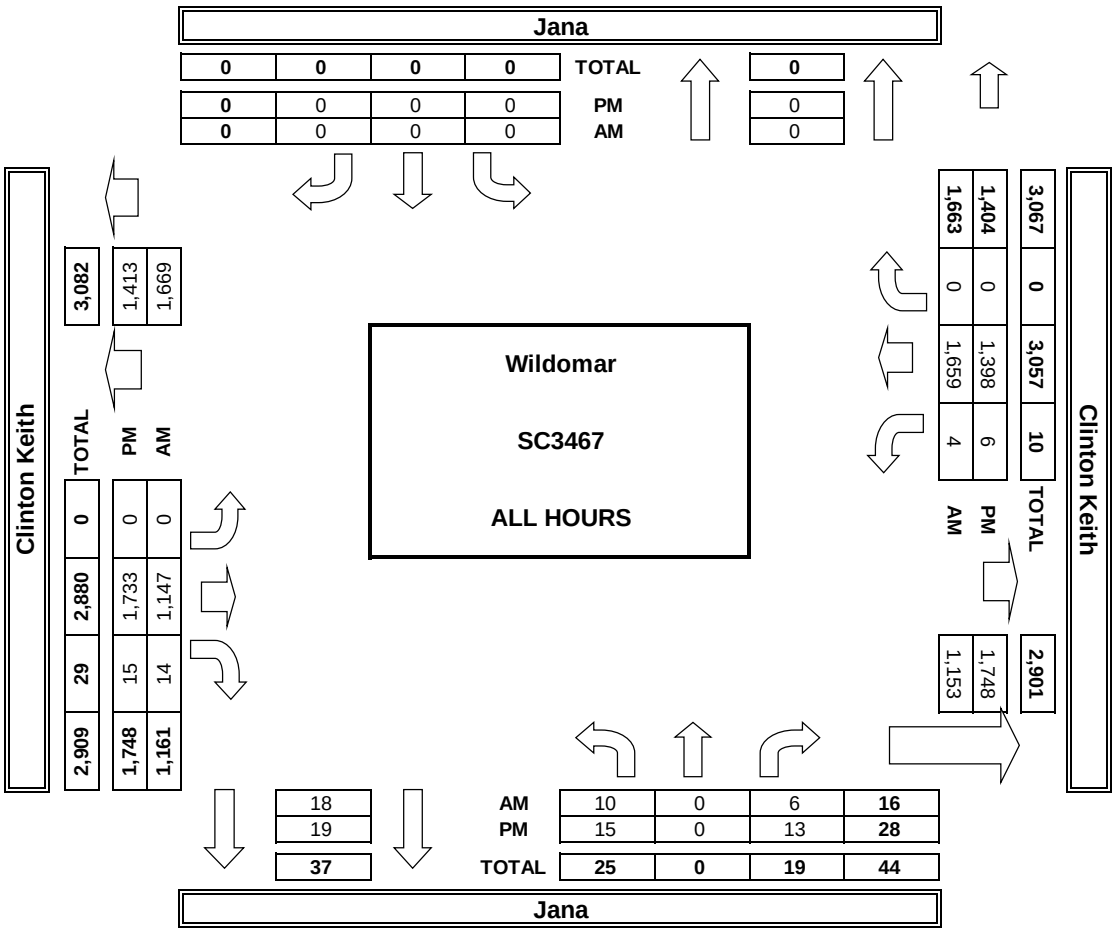
☑ Add U-Turns to Left Turns

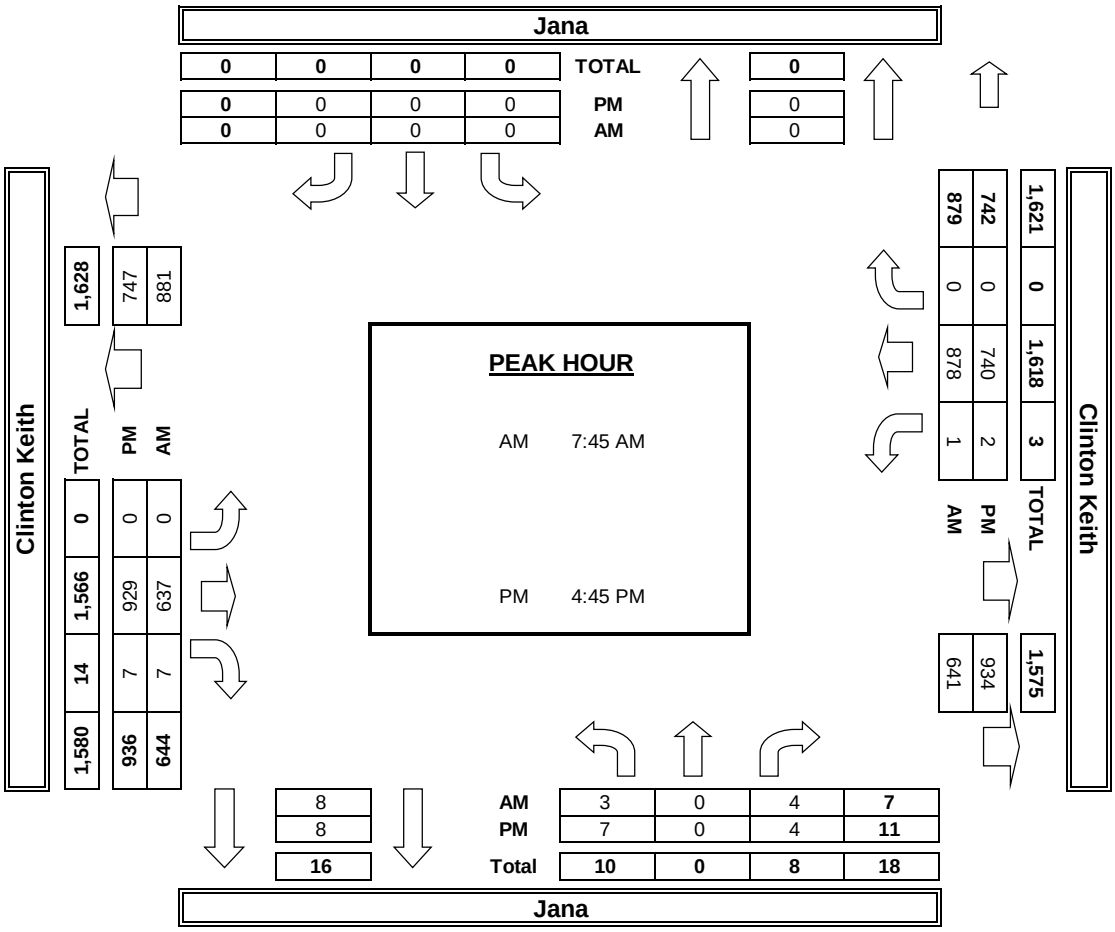
		NORTHBOUND Jana			SOUTHBOUND Jana			EASTBOUND Clinton Keith			WESTBOUND Clinton Keith				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 1	WL 1	WT 2	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	3	0	1	0	0	0	0	117	3	2	167	0	293	0	0	0	0	0
	7:15 AM	1	0	0	0	0	0	0	111	2	0	206	0	320	0	0	0	0	0
	7:30 AM	1	0	1	0	0	0	0	141	2	1	216	0	362	0	0	0	0	0
	7:45 AM	2	0	1	0	0	0	0	175	2	0	233	0	413	0	0	0	0	0
	8:00 AM	1	0	1	0	0	0	0	172	3	0	221	0	398	0	0	0	0	0
	8:15 AM	0	0	2	0	0	0	0	137	1	1	215	0	356	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	153	1	0	209	0	363	0	0	0	0	0
	8:45 AM	2	0	0	0	0	0	0	141	0	0	192	0	335	0	0	0	0	0
	VOLUMES	10	0	6	0	0	0	0	1,147	14	4	1,659	0	2,840	0	0	0	0	0
	APPROACH %	63%	0%	38%	0%	0%	0%	0%	99%	1%	0%	100%	0%						
	APP/DEPART	16	/	0	0	/	18	1,161	/	1,153	1,663	/	1,669	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	3	0	4	0	0	0	0	637	7	1	878	0	1,530					
	APPROACH %	43%	0%	57%	0%	0%	0%	0%	99%	1%	0%	100%	0%						
	PEAK HR FACTOR		0.583			0.000			0.910			0.943		0.926					
	APP/DEPART	7	/	0	0	/	8	644	/	641	879	/	881	0					
PM	4:00 PM	2	0	1	0	0	0	0	190	1	2	166	0	362	0	0	0	1	1
	4:15 PM	1	0	5	0	0	0	0	191	4	2	170	0	373	0	0	0	0	0
	4:30 PM	3	0	2	0	0	0	0	230	3	0	163	0	401	0	0	0	0	0
	4:45 PM	5	0	2	0	0	0	0	213	0	0	183	0	403	0	0	0	0	0
	5:00 PM	0	0	1	0	0	0	0	241	2	0	206	0	450	0	0	0	0	0
	5:15 PM	1	0	0	0	0	0	0	238	4	2	189	0	434	0	0	0	1	1
	5:30 PM	1	0	1	0	0	0	0	237	1	0	162	0	402	0	0	0	0	0
	5:45 PM	2	0	1	0	0	0	0	193	0	0	159	0	355	0	0	0	0	0
	VOLUMES	15	0	13	0	0	0	0	1,733	15	6	1,398	0	3,180	0	0	0	2	2
	APPROACH %	54%	0%	46%	0%	0%	0%	0%	99%	1%	0%	100%	0%						
	APP/DEPART	28	/	0	0	/	19	1,748	/	1,748	1,404	/	1,413	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	7	0	4	0	0	0	0	929	7	2	740	0	1,689					
	APPROACH %	64%	0%	36%	0%	0%	0%	0%	99%	1%	0%	100%	0%						
	PEAK HR FACTOR		0.393			0.000			0.963			0.900		0.938					
	APP/DEPART	11	/	0	0	/	8	936	/	934	742	/	747	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

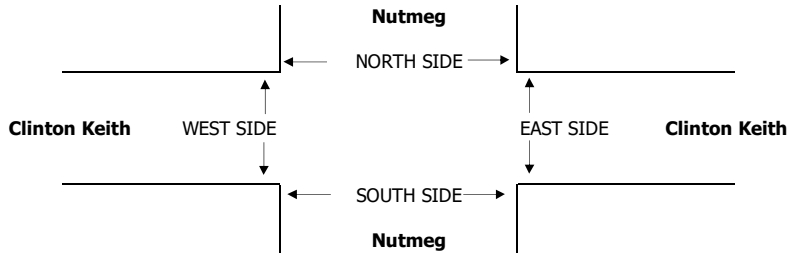
DATE:				
Tue, May 24, 22	LOCATION:	Wildomar	PROJECT #:	SC3467
	NORTH & SOUTH:	Nutmeg	LOCATION #:	6
	EAST & WEST:	Clinton Keith	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

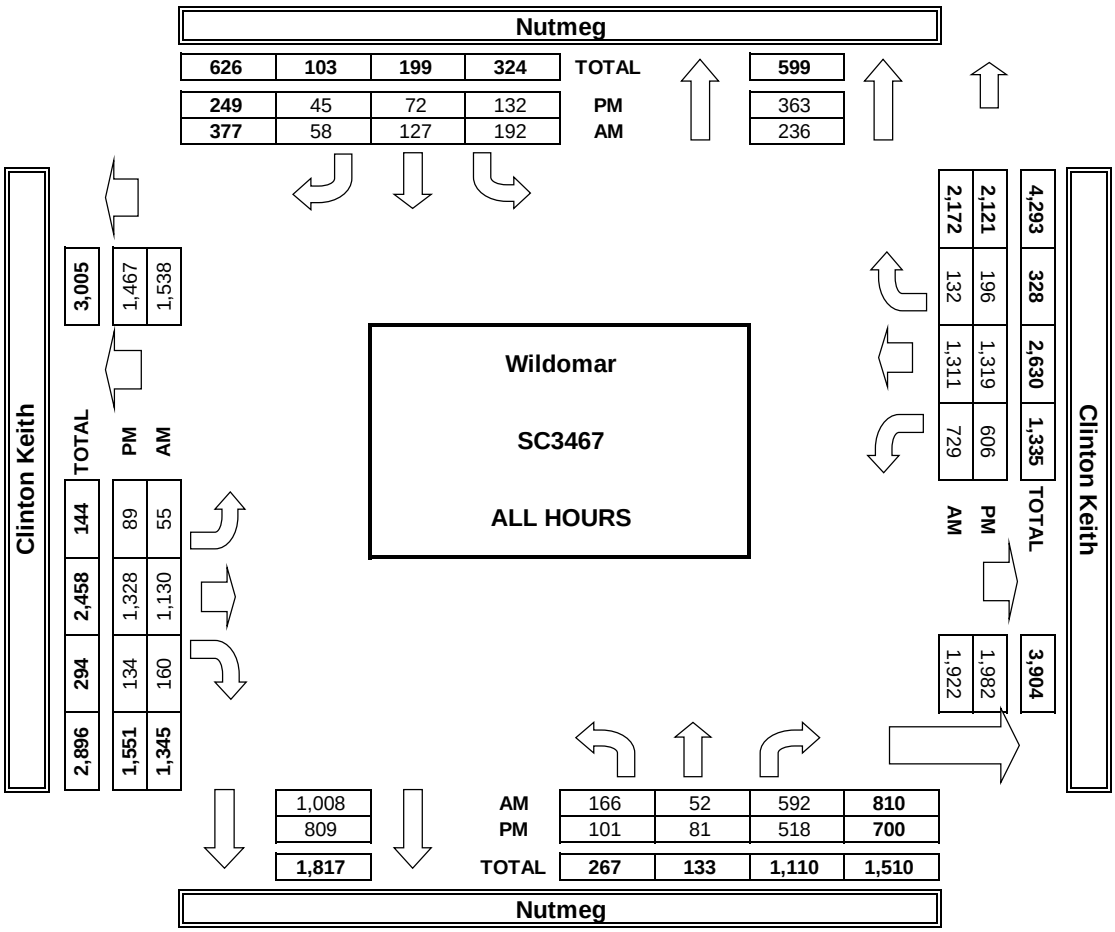
☑ Add U-Turns to Left Turns

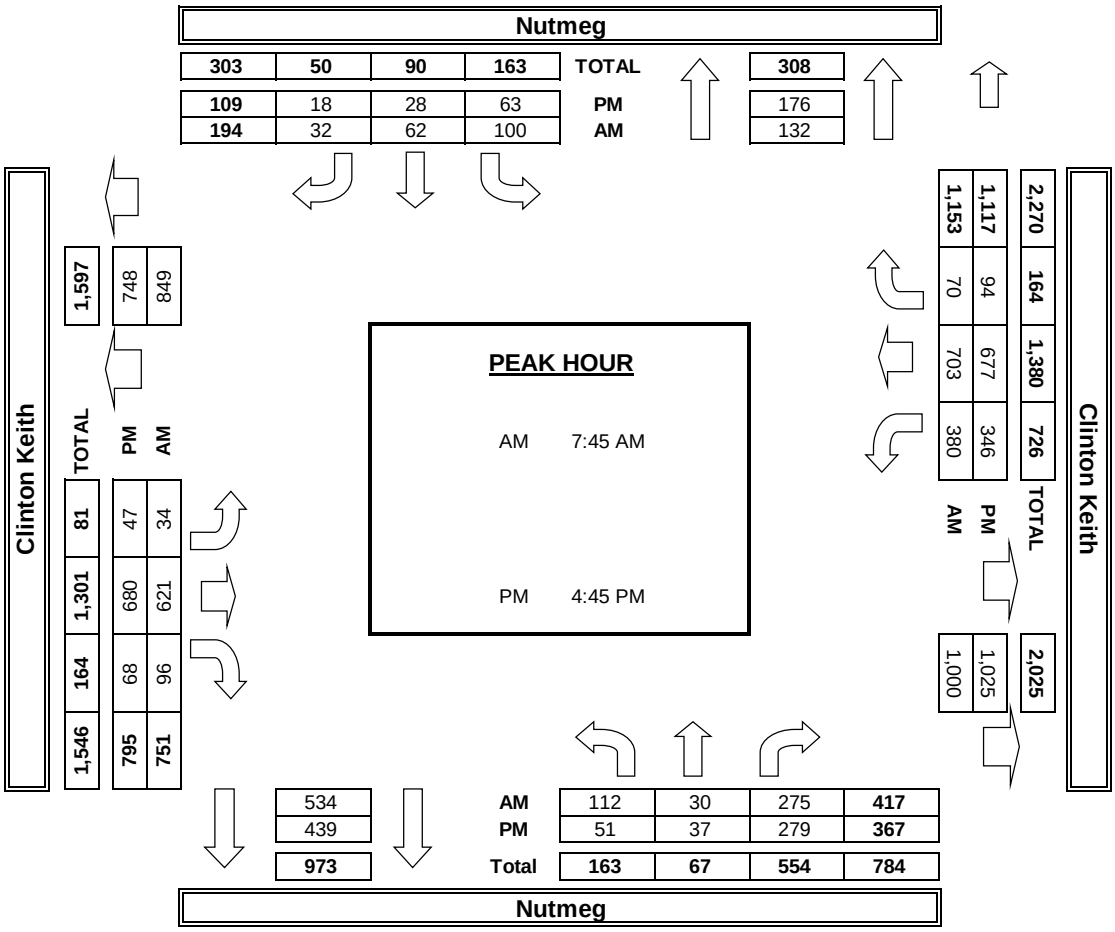
		NORTHBOUND Nutmeg			SOUTHBOUND Nutmeg			EASTBOUND Clinton Keith			WESTBOUND Clinton Keith				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	17	1	94	34	29	9	3	137	20	93	126	15	578	0	0	0	0	0
	7:15 AM	10	8	81	13	14	6	5	123	13	63	158	12	506	0	0	0	0	0
	7:30 AM	13	5	77	27	7	3	6	126	12	87	170	15	548	0	0	1	0	1
	7:45 AM	10	6	64	29	14	9	11	169	18	108	176	13	627	0	0	2	0	2
	8:00 AM	31	11	66	23	17	10	7	159	44	95	162	15	640	0	0	0	3	3
	8:15 AM	55	6	73	28	11	5	7	137	21	105	178	19	645	0	0	0	0	0
	8:30 AM	16	7	72	20	20	8	9	156	13	72	187	23	603	0	0	0	1	1
	8:45 AM	14	8	65	18	15	8	7	123	19	106	154	20	557	0	0	0	4	4
	VOLUMES	166	52	592	192	127	58	55	1,130	160	729	1,311	132	4,704	0	0	3	8	11
	APPROACH %	20%	6%	73%	51%	34%	15%	4%	84%	12%	34%	60%	6%						
	APP/DEPART	810	/	236	377	/	1,008	1,345	/	1,922	2,172	/	1,538	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	112	30	275	100	62	32	34	621	96	380	703	70	2,515					
	APPROACH %	27%	7%	66%	52%	32%	16%	5%	83%	13%	33%	61%	6%						
	PEAK HR FACTOR		0.778			0.933			0.894			0.954		0.975					
	APP/DEPART	417	/	132	194	/	534	751	/	1,000	1,153	/	849	0					
PM	4:00 PM	14	17	46	18	15	9	12	147	12	57	182	29	558	0	0	1	1	2
	4:15 PM	13	8	71	17	11	7	10	154	11	74	166	20	562	0	0	0	0	0
	4:30 PM	12	9	68	18	8	6	14	172	19	75	152	27	580	0	0	0	0	0
	4:45 PM	13	8	74	14	10	2	11	130	20	82	152	28	544	0	0	0	0	0
	5:00 PM	14	12	69	21	4	6	11	184	17	80	193	23	634	0	0	0	1	1
	5:15 PM	8	9	67	9	8	6	10	206	17	84	181	14	619	0	0	0	1	1
	5:30 PM	16	8	69	19	6	4	15	160	14	100	151	29	591	0	0	2	1	3
	5:45 PM	11	10	54	16	10	5	6	175	24	54	142	26	533	1	0	0	0	1
	VOLUMES	101	81	518	132	72	45	89	1,328	134	606	1,319	196	4,621	1	0	3	4	8
	APPROACH %	14%	12%	74%	53%	29%	18%	6%	86%	9%	29%	62%	9%						
	APP/DEPART	700	/	363	249	/	809	1,551	/	1,982	2,121	/	1,467	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	51	37	279	63	28	18	47	680	68	346	677	94	2,388					
	APPROACH %	14%	10%	76%	58%	26%	17%	6%	86%	9%	31%	61%	8%						
	PEAK HR FACTOR		0.966			0.879			0.853			0.943		0.942					
	APP/DEPART	367	/	176	109	/	439	795	/	1,025	1,117	/	748	0					



AimTD LLC

TURNING MOVEMENT COUNTS





APPENDIX D

LEVEL OF SERVICE WORKSHEETS

EXISTING

Beyond Food Mart (Clinton Keith & Jana)

Vistro File: G:\...\AME.vistro
Report File: G:\...\AME.pdf

Scenario 1 Existing AM Peak Hour
7/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-15 SB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	SB Right	0.833	18.8	B
2	I-15 NB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.750	15.2	B
3	Wildomar Trail (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.630	18.3	B
4	Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.699	13.1	B
5	Salida Del Sol (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	SB Left	0.188	53.0	F
6	Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	SB Left	0.047	34.4	D
7	Jana Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.014	22.2	C
8	Nutmeg St (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.701	19.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-15 SB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.833

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	2	0	1	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	680.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	411	4	410	0	937	725	307	807	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	411	4	410	0	937	725	307	807	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9710	0.9710	0.9710	1.0000	0.9710	0.9710	0.9710	0.9710	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	106	1	106	0	241	187	79	208	0
Total Analysis Volume [veh/h]	0	0	0	423	4	422	0	965	747	316	831	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	120	0	0	120	0	120	120	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	29	0	0	30	0	11	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	L	C
C, Cycle Length [s]		70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		13	13	13	37	37	9	50
g / C, Green / Cycle		0.18	0.18	0.18	0.52	0.52	0.13	0.71
(v / s)_i Volume / Saturation Flow Rate		0.12	0.12	0.15	0.18	0.46	0.09	0.16
s, saturation flow rate [veh/h]		1781	1783	2813	5094	1589	3459	5094
c, Capacity [veh/h]		318	318	502	2667	832	438	3603
d1, Uniform Delay [s]		26.76	26.76	27.68	9.75	14.62	29.32	3.57
k, delay calibration		0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		10.46	10.44	15.23	0.08	3.12	2.07	0.03
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.65	0.65	0.82	0.35	0.87	0.70	0.22
d, Delay for Lane Group [s/veh]		37.22	37.19	42.91	9.83	17.75	31.39	3.60
Lane Group LOS		D	D	D	A	B	C	A
Critical Lane Group		No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		4.00	4.00	4.20	2.38	8.94	2.46	0.84
50th-Percentile Queue Length [ft/ln]		99.92	99.92	105.09	59.46	223.43	61.62	20.98
95th-Percentile Queue Length [veh/ln]		7.19	7.19	7.57	4.28	13.84	4.44	1.51
95th-Percentile Queue Length [ft/ln]		179.85	179.86	189.15	107.03	346.00	110.91	37.76

Movement, Approach, & Intersection Results

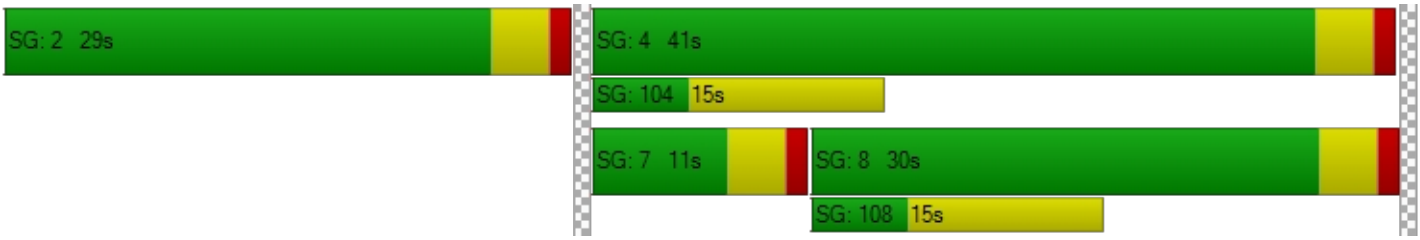
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	37.21	37.19	42.91	0.00	9.83	17.75	31.39	3.60	0.00
Movement LOS				D	D	D		A	B	C	A	
d_A, Approach Delay [s/veh]	0.00			40.04			13.28			11.26		
Approach LOS	A			D			B			B		
d_I, Intersection Delay [s/veh]	18.79											
Intersection LOS	B											
Intersection V/C	0.833											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.60	26.60	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.209	2.450	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	714	742	1057
d_b, Bicycle Delay [s]	35.02	14.48	13.84	7.79
I_b,int, Bicycle LOS Score for Intersection	4.132	2.921	2.474	2.172
Bicycle LOS	D	C	B	B

Sequence

Ring 1	2	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: I-15 NB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.750

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	2	0	0	0	0	0
Entry Pocket Length [ft]	650.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	300	2	236	0	0	0	409	939	0	0	814	598
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	300	2	236	0	0	0	409	939	0	0	814	598
Peak Hour Factor	0.9600	0.9600	0.9600	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	1.0000	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	78	1	61	0	0	0	107	245	0	0	212	156
Total Analysis Volume [veh/h]	313	2	246	0	0	0	426	978	0	0	848	623
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	12	0	0	0	0	19	48	0	0	29	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13		10	39	26	26
g / C, Green / Cycle	0.21	0.21	0.21		0.16	0.65	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.11		0.12	0.18	0.16	0.38
s, saturation flow rate [veh/h]	1781	1705	1589		3459	5094	5094	1589
c, Capacity [veh/h]	378	362	338		551	3334	2184	682
d1, Uniform Delay [s]	20.86	20.86	20.86		24.11	4.40	11.68	15.73
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.70	4.92	5.28		2.03	0.05	0.11	4.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.50	0.50		0.74	0.28	0.37	0.88
d, Delay for Lane Group [s/veh]	25.56	25.78	26.14		26.14	4.45	11.79	19.74
Lane Group LOS	C	C	C		C	A	B	B
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.66	2.57	2.43		2.69	1.03	2.09	6.91
50th-Percentile Queue Length [ft/ln]	66.48	64.21	60.74		67.28	25.85	52.31	172.68
95th-Percentile Queue Length [veh/ln]	4.79	4.62	4.37		4.84	1.86	3.77	11.22
95th-Percentile Queue Length [ft/ln]	119.66	115.58	109.34		121.10	46.53	94.15	280.43

Movement, Approach, & Intersection Results

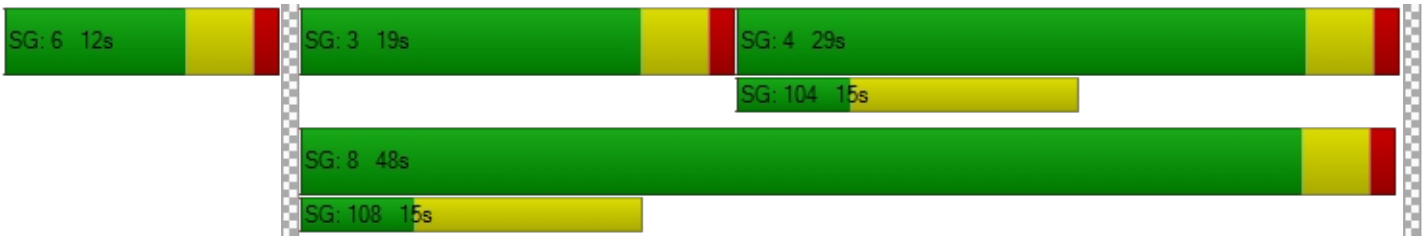
d_M, Delay for Movement [s/veh]	25.65	25.78	26.05	0.00	0.00	0.00	26.14	4.45	0.00	0.00	11.79	19.74
Movement LOS	C	C	C				C	A			B	B
d_A, Approach Delay [s/veh]	25.82			0.00			11.03			15.16		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	15.21											
Intersection LOS	B											
Intersection V/C	0.750											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	21.71	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.243	2.187	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	266	0	1465	832
d_b, Bicycle Delay [s]	22.57	30.04	2.15	10.24
I_b,int, Bicycle LOS Score for Intersection	2.447	4.132	2.301	2.336
Bicycle LOS	B	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Wildomar Trail (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.630

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	95.00	100.00	100.00	95.00	100.00	100.00	125.00	100.00	100.00	295.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Speed [mph]	25.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	60	36	38	110	27	220	106	889	21	70	911	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	36	38	110	27	220	106	889	21	70	911	38
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	10	10	29	7	59	28	236	6	19	242	10
Total Analysis Volume [veh/h]	64	38	40	117	29	234	113	946	22	74	969	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	32	49	0	31	48	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	22	22	6	22	22	5	21	21
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.36	0.10	0.36	0.36	0.08	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.06	0.05	0.09	0.02	0.15	0.07	0.19	0.19	0.04	0.28	0.03
s, saturation flow rate [veh/h]	1019	1543	1193	1683	1431	1603	3204	1663	1603	3204	1431
c, Capacity [veh/h]	438	554	465	604	514	158	1152	598	131	1099	491
d1, Uniform Delay [s]	15.12	12.98	16.71	12.56	14.60	26.18	15.18	15.18	26.50	18.13	13.33
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	0.50	1.20	0.14	2.62	5.03	0.37	0.71	3.36	1.70	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.13	0.24	0.04	0.43	0.67	0.52	0.52	0.53	0.83	0.08
d, Delay for Lane Group [s/veh]	15.77	13.48	17.91	12.69	17.22	31.21	15.54	15.89	29.86	19.84	13.40
Lane Group LOS	B	B	B	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.64	0.70	1.18	0.22	2.28	1.58	2.85	3.02	1.02	5.27	0.32
50th-Percentile Queue Length [ft/ln]	16.01	17.50	29.59	5.62	57.02	39.41	71.36	75.58	25.43	131.64	7.90
95th-Percentile Queue Length [veh/ln]	1.15	1.26	2.13	0.40	4.11	2.84	5.14	5.44	1.83	9.03	0.57
95th-Percentile Queue Length [ft/ln]	28.81	31.50	53.27	10.11	102.63	70.94	128.44	136.05	45.78	225.72	14.22

Movement, Approach, & Intersection Results

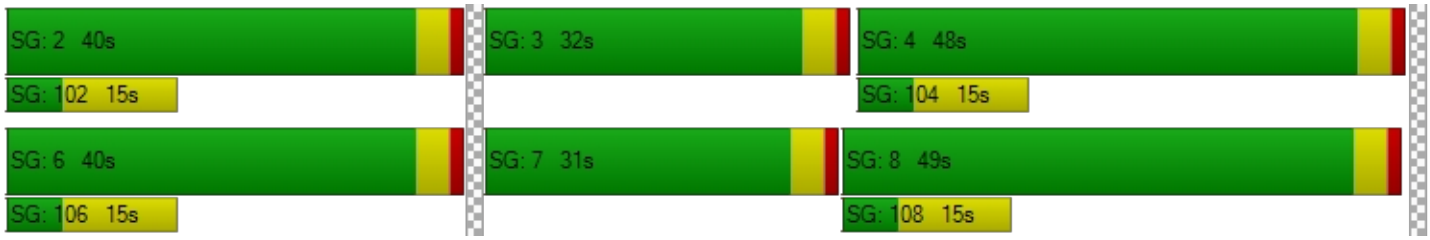
d_M, Delay for Movement [s/veh]	15.77	13.48	13.48	17.91	12.69	17.22	31.21	15.66	15.89	29.86	19.84	13.40
Movement LOS	B	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	14.50			17.09			17.28			20.28		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.32											
Intersection LOS	B											
Intersection V/C	0.630											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	21.71	21.71	21.71
I_p,int, Pedestrian LOS Score for Intersection	1.989	2.286	2.937	3.065
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1198	1198	1498	1465
d_b, Bicycle Delay [s]	4.82	4.82	1.89	2.15
I_b,int, Bicycle LOS Score for Intersection	1.781	2.149	2.118	2.400
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Inland Valley Dr (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.699

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	300.00	100.00	100.00	210.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	45.00			30.00			35.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	239	0	37	0	0	0	0	611	437	112	795	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	239	0	37	0	0	0	0	611	437	112	795	0
Peak Hour Factor	0.9640	1.0000	0.9640	1.0000	1.0000	1.0000	0.9640	0.9640	0.9640	0.9640	0.9640	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	0	10	0	0	0	0	158	113	29	206	0
Total Analysis Volume [veh/h]	248	0	38	0	0	0	0	634	453	116	825	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	0	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	120	0	0	0	0	0	120	120	0	120	120	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	0	0	0	0	0	9	34	0	13	38	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No						No	No		No	No	
Maximum Recall	No						No	No		No	No	
Pedestrian Recall	No						No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R		L	C	R	L	C
C, Cycle Length [s]	60	60		60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10		0	32	32	6	38
g / C, Green / Cycle	0.17	0.17		0.00	0.53	0.53	0.10	0.63
(v / s)_i Volume / Saturation Flow Rate	0.13	0.02		0.00	0.17	0.27	0.06	0.43
s, saturation flow rate [veh/h]	1781	1589		1781	3560	1589	1781	1870
c, Capacity [veh/h]	300	268		2	1894	846	178	1180
d1, Uniform Delay [s]	24.02	21.30		0.00	7.95	9.08	25.99	7.12
k, delay calibration	0.11	0.11		0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.02	0.23		0.00	0.45	2.27	3.67	3.13
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.14		0.00	0.32	0.52	0.63	0.67
d, Delay for Lane Group [s/veh]	29.04	21.53		0.00	8.40	11.35	29.67	10.25
Lane Group LOS	C	C		A	A	B	C	B
Critical Lane Group	Yes	No		No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.27	0.41		0.00	1.84	3.35	1.55	4.58
50th-Percentile Queue Length [ft/ln]	81.72	10.21		0.00	46.09	83.80	38.80	114.59
95th-Percentile Queue Length [veh/ln]	5.88	0.74		0.00	3.32	6.03	2.79	8.09
95th-Percentile Queue Length [ft/ln]	147.10	18.38		0.00	82.97	150.84	69.84	202.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.04	0.00	21.53	0.00	0.00	0.00	0.00	8.40	11.35	29.67	10.25	0.00
Movement LOS	C		C				A	A	B	C	B	
d_A, Approach Delay [s/veh]	28.03			0.00			9.63			12.65		
Approach LOS	C			A			A			B		
d_I, Intersection Delay [s/veh]	13.14											
Intersection LOS	B											
Intersection V/C	0.699											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.323	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	466	0	999	1132
d_b, Bicycle Delay [s]	17.67	30.04	7.53	5.66
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.424	3.056
Bicycle LOS	A	D	B	C

Sequence

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

Intersection Level Of Service Report
Intersection 5: Salida Del Sol (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	53.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.188

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	17	0	8	10	636	0	0	888	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	17	0	8	10	636	0	0	888	26
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	5	0	2	3	170	0	0	237	7
Total Analysis Volume [veh/h]	0	0	0	18	0	9	11	680	0	0	950	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.19	0.00	0.02	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	46.07	38.00	12.53	52.99	45.55	23.85	9.89	0.00	0.00	8.80	0.00	0.00
Movement LOS	E	E	B	F	E	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.79	0.79	0.79	0.04	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	19.82	19.82	19.82	1.02	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	32.20			43.66			0.15			0.00		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	0.75											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 6: Elizabeth Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	34.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.047

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	4	0	4	6	0	38	18	626	7	5	872	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	0	4	6	0	38	18	626	7	5	872	6
Peak Hour Factor	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	2	0	10	5	168	2	1	235	2
Total Analysis Volume [veh/h]	4	0	4	6	0	41	19	674	8	5	939	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.01	0.05	0.00	0.07	0.02	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	29.80	38.54	10.80	34.37	39.26	12.57	9.82	0.00	0.00	8.83	0.00	0.00
Movement LOS	D	E	B	D	E	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.10	0.39	0.39	0.39	0.07	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.55	2.55	2.55	9.64	9.64	9.64	1.81	0.00	0.00	0.40	0.00	0.00
d_A, Approach Delay [s/veh]	20.30			15.54			0.27			0.05		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.67											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 7: Jana Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	22.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.014

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	4	637	7	1	878
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	4	637	7	1	878
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	172	2	0	237
Total Analysis Volume [veh/h]	3	4	688	8	1	948
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	22.19	10.56	0.00	0.00	8.85	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.54	1.54	0.00	0.00	0.08	0.00
d_A, Approach Delay [s/veh]	15.54		0.00		0.01	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Nutmeg St (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.701

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	175.00	100.00	100.00	50.00	100.00	100.00	180.00	100.00	100.00	225.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	45.00			40.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	112	30	275	100	62	32	34	621	96	380	703	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	30	275	100	62	32	34	621	96	380	703	70
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	8	71	26	16	8	9	159	25	97	180	18
Total Analysis Volume [veh/h]	115	31	282	103	64	33	35	637	98	390	721	72
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	21	19	0	22	20	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20	20	20	20	3	13	13	15	25	25
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.34	0.34	0.05	0.22	0.22	0.24	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.09	0.02	0.17	0.09	0.03	0.02	0.02	0.17	0.06	0.21	0.20	0.04
s, saturation flow rate [veh/h]	1302	1870	1589	1074	1870	1589	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	495	632	537	442	632	537	93	772	344	438	1461	652
d1, Uniform Delay [s]	16.66	13.40	15.94	16.25	13.63	13.45	27.55	22.35	19.64	21.75	13.03	10.94
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.06	0.14	3.50	1.19	0.31	0.21	2.41	2.07	0.44	5.70	0.25	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.05	0.51	0.23	0.10	0.06	0.37	0.80	0.28	0.87	0.48	0.11
d, Delay for Lane Group [s/veh]	17.72	13.54	19.44	17.43	13.94	13.67	29.96	24.42	20.07	27.45	13.27	11.01
Lane Group LOS	B	B	B	B	B	B	C	C	C	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.16	0.25	3.01	1.07	0.55	0.28	0.49	3.79	1.01	5.06	2.80	0.47
50th-Percentile Queue Length [ft/ln]	29.10	6.32	75.24	26.64	13.72	7.08	12.19	94.85	25.31	126.44	69.88	11.80
95th-Percentile Queue Length [veh/ln]	2.09	0.46	5.42	1.92	0.99	0.51	0.88	6.83	1.82	8.75	5.03	0.85
95th-Percentile Queue Length [ft/ln]	52.37	11.38	135.44	47.95	24.69	12.75	21.93	170.73	45.55	218.65	125.79	21.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.72	13.54	19.44	17.43	13.94	13.67	29.96	24.42	20.07	27.45	13.27	11.01
Movement LOS	B	B	B	B	B	B	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	18.55			15.70			24.11			17.81		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	19.65											
Intersection LOS	B											
Intersection V/C	0.701											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	21.71	0.00	21.71
I_p,int, Pedestrian LOS Score for Intersection	2.461	2.218	0.000	3.100
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	499	499	533
d_b, Bicycle Delay [s]	16.91	16.91	16.91	16.17
I_b,int, Bicycle LOS Score for Intersection	2.248	1.880	2.179	2.511
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Beyond Food Mart (Clinton Keith & Jana)

Vistro File: G:\...\PME.vistro
Report File: G:\...\PME.pdf

Scenario 1 Existing PM Peak Hour
7/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-15 SB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.693	15.1	B
2	I-15 NB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.791	17.1	B
3	Wildomar Trail (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.613	19.2	B
4	Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.759	14.8	B
5	Salida Del Sol (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	SB Left	0.140	67.4	F
6	Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.034	46.3	E
7	Jana Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.046	29.9	D
8	Nutmeg St (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.701	19.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-15 SB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.693

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	2	0	1	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	680.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	523	1	394	0	1004	519	279	1092	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	523	1	394	0	1004	519	279	1092	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9490	0.9490	0.9490	1.0000	0.9490	0.9490	0.9490	0.9490	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	138	0	104	0	264	137	73	288	0
Total Analysis Volume [veh/h]	0	0	0	551	1	415	0	1058	547	294	1151	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	120	0	0	120	0	120	120	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	11	0	0	19	0	30	49	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	L	C
C, Cycle Length [s]		60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		16	16	16	25	25	7	36
g / C, Green / Cycle		0.26	0.26	0.26	0.41	0.41	0.12	0.60
(v / s)_i Volume / Saturation Flow Rate		0.15	0.15	0.14	0.20	0.33	0.08	0.21
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	3459	5094
c, Capacity [veh/h]		467	467	737	2112	659	428	3081
d1, Uniform Delay [s]		19.19	19.19	19.03	12.83	15.29	25.10	5.97
k, delay calibration		0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		4.91	4.90	2.79	0.17	2.17	1.70	0.07
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.56	0.56	0.53	0.48	0.79	0.65	0.35
d, Delay for Lane Group [s/veh]		24.09	24.09	21.82	12.99	17.47	26.81	6.04
Lane Group LOS		C	C	C	B	B	C	A
Critical Lane Group		Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		3.53	3.53	2.44	2.81	5.53	1.85	1.64
50th-Percentile Queue Length [ft/ln]		88.17	88.17	61.05	70.25	138.32	46.21	41.01
95th-Percentile Queue Length [veh/ln]		6.35	6.35	4.40	5.06	9.39	3.33	2.95
95th-Percentile Queue Length [ft/ln]		158.71	158.70	109.89	126.45	234.76	83.18	73.81

Movement, Approach, & Intersection Results

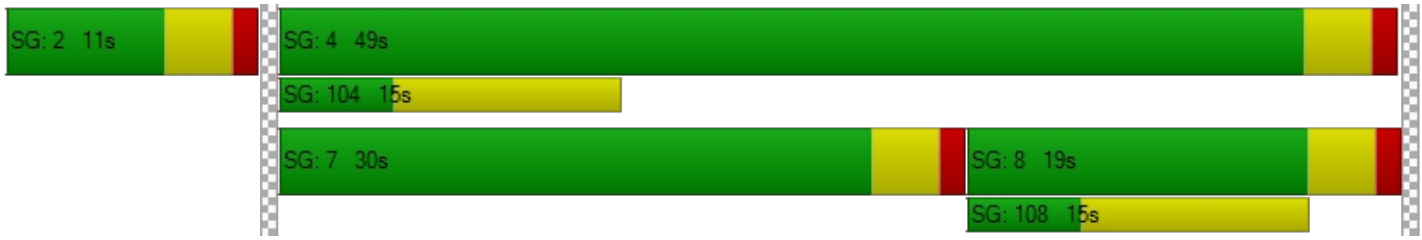
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.09	24.09	21.82	0.00	12.99	17.47	26.81	6.04	0.00
Movement LOS				C	C	C		B	B	C	A	
d_A, Approach Delay [s/veh]	0.00			23.12			14.52			10.27		
Approach LOS	A			C			B			B		
d_I, Intersection Delay [s/veh]	15.06											
Intersection LOS	B											
Intersection V/C	0.693											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.70	21.70	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.085	2.460	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	233	500	1499
d_b, Bicycle Delay [s]	30.03	23.43	16.90	1.89
I_b,int, Bicycle LOS Score for Intersection	4.132	3.074	2.397	2.314
Bicycle LOS	D	C	B	B

Sequence

Ring 1	2	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: I-15 NB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.791

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	2	0	0	0	0	0
Entry Pocket Length [ft]	650.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	538	0	364	0	0	0	353	1174	0	0	839	549
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	538	0	364	0	0	0	353	1174	0	0	839	549
Peak Hour Factor	0.9620	0.9620	0.9620	1.0000	1.0000	1.0000	0.9620	0.9620	1.0000	1.0000	0.9620	0.9620
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	140	0	95	0	0	0	92	305	0	0	218	143
Total Analysis Volume [veh/h]	559	0	378	0	0	0	367	1220	0	0	872	571
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	18	40	0	0	22	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17	17	17		8	35	23	23
g / C, Green / Cycle	0.28	0.28	0.28		0.14	0.58	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.19		0.10	0.23	0.16	0.35
s, saturation flow rate [veh/h]	1781	1733	1589		3459	5094	5094	1589
c, Capacity [veh/h]	503	489	449		486	2977	1922	600
d1, Uniform Delay [s]	18.65	18.73	18.98		24.70	6.74	13.94	17.78
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.47	5.90	7.59		2.12	0.09	0.16	6.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.62	0.66		0.73	0.39	0.44	0.92
d, Delay for Lane Group [s/veh]	24.12	24.63	26.57		26.81	6.82	14.09	24.50
Lane Group LOS	C	C	C		C	A	B	C
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.11	4.13	4.24		2.35	1.96	2.46	7.21
50th-Percentile Queue Length [ft/ln]	102.65	103.32	105.91		58.72	49.00	61.45	180.18
95th-Percentile Queue Length [veh/ln]	7.39	7.44	7.61		4.23	3.53	4.42	11.61
95th-Percentile Queue Length [ft/ln]	184.77	185.97	190.29		105.69	88.21	110.61	290.25

Movement, Approach, & Intersection Results

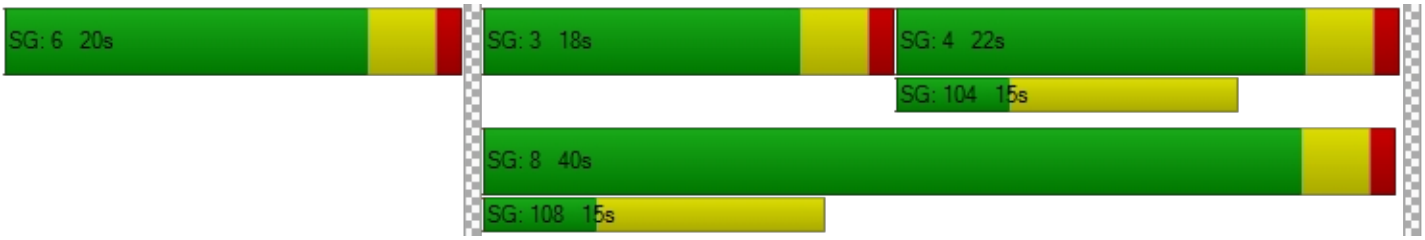
d_M, Delay for Movement [s/veh]	24.34	24.63	26.23	0.00	0.00	0.00	26.81	6.82	0.00	0.00	14.09	24.50
Movement LOS	C	C	C				C	A			B	C
d_A, Approach Delay [s/veh]	25.09			0.00			11.44			18.21		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	17.13											
Intersection LOS	B											
Intersection V/C	0.791											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.332	2.135	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	0	1200	600
d_b, Bicycle Delay [s]	16.14	30.01	4.81	14.71
I_b,int, Bicycle LOS Score for Intersection	3.048	4.132	2.399	2.323
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Wildomar Trail (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.613

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	95.00	100.00	100.00	95.00	100.00	100.00	125.00	100.00	100.00	295.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Speed [mph]	25.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	37	79	90	38	111	182	1072	28	109	958	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	37	79	90	38	111	182	1072	28	109	958	45
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	10	21	24	10	29	48	284	7	29	254	12
Total Analysis Volume [veh/h]	48	39	84	95	40	118	193	1137	30	116	1016	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	22	29	0	12	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19	19	19	9	23	23	6	21	21
g / C, Green / Cycle	0.32	0.32	0.32	0.32	0.32	0.14	0.39	0.39	0.10	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08	0.08	0.02	0.08	0.11	0.23	0.23	0.07	0.30	0.03
s, saturation flow rate [veh/h]	1114	1502	1148	1683	1431	1603	3204	1661	1603	3204	1431
c, Capacity [veh/h]	433	476	397	533	453	228	1232	639	159	1093	488
d1, Uniform Delay [s]	16.18	15.21	18.78	14.36	15.21	24.94	14.73	14.73	26.19	18.63	13.49
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	1.22	1.33	0.26	1.29	6.55	0.45	0.87	5.30	2.50	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	0.24	0.23	0.07	0.24	0.80	0.59	0.59	0.69	0.88	0.09
d, Delay for Lane Group [s/veh]	16.67	16.42	20.11	14.62	16.50	31.49	15.18	15.60	31.48	21.13	13.57
Lane Group LOS	B	B	C	B	B	C	B	B	C	C	B
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.50	1.26	1.06	0.35	1.13	2.72	3.42	3.62	1.63	5.75	0.38
50th-Percentile Queue Length [ft/ln]	12.40	31.52	26.45	8.80	28.33	67.95	85.53	90.56	40.74	143.86	9.41
95th-Percentile Queue Length [veh/ln]	0.89	2.27	1.90	0.63	2.04	4.89	6.16	6.52	2.93	9.69	0.68
95th-Percentile Queue Length [ft/ln]	22.32	56.73	47.61	15.84	50.99	122.30	153.96	163.00	73.33	242.21	16.94

Movement, Approach, & Intersection Results

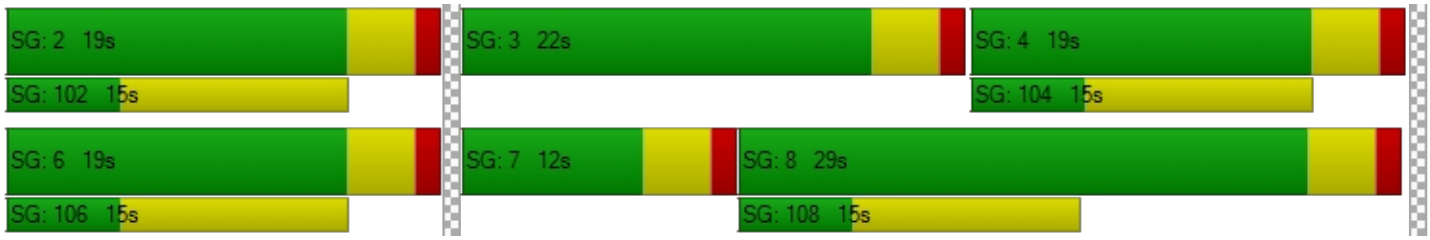
d_M, Delay for Movement [s/veh]	16.67	16.42	16.42	20.11	14.62	16.50	31.49	15.31	15.60	31.48	21.13	13.57
Movement LOS	B	B	B	C	B	B	C	B	B	C	C	B
d_A, Approach Delay [s/veh]	16.49			17.56			17.61			21.84		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	19.23											
Intersection LOS	B											
Intersection V/C	0.613											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	21.71	21.71	21.71
I_p,int, Pedestrian LOS Score for Intersection	2.012	2.275	2.952	3.085
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	499	832	499
d_b, Bicycle Delay [s]	16.91	16.91	10.24	16.91
I_b,int, Bicycle LOS Score for Intersection	1.825	1.954	2.265	2.477
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Inland Valley Dr (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.759

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	300.00	100.00	100.00	210.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	45.00			30.00			35.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	374	0	82	0	0	0	0	907	310	31	743	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	374	0	82	0	0	0	0	907	310	31	743	0
Peak Hour Factor	0.9650	1.0000	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650	0.9650	0.9650	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	97	0	21	0	0	0	0	235	80	8	192	0
Total Analysis Volume [veh/h]	388	0	85	0	0	0	0	940	321	32	770	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	0	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	120	0	0	0	0	0	120	120	0	120	120	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	0	0	0	0	0	11	21	0	20	30	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No						No	No		No	No	
Maximum Recall	No						No	No		No	No	
Pedestrian Recall	No						No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R		L	C	R	L	C
C, Cycle Length [s]	60	60		60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14		0	31	31	3	34
g / C, Green / Cycle	0.24	0.24		0.00	0.51	0.51	0.05	0.56
(v / s)_i Volume / Saturation Flow Rate	0.21	0.05		0.00	0.25	0.20	0.02	0.40
s, saturation flow rate [veh/h]	1781	1589		1781	3560	1589	1781	1870
c, Capacity [veh/h]	427	381		2	1824	814	87	1047
d1, Uniform Delay [s]	22.02	18.34		0.00	9.60	8.89	27.70	9.66
k, delay calibration	0.11	0.11		0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.30	0.28		0.00	0.98	1.36	2.49	4.17
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.22		0.00	0.50	0.38	0.36	0.71
d, Delay for Lane Group [s/veh]	28.32	18.62		0.00	10.58	10.25	30.18	13.83
Lane Group LOS	C	B		A	B	B	C	B
Critical Lane Group	Yes	No		No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.07	0.82		0.00	3.29	2.24	0.45	5.85
50th-Percentile Queue Length [ft/ln]	126.82	20.49		0.00	82.36	55.89	11.22	146.22
95th-Percentile Queue Length [veh/ln]	8.77	1.48		0.00	5.93	4.02	0.81	9.81
95th-Percentile Queue Length [ft/ln]	219.17	36.89		0.00	148.24	100.60	20.19	245.37

Movement, Approach, & Intersection Results

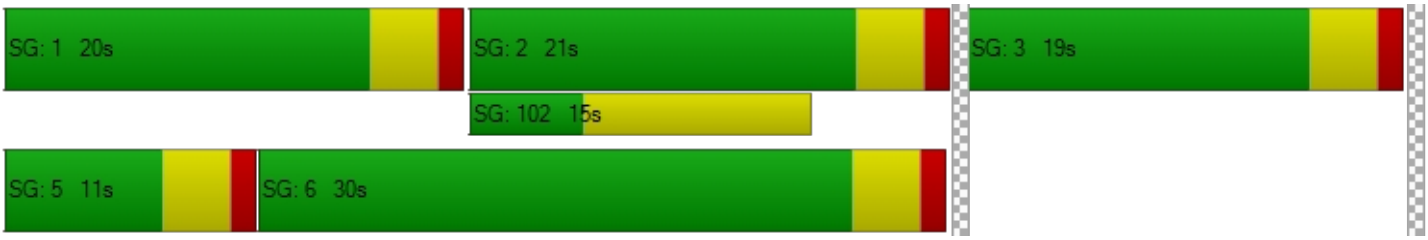
d_M, Delay for Movement [s/veh]	28.32	0.00	18.62	0.00	0.00	0.00	0.00	10.58	10.25	30.18	13.83	0.00
Movement LOS	C		B				A	B	B	C	B	
d_A, Approach Delay [s/veh]	26.58			0.00			10.49			14.48		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	14.75											
Intersection LOS	B											
Intersection V/C	0.759											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.309	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	0	566	866
d_b, Bicycle Delay [s]	16.91	30.04	15.44	9.66
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.564	2.837
Bicycle LOS	A	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 5: Salida Del Sol (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	67.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.140

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	9	0	7	7	979	0	0	768	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	9	0	7	7	979	0	0	768	17
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	2	0	2	2	258	0	0	203	4
Total Analysis Volume [veh/h]	0	0	0	10	0	7	7	1034	0	0	811	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.14	0.00	0.02	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	62.20	49.09	16.86	67.45	55.13	20.64	9.36	0.00	0.00	10.11	0.00	0.00
Movement LOS	F	E	C	F	F	C	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.55	0.55	0.55	0.03	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	13.82	13.82	13.82	0.64	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	42.72			46.97			0.07			0.00		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	0.46											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 6: Elizabeth Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	46.3
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.034

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	3	0	4	3	0	39	46	930	8	0	743	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	0	4	3	0	39	46	930	8	0	743	10
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	1	0	10	12	246	2	0	197	3
Total Analysis Volume [veh/h]	3	0	4	3	0	41	49	985	8	0	787	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.01	0.03	0.00	0.06	0.05	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	46.32	52.65	12.56	38.45	52.44	11.56	9.46	0.00	0.00	9.96	0.00	0.00
Movement LOS	E	F	B	E	F	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.13	0.30	0.30	0.30	0.17	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.21	3.21	3.21	7.41	7.41	7.41	4.27	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	27.03			13.48			0.44			0.00		
Approach LOS	D			B			A			A		
d_I, Intersection Delay [s/veh]	0.67											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 7: Jana Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	29.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.046

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	7	4	929	7	2	740
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	4	929	7	2	740
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	248	2	1	197
Total Analysis Volume [veh/h]	7	4	990	7	2	789
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	29.85	12.65	0.00	0.00	9.96	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	4.25	4.25	0.00	0.00	0.21	0.00
d_A, Approach Delay [s/veh]	23.60		0.00		0.03	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 8: Nutmeg St (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.701

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	175.00	100.00	100.00	50.00	100.00	100.00	180.00	100.00	100.00	225.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	45.00			40.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	37	279	63	28	18	47	680	68	346	677	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	51	37	279	63	28	18	47	680	68	346	677	94
Peak Hour Factor	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	10	74	17	7	5	12	180	18	92	180	25
Total Analysis Volume [veh/h]	54	39	296	67	30	19	50	722	72	367	719	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	22	21	0	20	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20	20	20	20	4	14	14	14	24	24
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.34	0.34	0.06	0.23	0.23	0.22	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.04	0.02	0.18	0.06	0.01	0.01	0.03	0.19	0.04	0.19	0.19	0.06
s, saturation flow rate [veh/h]	1360	1870	1589	1063	1870	1589	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	532	637	541	438	637	541	116	834	372	402	1406	628
d1, Uniform Delay [s]	15.18	13.34	15.86	15.68	13.28	13.23	27.00	21.81	18.43	22.38	13.60	11.71
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	0.17	3.52	0.69	0.13	0.11	2.29	2.05	0.23	5.83	0.26	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	0.06	0.52	0.14	0.04	0.03	0.41	0.82	0.18	0.86	0.48	0.15
d, Delay for Lane Group [s/veh]	15.54	13.52	19.38	16.36	13.41	13.34	29.29	23.86	18.66	28.21	13.86	11.82
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.48	0.31	3.04	0.64	0.24	0.16	0.66	4.11	0.68	4.67	2.78	0.67
50th-Percentile Queue Length [ft/ln]	12.01	7.79	76.12	16.06	6.02	3.92	16.38	102.72	16.96	116.86	69.49	16.79
95th-Percentile Queue Length [veh/ln]	0.86	0.56	5.48	1.16	0.43	0.28	1.18	7.40	1.22	8.22	5.00	1.21
95th-Percentile Queue Length [ft/ln]	21.61	14.01	137.02	28.91	10.83	7.05	29.49	184.90	30.53	205.51	125.09	30.22

Movement, Approach, & Intersection Results

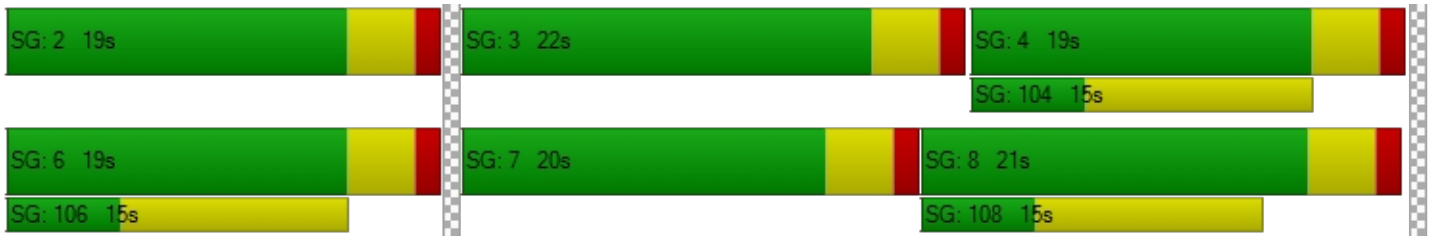
d_M, Delay for Movement [s/veh]	15.54	13.52	19.38	16.36	13.41	13.34	29.29	23.86	18.66	28.21	13.86	11.82
Movement LOS	B	B	B	B	B	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	18.26			15.11			23.74			18.13		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	19.88											
Intersection LOS	B											
Intersection V/C	0.701											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	21.71	0.00	21.71
I_p,int, Pedestrian LOS Score for Intersection	2.408	2.205	0.000	3.045
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	499	566	499
d_b, Bicycle Delay [s]	16.91	16.91	15.44	16.91
I_b,int, Bicycle LOS Score for Intersection	2.165	1.739	2.215	2.481
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Existing Plus Ambient Growth Plus Project

Beyond Food Mart (Clinton Keith & Jana)

Vistro File: G:\...\AME.vistro

Scenario 2 Existing Plus Ambient Growth Plus Project AM Peak Hour

Report File: G:\...\AMEAP.pdf

7/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-15 SB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	SB Right	0.849	20.9	C
2	I-15 NB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.791	16.0	B
3	Wildomar Trail (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.672	18.5	B
4	Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.759	14.1	B
5	Salida Del Sol (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	SB Left	0.350	82.5	F
6	Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	SB Left	0.100	43.6	E
7	Jana Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	2.277	2,797.1	F
8	Nutmeg St (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.735	19.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-15 SB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.849

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	2	0	1	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	680.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	411	4	410	0	937	725	307	807	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0404	1.0404	1.0000	1.0404	1.0404	1.0404	1.0404	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	15	0	0	0	22	0	12	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	443	4	427	0	997	754	331	858	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9710	0.9710	0.9710	1.0000	0.9710	0.9710	0.9710	0.9710	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	114	1	110	0	257	194	85	221	0
Total Analysis Volume [veh/h]	0	0	0	456	4	440	0	1027	777	341	884	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	120	0	0	120	0	120	120	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	50	0	0	19	0	11	30	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	L	C
C, Cycle Length [s]		80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		15	15	15	43	43	10	57
g / C, Green / Cycle		0.18	0.18	0.18	0.54	0.54	0.13	0.72
(v / s)_i Volume / Saturation Flow Rate		0.13	0.13	0.15	0.20	0.47	0.10	0.17
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	3459	5094
c, Capacity [veh/h]		327	328	517	2732	852	450	3649
d1, Uniform Delay [s]		30.51	30.51	31.46	10.71	16.39	33.52	3.88
k, delay calibration		0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		11.59	11.56	15.69	0.08	3.44	2.39	0.03
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.68	0.68	0.83	0.36	0.88	0.74	0.24
d, Delay for Lane Group [s/veh]		42.10	42.07	47.15	10.79	19.83	35.92	3.91
Lane Group LOS		D	D	D	B	B	D	A
Critical Lane Group		No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		4.95	4.95	4.97	3.00	11.16	3.12	1.12
50th-Percentile Queue Length [ft/ln]		123.77	123.75	124.15	74.99	278.90	78.07	27.92
95th-Percentile Queue Length [veh/ln]		8.60	8.60	8.62	5.40	16.63	5.62	2.01
95th-Percentile Queue Length [ft/ln]		214.99	214.97	215.51	134.99	415.84	140.52	50.26

Movement, Approach, & Intersection Results

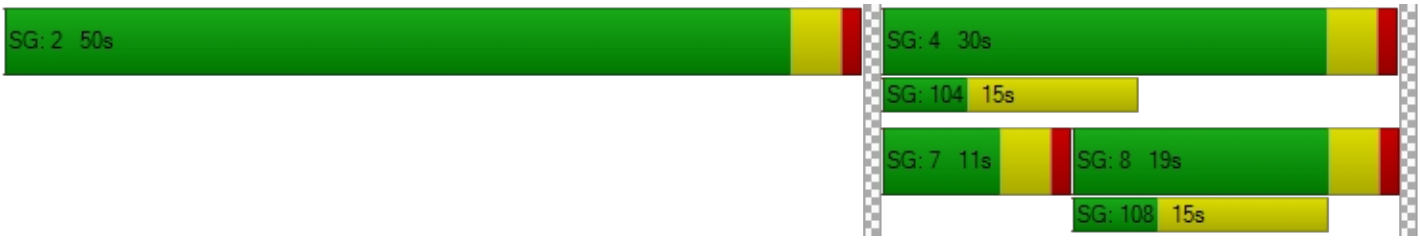
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	42.08	42.07	47.15	0.00	10.79	19.83	35.92	3.91	0.00
Movement LOS				D	D	D		B	B	D	A	
d_A, Approach Delay [s/veh]	0.00			44.56			14.68			12.82		
Approach LOS	A			D			B			B		
d_I, Intersection Delay [s/veh]	20.95											
Intersection LOS	C											
Intersection V/C	0.849											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.54	31.54	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.241	2.466	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1149	375	650
d_b, Bicycle Delay [s]	40.03	7.25	26.44	18.25
I_b,int, Bicycle LOS Score for Intersection	4.132	3.002	2.523	2.214
Bicycle LOS	D	C	B	B

Sequence

Ring 1	2	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: I-15 NB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.791

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	2	0	0	0	0	0
Entry Pocket Length [ft]	650.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	300	2	236	0	0	0	409	939	0	0	814	598
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	37	0	0	30	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	312	2	246	0	0	0	426	1014	0	0	877	634
Peak Hour Factor	0.9600	0.9600	0.9600	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	1.0000	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	1	64	0	0	0	111	264	0	0	228	165
Total Analysis Volume [veh/h]	325	2	256	0	0	0	444	1056	0	0	914	660
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	16	0	0	0	0	16	44	0	0	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13		10	39	26	26
g / C, Green / Cycle	0.21	0.21	0.21		0.16	0.65	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.11		0.12	0.20	0.17	0.40
s, saturation flow rate [veh/h]	1781	1705	1589		3459	5094	5094	1589
c, Capacity [veh/h]	380	363	339		549	3329	2181	681
d1, Uniform Delay [s]	20.89	20.89	20.89		24.23	4.50	11.85	16.33
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.05	5.28	5.68		2.44	0.05	0.12	7.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.52	0.52		0.78	0.30	0.40	0.93
d, Delay for Lane Group [s/veh]	25.93	26.17	26.57		26.67	4.55	11.97	23.65
Lane Group LOS	C	C	C		C	A	B	C
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.79	2.70	2.56		2.84	1.14	2.29	8.15
50th-Percentile Queue Length [ft/ln]	69.80	67.47	63.92		70.96	28.41	57.19	203.63
95th-Percentile Queue Length [veh/ln]	5.03	4.86	4.60		5.11	2.05	4.12	12.83
95th-Percentile Queue Length [ft/ln]	125.65	121.45	115.05		127.73	51.14	102.94	320.65

Movement, Approach, & Intersection Results

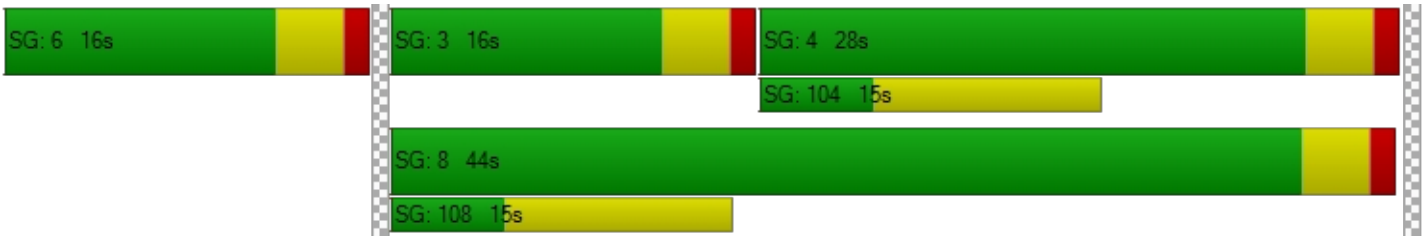
d_M, Delay for Movement [s/veh]	26.03	26.17	26.47	0.00	0.00	0.00	26.67	4.55	0.00	0.00	11.97	23.65
Movement LOS	C	C	C				C	A			B	C
d_A, Approach Delay [s/veh]	26.21			0.00			11.09			16.87		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	15.99											
Intersection LOS	B											
Intersection V/C	0.791											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.248	2.213	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	0	1333	800
d_b, Bicycle Delay [s]	19.21	30.01	3.34	10.81
I_b,int, Bicycle LOS Score for Intersection	2.484	4.132	2.352	2.391
Bicycle LOS	B	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Wildomar Trail (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.672

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	95.00	100.00	100.00	95.00	100.00	100.00	125.00	100.00	100.00	295.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Speed [mph]	25.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	60	36	38	110	27	220	106	889	21	70	911	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	4	0	0	0	37	0	2	42	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	37	43	118	28	229	110	962	22	75	990	44
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	10	11	31	7	61	29	256	6	20	263	12
Total Analysis Volume [veh/h]	66	39	46	126	30	244	117	1023	23	80	1053	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	22	30	0	11	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	21	21	21	21	6	22	22	5	22	22
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.34	0.10	0.37	0.37	0.08	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.06	0.05	0.10	0.02	0.16	0.07	0.20	0.20	0.05	0.31	0.03
s, saturation flow rate [veh/h]	1010	1537	1186	1683	1431	1603	3204	1664	1603	3204	1431
c, Capacity [veh/h]	438	528	467	578	491	162	1190	618	138	1143	510
d1, Uniform Delay [s]	15.04	13.71	16.73	13.22	15.47	26.17	14.93	14.94	26.41	18.06	12.88
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	0.61	1.30	0.16	3.19	5.06	0.39	0.75	3.33	2.19	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.15	0.25	0.05	0.47	0.68	0.54	0.54	0.54	0.87	0.09
d, Delay for Lane Group [s/veh]	15.72	14.32	18.04	13.38	18.66	31.22	15.32	15.69	29.74	20.25	12.95
Lane Group LOS	B	B	B	B	B	C	B	B	C	C	B
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.66	0.79	1.28	0.24	2.52	1.64	3.06	3.24	1.09	5.81	0.36
50th-Percentile Queue Length [ft/ln]	16.55	19.77	31.99	6.07	62.91	40.92	76.45	81.01	27.16	145.21	8.91
95th-Percentile Queue Length [veh/ln]	1.19	1.42	2.30	0.44	4.53	2.95	5.50	5.83	1.96	9.76	0.64
95th-Percentile Queue Length [ft/ln]	29.80	35.59	57.59	10.93	113.23	73.66	137.61	145.82	48.88	244.02	16.03

Movement, Approach, & Intersection Results

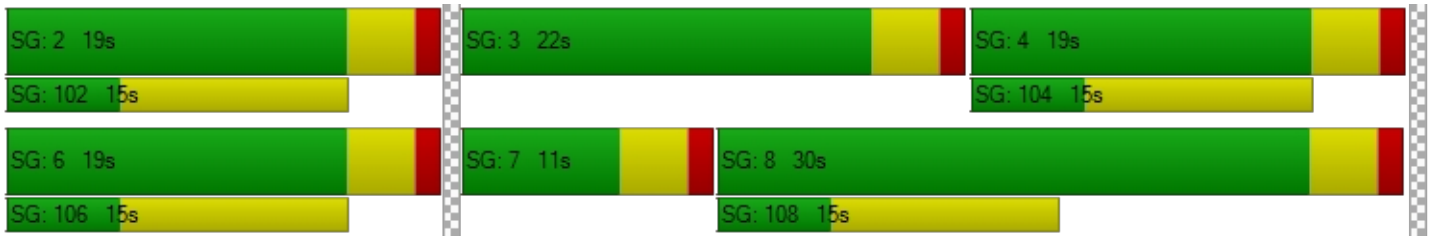
d_M, Delay for Movement [s/veh]	15.72	14.32	14.32	18.04	13.38	18.66	31.22	15.44	15.69	29.74	20.25	12.95
Movement LOS	B	B	B	B	B	B	C	B	B	C	C	B
d_A, Approach Delay [s/veh]	14.93			18.07			17.03			20.60		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.52											
Intersection LOS	B											
Intersection V/C	0.672											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.75	21.75	21.75	21.75
I_p,int, Pedestrian LOS Score for Intersection	1.993	2.296	2.972	3.105
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	499	864	499
d_b, Bicycle Delay [s]	16.95	16.95	9.70	16.95
I_b,int, Bicycle LOS Score for Intersection	1.794	2.178	2.161	2.475
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Inland Valley Dr (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.759

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	300.00	100.00	100.00	210.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	45.00			30.00			35.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	239	0	37	0	0	0	0	611	437	112	795	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0000	1.0404	1.0000	1.0000	1.0000	1.0404	1.0404	1.0404	1.0404	1.0404	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	7	0	0	0	0	44	0	6	48	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	249	0	45	0	0	0	0	680	455	123	875	0
Peak Hour Factor	0.9640	1.0000	0.9640	1.0000	1.0000	1.0000	0.9640	0.9640	0.9640	0.9640	0.9640	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	0	12	0	0	0	0	176	118	32	227	0
Total Analysis Volume [veh/h]	258	0	47	0	0	0	0	705	472	128	908	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	0	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	120	0	0	0	0	0	120	120	0	120	120	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	0	0	0	0	0	11	19	0	26	34	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No						No	No		No	No	
Maximum Recall	No						No	No		No	No	
Pedestrian Recall	No						No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R		L	C	R	L	C
C, Cycle Length [s]	60	60		60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10		0	32	32	6	38
g / C, Green / Cycle	0.17	0.17		0.00	0.53	0.53	0.10	0.63
(v / s)_i Volume / Saturation Flow Rate	0.14	0.03		0.00	0.19	0.29	0.07	0.47
s, saturation flow rate [veh/h]	1781	1589		1781	3560	1589	1781	1870
c, Capacity [veh/h]	303	270		2	1877	838	184	1177
d1, Uniform Delay [s]	24.08	21.32		0.00	8.31	9.42	25.99	7.76
k, delay calibration	0.11	0.11		0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.83	0.29		0.00	0.54	2.54	4.26	4.39
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.17		0.00	0.36	0.54	0.67	0.74
d, Delay for Lane Group [s/veh]	29.91	21.61		0.00	8.85	11.96	30.25	12.15
Lane Group LOS	C	C		A	A	B	C	B
Critical Lane Group	Yes	No		No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.47	0.50		0.00	2.14	3.62	1.73	5.71
50th-Percentile Queue Length [ft/ln]	86.77	12.46		0.00	53.53	90.62	43.14	142.84
95th-Percentile Queue Length [veh/ln]	6.25	0.90		0.00	3.85	6.52	3.11	9.63
95th-Percentile Queue Length [ft/ln]	156.19	22.43		0.00	96.36	163.11	77.64	240.84

Movement, Approach, & Intersection Results

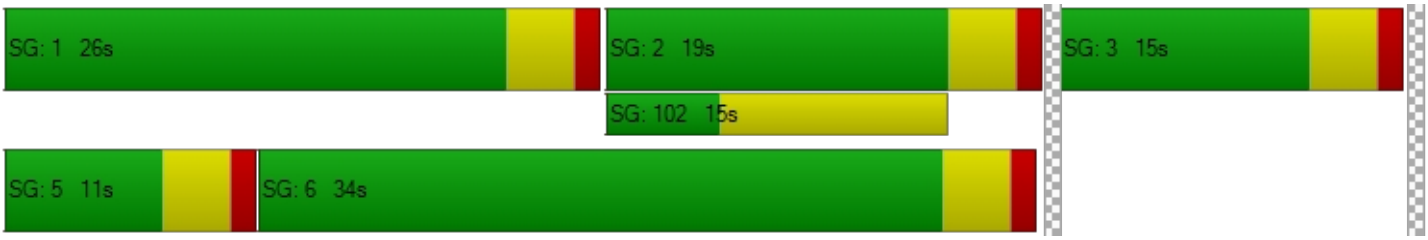
d_M, Delay for Movement [s/veh]	29.91	0.00	21.61	0.00	0.00	0.00	0.00	8.85	11.96	30.25	12.15	0.00
Movement LOS	C		C				A	A	B	C	B	
d_A, Approach Delay [s/veh]	28.64			0.00			10.10			14.38		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	14.10											
Intersection LOS	B											
Intersection V/C	0.759											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.346	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	366	0	499	999
d_b, Bicycle Delay [s]	20.05	30.04	16.91	7.53
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.496	3.206
Bicycle LOS	A	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 5: Salida Del Sol (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	82.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.350

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	17	0	8	10	636	0	0	888	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	6	0	0	0	51	0	0	54	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	24	0	8	10	713	0	0	978	32
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	6	0	2	3	191	0	0	261	9
Total Analysis Volume [veh/h]	0	0	0	26	0	9	11	763	0	0	1046	34
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.35	0.00	0.03	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	59.28	47.20	13.34	82.53	71.31	42.16	10.32	0.00	0.00	9.06	0.00	0.00
Movement LOS	F	E	B	F	F	E	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	1.70	1.70	1.70	0.04	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	42.59	42.59	42.59	1.11	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	39.94			72.44			0.14			0.00		
Approach LOS	E			F			A			A		
d_I, Intersection Delay [s/veh]	1.37											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 6: Elizabeth Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	43.6
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.100

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	4	0	4	6	0	38	18	626	7	5	872	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	4	0	0	0	57	0	0	59	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	0	4	10	0	40	19	708	7	5	966	10
Peak Hour Factor	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	3	0	11	5	191	2	1	260	3
Total Analysis Volume [veh/h]	4	0	4	11	0	43	20	762	8	5	1040	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.01	0.10	0.00	0.08	0.03	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	36.53	48.72	11.40	43.55	50.55	14.54	10.27	0.00	0.00	9.11	0.00	0.00
Movement LOS	E	E	B	E	F	B	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.13	0.64	0.64	0.64	0.08	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.16	3.16	3.16	15.90	15.90	15.90	2.08	0.00	0.00	0.43	0.00	0.00
d_A, Approach Delay [s/veh]	23.97			20.34			0.27			0.05		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.82											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 7: Jana Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	2,797.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	2.277

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	4	637	7	1	878
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	180	136	41	34	188	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	140	704	41	189	913
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	38	190	11	51	246
Total Analysis Volume [veh/h]	198	151	760	44	204	986
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	2.28	0.22	0.01	0.00	0.22	0.01
d_M, Delay for Movement [s/veh]	2797.12	2758.09	0.00	0.00	10.37	0.00
Movement LOS	F	F	A	A	B	A
95th-Percentile Queue Length [veh/ln]	101.69	101.69	0.00	0.00	0.84	0.00
95th-Percentile Queue Length [ft/ln]	2542.21	2542.21	0.00	0.00	21.11	0.00
d_A, Approach Delay [s/veh]	2780.20		0.00		1.78	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	414.73					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Nutmeg St (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.735

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	175.00	100.00	100.00	50.00	100.00	100.00	180.00	100.00	100.00	225.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	45.00			40.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	112	30	275	100	62	32	34	621	96	380	703	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	0	0	0	0	7	6	18	6	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	124	31	286	104	65	40	41	664	106	395	753	73
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	8	73	27	17	10	11	170	27	101	193	19
Total Analysis Volume [veh/h]	127	32	293	107	67	41	42	681	109	405	772	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	20	19	0	22	21	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19	19	19	19	4	14	14	15	25	25
g / C, Green / Cycle	0.32	0.32	0.32	0.32	0.32	0.32	0.06	0.23	0.23	0.25	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.10	0.02	0.18	0.10	0.03	0.03	0.02	0.19	0.07	0.22	0.21	0.05
s, saturation flow rate [veh/h]	1289	1870	1589	1062	1870	1589	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	468	598	508	420	598	508	106	809	361	452	1500	670
d1, Uniform Delay [s]	17.72	14.16	16.98	17.14	14.42	14.28	27.23	22.08	19.25	21.52	12.77	10.55
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.38	0.16	4.54	1.41	0.37	0.30	2.32	2.19	0.45	5.83	0.26	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.05	0.56	0.25	0.11	0.08	0.39	0.82	0.29	0.87	0.50	0.11
d, Delay for Lane Group [s/veh]	19.10	14.32	21.51	18.55	14.79	14.58	29.55	24.28	19.70	27.35	13.03	10.62
Lane Group LOS	B	B	C	B	B	B	C	C	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.36	0.27	3.36	1.16	0.60	0.37	0.58	4.05	1.10	5.25	2.96	0.48
50th-Percentile Queue Length [ft/ln]	34.05	6.82	83.94	28.98	15.02	9.29	14.44	101.24	27.58	131.26	73.92	11.96
95th-Percentile Queue Length [veh/ln]	2.45	0.49	6.04	2.09	1.08	0.67	1.04	7.29	1.99	9.01	5.32	0.86
95th-Percentile Queue Length [ft/ln]	61.29	12.28	151.08	52.17	27.04	16.73	26.00	182.23	49.65	225.21	133.05	21.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.10	14.32	21.51	18.55	14.79	14.58	29.55	24.28	19.70	27.35	13.03	10.62
Movement LOS	B	B	C	B	B	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	20.33			16.62			23.94			17.52		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	19.85											
Intersection LOS	B											
Intersection V/C	0.735											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	21.71	0.00	21.71
I_p,int, Pedestrian LOS Score for Intersection	2.480	2.227	0.000	3.136
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	499	499	566
d_b, Bicycle Delay [s]	16.91	16.91	16.91	15.44
I_b,int, Bicycle LOS Score for Intersection	2.287	1.904	2.229	2.567
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Beyond Food Mart (Clinton Keith & Jana)

Vistro File: G:\...\PME.vistro

Scenario 2 Existing Plus Ambient Growth Plus Project PM Peak Hour

Report File: G:\...\PMEAP.pdf

7/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-15 SB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	SB Left	0.730	15.6	B
2	I-15 NB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	NB Right	0.836	17.8	B
3	Wildomar Trail (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.663	19.1	B
4	Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.827	16.5	B
5	Salida Del Sol (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	SB Left	0.293	104.2	F
6	Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.044	58.9	F
7	Jana Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	2.960	4,101.2	F
8	Nutmeg St (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.736	20.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-15 SB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.730

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	2	0	1	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	680.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	523	1	394	0	1004	519	279	1092	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0404	1.0404	1.0000	1.0404	1.0404	1.0404	1.0404	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	13	0	0	0	19	0	14	21	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	557	1	410	0	1064	540	304	1157	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9490	0.9490	0.9490	1.0000	0.9490	0.9490	0.9490	0.9490	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	147	0	108	0	280	142	80	305	0
Total Analysis Volume [veh/h]	0	0	0	587	1	432	0	1121	569	320	1219	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	120	0	0	120	0	120	120	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	30	0	0	19	0	11	30	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	L	C
C, Cycle Length [s]		60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		14	14	14	26	26	8	38
g / C, Green / Cycle		0.24	0.24	0.24	0.43	0.43	0.13	0.63
(v / s)_i Volume / Saturation Flow Rate		0.16	0.16	0.15	0.21	0.34	0.09	0.23
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	3459	5094
c, Capacity [veh/h]		419	420	663	2204	688	457	3216
d1, Uniform Delay [s]		20.83	20.83	20.56	12.23	14.65	24.82	5.28
k, delay calibration		0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		8.40	8.40	4.38	0.16	2.06	1.69	0.07
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.67	0.66	0.62	0.48	0.79	0.67	0.36
d, Delay for Lane Group [s/veh]		29.23	29.23	24.94	12.39	16.71	26.51	5.35
Lane Group LOS		C	C	C	B	B	C	A
Critical Lane Group		Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		4.24	4.24	2.77	2.89	5.60	2.00	1.55
50th-Percentile Queue Length [ft/ln]		105.98	105.96	69.19	72.14	139.89	50.07	38.63
95th-Percentile Queue Length [veh/ln]		7.62	7.61	4.98	5.19	9.48	3.61	2.78
95th-Percentile Queue Length [ft/ln]		190.39	190.37	124.55	129.86	236.88	90.13	69.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	29.23	29.23	24.94	0.00	12.39	16.71	26.51	5.35	0.00
Movement LOS				C	C	C		B	B	C	A	
d_A, Approach Delay [s/veh]	0.00			27.41			13.84			9.75		
Approach LOS	A			C			B			A		
d_I, Intersection Delay [s/veh]	15.62											
Intersection LOS	B											
Intersection V/C	0.730											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.70	21.70	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.108	2.469	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	866	500	866
d_b, Bicycle Delay [s]	30.03	9.66	16.90	9.66
I_b,int, Bicycle LOS Score for Intersection	4.132	3.157	2.442	2.363
Bicycle LOS	D	C	B	B

Sequence

Ring 1	2	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: I-15 NB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.836

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	2	0	0	0	0	0
Entry Pocket Length [ft]	650.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	538	0	364	0	0	0	353	1174	0	0	839	549
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	32	0	0	35	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	560	0	379	0	0	0	367	1253	0	0	908	585
Peak Hour Factor	0.9620	0.9620	0.9620	1.0000	1.0000	1.0000	0.9620	0.9620	1.0000	1.0000	0.9620	0.9620
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	146	0	98	0	0	0	95	326	0	0	236	152
Total Analysis Volume [veh/h]	582	0	394	0	0	0	381	1302	0	0	944	608
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	12	40	0	0	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	16	16		8	36	24	24
g / C, Green / Cycle	0.27	0.27	0.27		0.13	0.59	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.19		0.11	0.25	0.18	0.37
s, saturation flow rate [veh/h]	1781	1735	1589		3459	5094	5094	1589
c, Capacity [veh/h]	487	475	435		462	3022	2002	625
d1, Uniform Delay [s]	19.26	19.35	19.69		25.22	6.59	13.47	17.51
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.69	7.32	10.06		3.22	0.09	0.16	8.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.66	0.71		0.79	0.41	0.45	0.94
d, Delay for Lane Group [s/veh]	25.95	26.67	29.75		28.44	6.68	13.63	26.06
Lane Group LOS	C	C	C		C	A	B	C
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.45	4.51	4.77		2.53	2.05	2.61	7.96
50th-Percentile Queue Length [ft/ln]	111.14	112.72	119.36		63.36	51.31	65.17	198.98
95th-Percentile Queue Length [veh/ln]	7.90	7.99	8.36		4.56	3.69	4.69	12.59
95th-Percentile Queue Length [ft/ln]	197.58	199.78	208.94		114.06	92.36	117.31	314.65

Movement, Approach, & Intersection Results

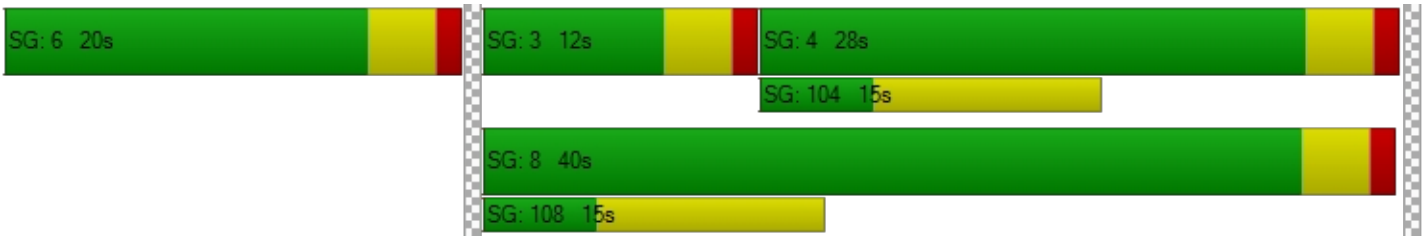
d_M, Delay for Movement [s/veh]	26.26	26.67	29.20	0.00	0.00	0.00	28.44	6.68	0.00	0.00	13.63	26.06
Movement LOS	C	C	C				C	A			B	C
d_A, Approach Delay [s/veh]	27.44			0.00			11.61			18.50		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	17.82											
Intersection LOS	B											
Intersection V/C	0.836											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.69	21.69	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.341	2.160	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	0	1199	799
d_b, Bicycle Delay [s]	16.15	30.02	4.81	10.82
I_b,int, Bicycle LOS Score for Intersection	3.109	4.132	2.451	2.381
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Wildomar Trail (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.663

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	95.00	100.00	100.00	95.00	100.00	100.00	125.00	100.00	100.00	295.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Speed [mph]	25.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	37	79	90	38	111	182	1072	28	109	958	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	4	0	0	0	32	0	3	49	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	38	85	98	40	115	189	1147	29	116	1046	51
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	10	23	26	11	30	50	304	8	31	277	14
Total Analysis Volume [veh/h]	50	40	90	104	42	122	200	1216	31	123	1109	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	16	19	0	22	25	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17	17	17	17	17	9	25	25	6	22	22
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.29	0.14	0.41	0.41	0.10	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08	0.09	0.02	0.08	0.12	0.24	0.24	0.07	0.33	0.04
s, saturation flow rate [veh/h]	1108	1500	1141	1683	1431	1603	3204	1662	1603	3204	1431
c, Capacity [veh/h]	399	437	356	490	417	231	1309	679	161	1168	522
d1, Uniform Delay [s]	17.56	16.44	20.67	15.46	16.41	24.93	13.86	13.86	26.19	18.00	12.57
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	1.61	1.92	0.33	1.65	7.31	0.43	0.83	6.10	2.80	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.12	0.28	0.28	0.08	0.28	0.82	0.59	0.59	0.72	0.90	0.10
d, Delay for Lane Group [s/veh]	18.17	18.05	22.59	15.78	18.06	32.24	14.29	14.69	32.30	20.80	12.65
Lane Group LOS	B	B	C	B	B	C	B	B	C	C	B
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.55	1.42	1.25	0.39	1.25	2.86	3.52	3.73	1.76	6.25	0.41
50th-Percentile Queue Length [ft/ln]	13.73	35.62	31.28	9.81	31.31	71.57	87.99	93.15	44.02	156.35	10.17
95th-Percentile Queue Length [veh/ln]	0.99	2.56	2.25	0.71	2.25	5.15	6.34	6.71	3.17	10.36	0.73
95th-Percentile Queue Length [ft/ln]	24.72	64.12	56.30	17.66	56.37	128.83	158.38	167.67	79.24	258.88	18.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.17	18.05	18.05	22.59	15.78	18.06	32.24	14.42	14.69	32.30	20.80	12.65
Movement LOS	B	B	B	C	B	B	C	B	B	C	C	B
d_A, Approach Delay [s/veh]	18.08			19.45			16.90			21.56		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	19.06											
Intersection LOS	B											
Intersection V/C	0.663											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.69	21.69	21.69	21.69
I_p,int, Pedestrian LOS Score for Intersection	2.017	2.284	2.988	3.127
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	500	500	700
d_b, Bicycle Delay [s]	16.89	16.89	16.89	12.69
I_b,int, Bicycle LOS Score for Intersection	1.840	1.977	2.310	2.560
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Inland Valley Dr (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.827

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	300.00	100.00	100.00	210.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	45.00			30.00			35.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	374	0	82	0	0	0	0	907	310	31	743	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0000	1.0404	1.0000	1.0000	1.0000	1.0404	1.0404	1.0404	1.0404	1.0404	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	0	0	0	0	39	0	7	56	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	389	0	91	0	0	0	0	983	323	39	829	0
Peak Hour Factor	0.9650	1.0000	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650	0.9650	0.9650	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	0	24	0	0	0	0	255	84	10	215	0
Total Analysis Volume [veh/h]	403	0	94	0	0	0	0	1019	335	40	859	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	0	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	120	0	0	0	0	0	120	120	0	120	120	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	0	0	0	0	0	11	21	0	20	30	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No						No	No		No	No	
Maximum Recall	No						No	No		No	No	
Pedestrian Recall	No						No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R		L	C	R	L	C
C, Cycle Length [s]	60	60		60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	15		0	30	30	3	33
g / C, Green / Cycle	0.25	0.25		0.00	0.50	0.50	0.06	0.55
(v / s)_i Volume / Saturation Flow Rate	0.22	0.06		0.00	0.28	0.20	0.02	0.44
s, saturation flow rate [veh/h]	1781	1589		1781	3560	1589	1781	1870
c, Capacity [veh/h]	439	392		2	1768	789	102	1034
d1, Uniform Delay [s]	21.84	18.11		0.00	10.53	9.57	27.32	10.80
k, delay calibration	0.11	0.11		0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.65	0.30		0.00	1.27	1.58	2.34	6.91
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.23		0.00	0.56	0.41	0.38	0.80
d, Delay for Lane Group [s/veh]	28.49	18.41		0.00	11.81	11.15	29.65	17.71
Lane Group LOS	C	B		A	B	B	C	B
Critical Lane Group	Yes	No		No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.30	0.90		0.00	3.89	2.48	0.55	7.76
50th-Percentile Queue Length [ft/ln]	132.49	22.58		0.00	97.31	62.08	13.80	194.08
95th-Percentile Queue Length [veh/ln]	9.08	1.63		0.00	7.01	4.47	0.99	12.33
95th-Percentile Queue Length [ft/ln]	226.88	40.64		0.00	175.16	111.75	24.84	308.32

Movement, Approach, & Intersection Results

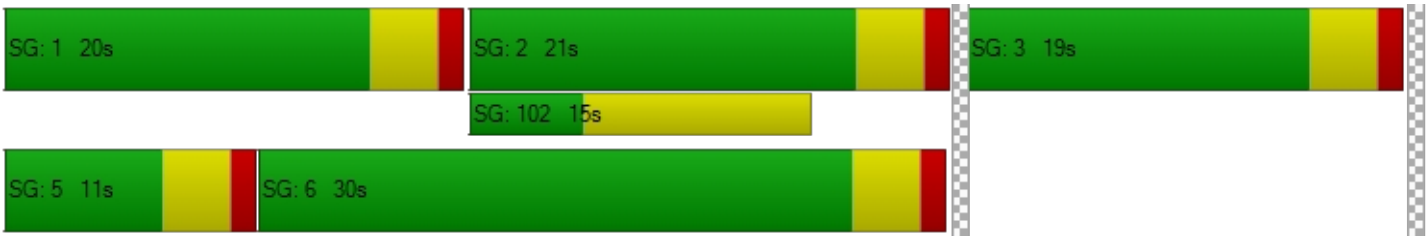
d_M, Delay for Movement [s/veh]	28.49	0.00	18.41	0.00	0.00	0.00	0.00	11.81	11.15	29.65	17.71	0.00
Movement LOS	C		B				A	B	B	C	B	
d_A, Approach Delay [s/veh]	26.58			0.00			11.65			18.24		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	16.50											
Intersection LOS	B											
Intersection V/C	0.827											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.331	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	0	566	866
d_b, Bicycle Delay [s]	16.91	30.04	15.44	9.66
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.637	2.992
Bicycle LOS	A	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 5: Salida Del Sol (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	104.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.293

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	9	0	7	7	979	0	0	768	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	0	0	0	45	0	0	63	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	14	0	7	7	1064	0	0	862	24
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	4	0	2	2	281	0	0	228	6
Total Analysis Volume [veh/h]	0	0	0	15	0	7	7	1124	0	0	910	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.29	0.00	0.02	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	82.26	62.61	18.29	104.23	85.57	39.26	9.76	0.00	0.00	10.50	0.00	0.00
Movement LOS	F	F	C	F	F	E	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	1.29	1.29	1.29	0.03	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	32.33	32.33	32.33	0.69	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	54.39			82.57			0.06			0.00		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	0.91											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 6: Elizabeth Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	58.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.044

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	3	0	4	3	0	39	46	930	8	0	743	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	4	0	0	0	50	0	0	69	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	0	4	7	0	41	48	1018	8	0	842	14
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	2	0	11	13	270	2	0	223	4
Total Analysis Volume [veh/h]	3	0	4	7	0	43	51	1078	8	0	892	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.01	0.08	0.00	0.07	0.06	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	58.88	68.85	13.55	49.65	69.23	13.36	9.92	0.00	0.00	10.35	0.00	0.00
Movement LOS	F	F	B	E	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.16	0.16	0.16	0.54	0.54	0.54	0.20	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.07	4.07	4.07	13.60	13.60	13.60	4.92	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	32.98			18.65			0.44			0.00		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	0.81											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 7: Jana Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	4,101.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	2.960

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	7	4	929	7	2	740
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	170	122	40	29	159	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	177	126	1007	36	161	770
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	34	268	10	43	205
Total Analysis Volume [veh/h]	189	134	1074	38	172	821
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	2.96	0.25	0.01	0.00	0.24	0.01
d_M, Delay for Movement [s/veh]	4101.20	4048.21	0.00	0.00	12.18	0.00
Movement LOS	F	F	A	A	B	A
95th-Percentile Queue Length [veh/ln]	108.52	108.52	0.00	0.00	0.96	0.00
95th-Percentile Queue Length [ft/ln]	2712.98	2712.98	0.00	0.00	23.98	0.00
d_A, Approach Delay [s/veh]	4079.17		0.00		2.11	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	543.67					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Nutmeg St (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	20.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.736

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	175.00	100.00	100.00	50.00	100.00	100.00	180.00	100.00	100.00	225.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	45.00			40.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	37	279	63	28	18	47	680	68	346	677	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	0	0	6	7	21	7	0	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	38	290	66	29	25	56	728	78	360	723	98
Peak Hour Factor	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	10	77	18	8	7	15	193	21	96	192	26
Total Analysis Volume [veh/h]	63	40	308	70	31	27	59	773	83	382	768	104
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	22	19	0	22	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19	19	19	19	4	15	15	14	25	25
g / C, Green / Cycle	0.32	0.32	0.32	0.32	0.32	0.32	0.07	0.25	0.25	0.23	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.04	0.02	0.18	0.06	0.02	0.02	0.03	0.20	0.05	0.20	0.20	0.06
s, saturation flow rate [veh/h]	1350	1870	1589	1052	1870	1589	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	507	599	509	418	599	509	129	872	389	419	1451	648
d1, Uniform Delay [s]	16.00	14.18	16.99	16.47	14.11	14.11	26.72	21.56	18.04	22.05	13.25	11.25
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	0.20	4.64	0.81	0.15	0.18	2.30	2.24	0.25	5.56	0.27	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.12	0.06	0.57	0.16	0.05	0.05	0.43	0.84	0.20	0.86	0.50	0.15
d, Delay for Lane Group [s/veh]	16.47	14.38	21.63	17.28	14.26	14.29	29.02	23.80	18.29	27.61	13.51	11.36
Lane Group LOS	B	B	C	B	B	B	C	C	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.58	0.34	3.42	0.70	0.26	0.23	0.77	4.40	0.77	4.80	2.91	0.68
50th-Percentile Queue Length [ft/ln]	14.52	8.39	85.45	17.53	6.54	5.73	19.30	109.94	19.17	120.09	72.82	16.94
95th-Percentile Queue Length [veh/ln]	1.05	0.60	6.15	1.26	0.47	0.41	1.39	7.84	1.38	8.40	5.24	1.22
95th-Percentile Queue Length [ft/ln]	26.14	15.11	153.81	31.56	11.76	10.32	34.75	195.92	34.50	209.95	131.08	30.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.47	14.38	21.63	17.28	14.26	14.29	29.02	23.80	18.29	27.61	13.51	11.36
Movement LOS	B	B	C	B	B	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	20.13			15.93			23.64			17.63		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	19.96											
Intersection LOS	B											
Intersection V/C	0.736											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	21.71	0.00	21.71
I_p,int, Pedestrian LOS Score for Intersection	2.424	2.213	0.000	3.080
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	499	499	499
d_b, Bicycle Delay [s]	16.91	16.91	16.91	16.91
I_b,int, Bicycle LOS Score for Intersection	2.198	1.758	2.271	2.534
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Beyond Food Mart (Clinton Keith & Jana)

Vistro File: G:\...\AME.vistro

Scenario 3 Existing Plus Ambient Growth Plus Project AM Peak Hour - With Improvements

Report File: G:\...\AMEAPI.pdf

7/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
7	Jana Ln (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.515	11.6	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 7: Jana Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.515

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	4	637	7	1	878
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	180	136	41	34	188	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	140	704	41	189	913
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	38	190	11	51	246
Total Analysis Volume [veh/h]	198	151	760	44	204	986
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	13	0	19	0	28	47
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	32	32	8	44
g / C, Green / Cycle	0.13	0.13	0.53	0.53	0.14	0.73
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.20	0.20	0.11	0.26
s, saturation flow rate [veh/h]	1781	1589	1870	1834	1781	3560
c, Capacity [veh/h]	241	215	987	968	245	2606
d1, Uniform Delay [s]	25.07	24.67	8.37	8.42	25.03	2.91
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.06	3.37	1.10	1.16	5.29	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.65	0.38	0.38	0.77	0.35
d, Delay for Lane Group [s/veh]	30.13	28.03	9.48	9.58	30.32	3.28
Lane Group LOS	C	C	A	A	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.74	2.01	2.30	2.32	2.65	0.69
50th-Percentile Queue Length [ft/ln]	68.56	50.26	57.48	57.96	66.32	17.20
95th-Percentile Queue Length [veh/ln]	4.94	3.62	4.14	4.17	4.78	1.24
95th-Percentile Queue Length [ft/ln]	123.40	90.47	103.46	104.33	119.38	30.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.13	28.03	9.53	9.58	30.32	3.28
Movement LOS	C	C	A	A	C	A
d_A, Approach Delay [s/veh]	29.22		9.53		7.92	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	11.64					
Intersection LOS	B					
Intersection V/C	0.515					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.071	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	499	1432
d_b, Bicycle Delay [s]	21.71	16.91	2.43
I_b,int, Bicycle LOS Score for Intersection	1.560	2.174	2.469
Bicycle LOS	A	B	B

Sequence

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

Beyond Food Mart (Clinton Keith & Jana)

Vistro File: G:\...\PME.vistro

Scenario 3 Existing Plus Ambient Growth Plus Project PM Peak Hour - With Improvements

Report File: G:\...\PMEAPI.pdf

7/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
7	Jana Ln (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.590	11.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 7: Jana Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.590

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	7	4	929	7	2	740
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	170	122	40	29	159	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	177	126	1007	36	161	770
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	34	268	10	43	205
Total Analysis Volume [veh/h]	189	134	1074	38	172	821
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	12	0	19	0	29	48
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	33	33	7	44
g / C, Green / Cycle	0.13	0.13	0.55	0.55	0.12	0.74
(v / s)_i Volume / Saturation Flow Rate	0.10	0.08	0.28	0.28	0.09	0.22
s, saturation flow rate [veh/h]	1781	1589	1870	1847	1781	3560
c, Capacity [veh/h]	232	207	1030	1018	212	2623
d1, Uniform Delay [s]	25.26	24.71	8.41	8.45	25.65	2.66
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.31	2.90	1.79	1.85	5.66	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.61	0.51	0.51	0.76	0.29
d, Delay for Lane Group [s/veh]	30.57	27.61	10.20	10.31	31.31	2.95
Lane Group LOS	C	C	B	B	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.67	1.79	3.34	3.36	2.31	0.51
50th-Percentile Queue Length [ft/ln]	66.86	44.77	83.44	84.09	57.68	12.69
95th-Percentile Queue Length [veh/ln]	4.81	3.22	6.01	6.05	4.15	0.91
95th-Percentile Queue Length [ft/ln]	120.35	80.58	150.20	151.37	103.82	22.84

Movement, Approach, & Intersection Results

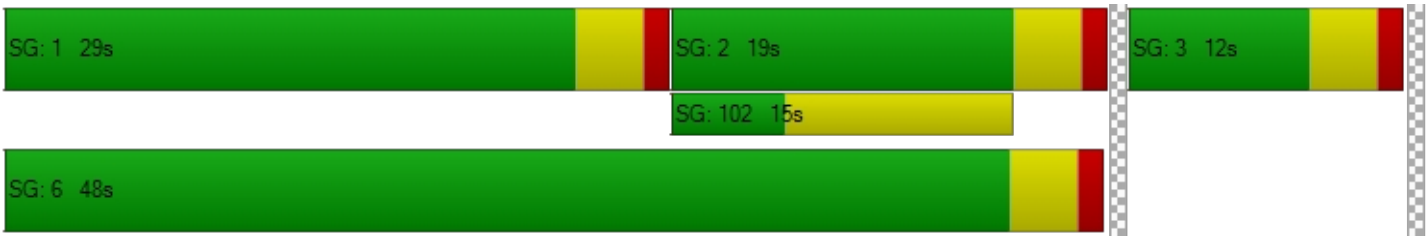
d_M, Delay for Movement [s/veh]	30.57	27.61	10.25	10.31	31.31	2.95
Movement LOS	C	C	B	B	C	A
d_A, Approach Delay [s/veh]	29.34		10.25		7.85	
Approach LOS	C		B		A	
d_I, Intersection Delay [s/veh]	11.81					
Intersection LOS	B					
Intersection V/C	0.590					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.056	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	266	499	1465
d_b, Bicycle Delay [s]	22.57	16.91	2.15
I_b,int, Bicycle LOS Score for Intersection	1.560	2.420	2.328
Bicycle LOS	A	B	B

Sequence

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



Existing Plus Ambient Growth Plus Project Plus Cumulative

Beyond Food Mart (Clinton Keith & Jana)

Vistro File: G:\...\AME.vistro

Scenario 4 Existing Plus Ambient Growth Plus Project Plus Cumulative AM Peak Hour

Report File: G:\...\AMEAPC.pdf

7/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-15 SB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	SB Left	0.913	42.2	D
2	I-15 NB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	NB Right	0.901	18.7	B
3	Wildomar Trail (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.854	21.1	C
4	Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.884	21.2	C
5	Salida Del Sol (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	1.636	1,765.8	F
6	Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.974	424.8	F
7	Jana Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	3.678	5,415.8	F
8	Nutmeg St (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.757	20.1	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-15 SB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	42.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.913

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	2	0	1	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	680.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	411	4	410	0	937	725	307	807	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0404	1.0404	1.0000	1.0404	1.0404	1.0404	1.0404	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	232	0	46	0	241	31	169	156	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	660	4	473	0	1216	785	488	996	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9710	0.9710	0.9710	1.0000	0.9710	0.9710	0.9710	0.9710	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	170	1	122	0	313	202	126	256	0
Total Analysis Volume [veh/h]	0	0	0	680	4	487	0	1252	808	503	1026	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	120	0	0	120	0	120	120	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	89	0	0	20	0	11	31	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	L	C
C, Cycle Length [s]		120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		23	23	23	65	65	20	89
g / C, Green / Cycle		0.19	0.19	0.19	0.54	0.54	0.17	0.74
(v / s)_i Volume / Saturation Flow Rate		0.19	0.19	0.17	0.24	0.49	0.14	0.20
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	3459	5094
c, Capacity [veh/h]		337	337	533	2773	865	575	3790
d1, Uniform Delay [s]		48.50	48.49	47.43	16.37	24.62	48.58	4.89
k, delay calibration		0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		84.58	84.09	23.99	0.11	4.28	3.73	0.04
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.98	0.98	0.89	0.44	0.91	0.85	0.26
d, Delay for Lane Group [s/veh]		133.08	132.58	71.42	16.48	28.90	52.30	4.92
Lane Group LOS		F	F	E	B	C	D	A
Critical Lane Group		Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		17.77	17.73	8.64	6.46	19.77	7.31	2.26
50th-Percentile Queue Length [ft/ln]		444.26	443.19	215.91	161.56	494.30	182.81	56.38
95th-Percentile Queue Length [veh/ln]		24.68	24.63	13.46	10.63	27.06	11.75	4.06
95th-Percentile Queue Length [ft/ln]		617.09	615.81	336.40	265.78	676.61	293.68	101.48

Movement, Approach, & Intersection Results

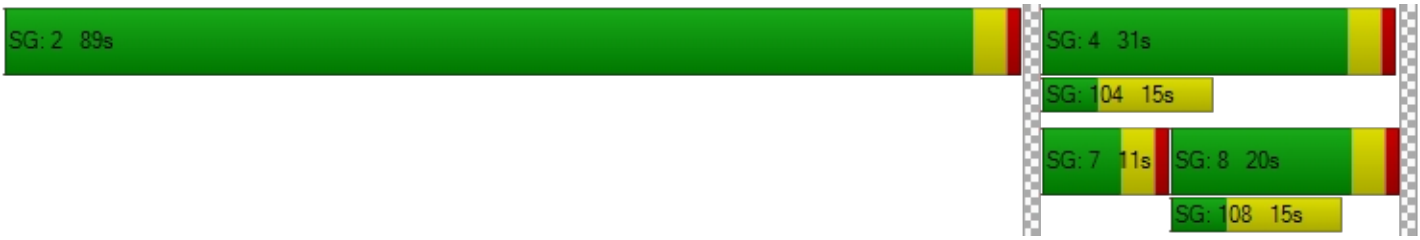
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	132.83	132.58	71.42	0.00	16.48	28.90	52.30	4.92	0.00
Movement LOS				F	F	E		B	C	D	A	
d_A, Approach Delay [s/veh]	0.00			107.28			21.35			20.50		
Approach LOS	A			F			C			C		
d_I, Intersection Delay [s/veh]	42.22											
Intersection LOS	D											
Intersection V/C	0.913											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.353	2.537	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1416	267	450
d_b, Bicycle Delay [s]	60.02	5.11	45.08	36.05
I_b,int, Bicycle LOS Score for Intersection	4.132	3.436	2.660	2.376
Bicycle LOS	D	C	B	B

Sequence

Ring 1	2	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: I-15 NB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.901

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	2	0	0	0	0	0
Entry Pocket Length [ft]	650.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	300	2	236	0	0	0	409	939	0	0	814	598
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	47	426	0	0	325	172
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	312	2	246	0	0	0	473	1403	0	0	1172	794
Peak Hour Factor	0.9600	0.9600	0.9600	1.0000	1.0000	1.0000	0.9600	0.9600	1.0000	1.0000	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	1	64	0	0	0	123	365	0	0	305	207
Total Analysis Volume [veh/h]	325	2	256	0	0	0	493	1461	0	0	1221	827
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	15	0	0	0	0	15	55	0	0	40	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	70	70	70		70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	11	11		11	51	36	36
g / C, Green / Cycle	0.16	0.16	0.16		0.16	0.73	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.11		0.14	0.28	0.23	0.50
s, saturation flow rate [veh/h]	1781	1705	1589		3459	5094	5094	1589
c, Capacity [veh/h]	284	272	254		544	3699	2607	813
d1, Uniform Delay [s]	27.80	27.80	27.80		28.81	3.62	10.84	16.68
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.79	14.43	15.52		4.68	0.06	0.12	14.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.69	0.69		0.87	0.38	0.45	0.98
d, Delay for Lane Group [s/veh]	41.58	42.23	43.32		33.49	3.69	10.96	31.24
Lane Group LOS	D	D	D		C	A	B	C
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.06	3.94	3.76		3.99	1.44	3.26	13.38
50th-Percentile Queue Length [ft/ln]	101.58	98.53	93.88		99.80	35.95	81.44	334.61
95th-Percentile Queue Length [veh/ln]	7.31	7.09	6.76		7.19	2.59	5.86	19.38
95th-Percentile Queue Length [ft/ln]	182.85	177.36	168.99		179.65	64.71	146.60	484.61

Movement, Approach, & Intersection Results

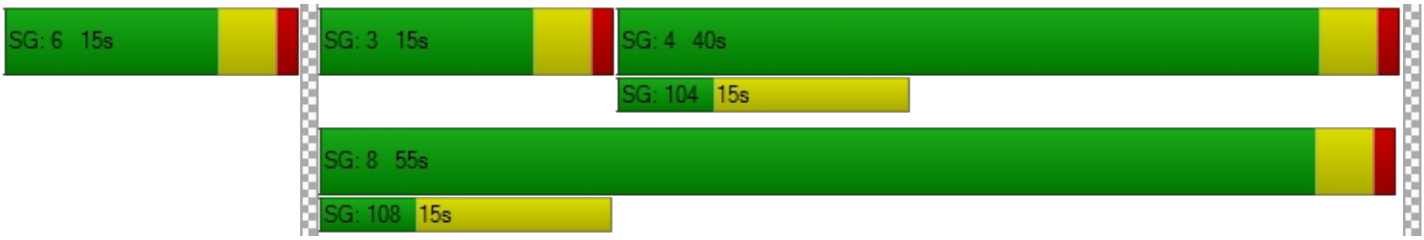
d_M, Delay for Movement [s/veh]	41.84	42.23	43.04	0.00	0.00	0.00	33.49	3.69	0.00	0.00	10.96	31.24
Movement LOS	D	D	D				C	A			B	C
d_A, Approach Delay [s/veh]	42.34			0.00			11.20			19.15		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	18.71											
Intersection LOS	B											
Intersection V/C	0.901											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.59	26.59	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.256	2.322	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	314	0	1457	1028
d_b, Bicycle Delay [s]	24.87	35.01	2.58	8.26
I_b,int, Bicycle LOS Score for Intersection	2.484	4.132	2.591	2.641
Bicycle LOS	B	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Wildomar Trail (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.854

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	95.00	100.00	100.00	95.00	100.00	100.00	125.00	100.00	100.00	295.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Speed [mph]	25.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	60	36	38	110	27	220	106	889	21	70	911	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	85	0	22	72	0	86	41	259	74	31	235	60
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	37	62	186	28	315	151	1184	96	104	1183	100
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	10	16	49	7	84	40	315	26	28	315	27
Total Analysis Volume [veh/h]	156	39	66	198	30	335	161	1260	102	111	1259	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	21	0	0	21	0	20	28	0	11	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17	17	17	17	17	7	25	25	6	24	24
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.29	0.12	0.41	0.41	0.10	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.16	0.07	0.16	0.02	0.22	0.09	0.27	0.27	0.06	0.37	0.07
s, saturation flow rate [veh/h]	934	1515	1166	1683	1431	1603	3204	1619	1603	3204	1431
c, Capacity [veh/h]	358	440	375	489	415	190	1324	669	155	1254	560
d1, Uniform Delay [s]	19.77	16.17	21.82	15.37	19.38	25.76	14.07	14.07	26.21	17.63	11.96
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.49	1.19	4.71	0.22	13.19	7.83	0.53	1.04	5.13	4.92	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.22	0.50	0.06	0.76	0.80	0.64	0.64	0.67	0.94	0.18
d, Delay for Lane Group [s/veh]	23.27	17.36	26.53	15.60	32.58	33.59	14.59	15.11	31.33	22.55	12.11
Lane Group LOS	C	B	C	B	C	C	B	B	C	C	B
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.05	1.12	2.64	0.27	4.96	2.34	3.94	4.08	1.55	7.43	0.78
50th-Percentile Queue Length [ft/ln]	51.37	27.98	66.02	6.82	124.07	58.62	98.56	101.99	38.75	185.74	19.43
95th-Percentile Queue Length [veh/ln]	3.70	2.01	4.75	0.49	8.62	4.22	7.10	7.34	2.79	11.90	1.40
95th-Percentile Queue Length [ft/ln]	92.46	50.36	118.83	12.28	215.41	105.52	177.40	183.59	69.74	297.49	34.97

Movement, Approach, & Intersection Results

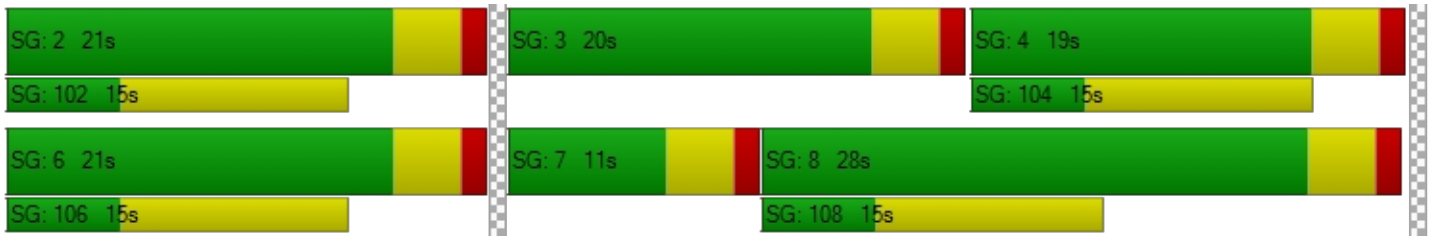
d_M, Delay for Movement [s/veh]	23.27	17.36	17.36	26.53	15.60	32.58	33.59	14.74	15.11	31.33	22.55	12.11
Movement LOS	C	B	B	C	B	C	C	B	B	C	C	B
d_A, Approach Delay [s/veh]	20.89			29.55			16.75			22.46		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	21.12											
Intersection LOS	C											
Intersection V/C	0.854											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	2.049	2.377	3.226	3.297
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	566	566	800	500
d_b, Bicycle Delay [s]	15.42	15.42	10.81	16.88
I_b,int, Bicycle LOS Score for Intersection	1.966	2.432	2.347	2.704
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Inland Valley Dr (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.884

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	300.00	100.00	100.00	210.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	45.00			30.00			35.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	239	0	37	0	0	0	0	611	437	112	795	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0000	1.0404	1.0000	1.0000	1.0000	1.0404	1.0404	1.0404	1.0404	1.0404	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	82	0	24	0	0	0	0	301	58	9	246	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	331	0	62	0	0	0	0	937	513	126	1073	0
Peak Hour Factor	0.9640	1.0000	0.9640	1.0000	1.0000	1.0000	0.9640	0.9640	0.9640	0.9640	0.9640	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	0	16	0	0	0	0	243	133	33	278	0
Total Analysis Volume [veh/h]	343	0	64	0	0	0	0	972	532	131	1113	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	0	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	120	0	0	0	0	0	120	120	0	120	120	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	22	0	0	0	0	0	11	19	0	44	52	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No						No	No		No	No	
Maximum Recall	No						No	No		No	No	
Pedestrian Recall	No						No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R		L	C	R	L	C
C, Cycle Length [s]	85	85		85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	18		0	48	48	8	55
g / C, Green / Cycle	0.21	0.21		0.00	0.56	0.56	0.09	0.65
(v / s)_i Volume / Saturation Flow Rate	0.19	0.04		0.00	0.26	0.32	0.07	0.57
s, saturation flow rate [veh/h]	1781	1589		1781	3560	1589	1781	1870
c, Capacity [veh/h]	368	329		1	1995	891	164	1219
d1, Uniform Delay [s]	32.90	27.88		0.00	11.17	12.16	37.76	12.12
k, delay calibration	0.11	0.11		0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.96	0.28		0.00	0.80	2.74	7.73	10.39
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.19		0.00	0.47	0.58	0.77	0.88
d, Delay for Lane Group [s/veh]	41.86	28.15		0.00	11.97	14.89	45.49	22.51
Lane Group LOS	D	C		A	B	B	D	C
Critical Lane Group	Yes	No		No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.09	1.01		0.00	4.84	6.18	2.78	15.22
50th-Percentile Queue Length [ft/ln]	177.32	25.13		0.00	120.92	154.39	69.49	380.61
95th-Percentile Queue Length [veh/ln]	11.46	1.81		0.00	8.44	10.25	5.00	21.62
95th-Percentile Queue Length [ft/ln]	286.51	45.23		0.00	211.09	256.28	125.08	540.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.86	0.00	28.15	0.00	0.00	0.00	0.00	11.97	14.89	45.49	22.51	0.00
Movement LOS	D		C				A	B	B	D	C	
d_A, Approach Delay [s/veh]	39.70			0.00			13.00			24.93		
Approach LOS	D			A			B			C		
d_I, Intersection Delay [s/veh]	21.15											
Intersection LOS	C											
Intersection V/C	0.884											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.01	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.442	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	353	1128
d_b, Bicycle Delay [s]	26.44	42.54	28.86	8.08
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.756	3.538
Bicycle LOS	A	D	C	D

Sequence

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

Intersection Level Of Service Report
Intersection 5: Salida Del Sol (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	1,765.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.636

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	17	0	8	10	636	0	0	888	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	44	5	9	6	5	0	0	295	0	16	211	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	5	9	24	5	8	10	957	0	16	1135	35
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	1	2	6	1	2	3	256	0	4	303	9
Total Analysis Volume [veh/h]	47	5	10	26	5	9	11	1024	0	17	1214	37
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.64	0.12	0.03	0.89	0.11	0.03	0.02	0.01	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	1765.82	1716.72	1643.47	611.29	560.15	492.49	11.13	0.00	0.00	10.03	0.00	0.00
Movement LOS	F	F	F	F	F	F	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	17.66	17.66	17.66	7.81	7.81	7.81	0.05	0.00	0.00	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	441.47	441.47	441.47	195.32	195.32	195.32	1.28	0.00	0.00	0.68	0.68	0.68
d_A, Approach Delay [s/veh]	1742.60			578.69			0.12			0.14		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	54.61											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 6: Elizabeth Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	424.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.974

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	4	0	4	6	0	38	18	626	7	5	872	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	39	0	6	4	0	10	9	180	0	119	186	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	0	10	10	0	50	28	831	7	124	1093	10
Peak Hour Factor	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	0	3	3	0	13	8	224	2	33	294	3
Total Analysis Volume [veh/h]	46	0	11	11	0	54	30	895	8	133	1177	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.97	0.00	0.02	0.26	0.00	0.10	0.04	0.01	0.00	0.16	0.01	0.00
d_M, Delay for Movement [s/veh]	424.82	450.68	349.48	111.91	124.73	25.13	10.99	0.00	0.00	10.39	0.00	0.00
Movement LOS	F	F	F	F	F	D	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	8.79	8.79	8.79	1.68	1.68	1.68	0.14	0.00	0.00	0.56	0.00	0.00
95th-Percentile Queue Length [ft/ln]	219.86	219.86	219.86	42.05	42.05	42.05	3.49	0.00	0.00	13.90	0.00	0.00
d_A, Approach Delay [s/veh]	410.61			39.60			0.36			1.05		
Approach LOS	F			E			A			A		
d_I, Intersection Delay [s/veh]	11.67											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 7: Jana Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	5,415.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	3.678

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	4	637	7	1	878
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	190	143	167	37	191	236
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	193	147	830	44	192	1149
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	40	224	12	52	310
Total Analysis Volume [veh/h]	208	159	896	48	207	1241
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	3.68	0.26	0.01	0.00	0.25	0.01
d_M, Delay for Movement [s/veh]	5415.78	5353.52	0.00	0.00	11.25	0.00
Movement LOS	F	F	A	A	B	A
95th-Percentile Queue Length [veh/ln]	130.72	130.72	0.00	0.00	1.00	0.00
95th-Percentile Queue Length [ft/ln]	3268.07	3268.07	0.00	0.00	24.92	0.00
d_A, Approach Delay [s/veh]	5388.86		0.00		1.61	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	717.95					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Nutmeg St (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.757

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	175.00	100.00	100.00	50.00	100.00	100.00	180.00	100.00	100.00	225.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	45.00			40.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	112	30	275	100	62	32	34	621	96	380	703	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	0	0	0	0	50	21	82	6	0	133	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	124	31	286	104	65	83	56	728	106	395	864	73
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	8	73	27	17	21	14	187	27	101	222	19
Total Analysis Volume [veh/h]	127	32	293	107	67	85	57	747	109	405	886	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	22	22	0	19	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	18	18	18	18	18	4	15	15	15	25	25
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.31	0.07	0.25	0.25	0.25	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.10	0.02	0.18	0.10	0.03	0.05	0.03	0.20	0.07	0.22	0.24	0.05
s, saturation flow rate [veh/h]	1239	1870	1589	1062	1870	1589	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	447	574	488	413	574	488	132	870	388	445	1496	668
d1, Uniform Delay [s]	18.14	14.73	17.67	17.50	15.01	15.29	26.70	21.64	18.45	21.80	13.38	10.62
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.54	0.18	5.20	1.46	0.40	0.76	2.18	2.27	0.38	6.69	0.35	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.05	0.59	0.25	0.11	0.17	0.43	0.84	0.27	0.89	0.58	0.11
d, Delay for Lane Group [s/veh]	19.68	14.91	22.87	18.97	15.41	16.04	28.88	23.92	18.82	28.49	13.73	10.69
Lane Group LOS	B	B	C	B	B	B	C	C	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.40	0.28	3.50	1.18	0.62	0.83	0.77	4.41	1.07	5.39	3.55	0.48
50th-Percentile Queue Length [ft/ln]	34.89	7.04	87.57	29.46	15.49	20.63	19.24	110.36	26.70	134.66	88.80	12.00
95th-Percentile Queue Length [veh/ln]	2.51	0.51	6.31	2.12	1.12	1.49	1.39	7.86	1.92	9.19	6.39	0.86
95th-Percentile Queue Length [ft/ln]	62.80	12.67	157.63	53.02	27.88	37.13	34.64	196.50	48.06	229.82	159.84	21.59

Movement, Approach, & Intersection Results

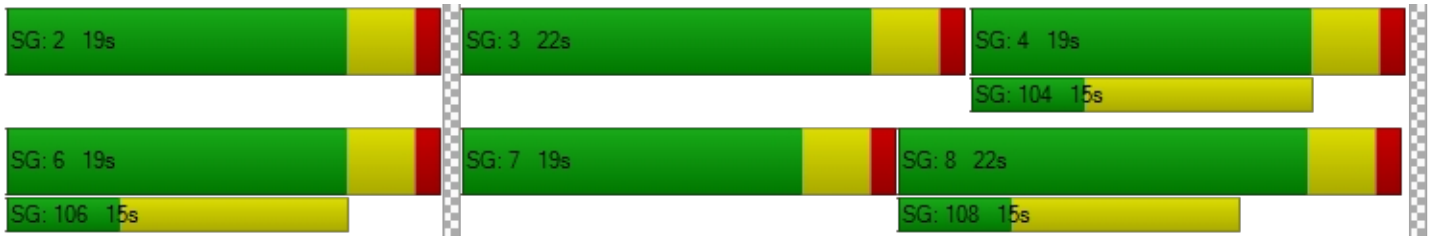
d_M, Delay for Movement [s/veh]	19.68	14.91	22.87	18.97	15.41	16.04	28.88	23.92	18.82	28.49	13.73	10.69
Movement LOS	B	B	C	B	B	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	21.41			17.09			23.62			17.94		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	20.13											
Intersection LOS	C											
Intersection V/C	0.757											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.75	21.75	0.00	21.75
I_p,int, Pedestrian LOS Score for Intersection	2.480	2.246	0.000	3.179
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	499	598	499
d_b, Bicycle Delay [s]	16.95	16.95	14.77	16.95
I_b,int, Bicycle LOS Score for Intersection	2.287	1.975	2.294	2.659
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Beyond Food Mart (Clinton Keith & Jana)

Vistro File: G:\...\PME.vistro

Scenario 4 Existing Plus Ambient Growth Plus Project Plus Cumulative PM Peak Hour

Report File: G:\...\PMEAPC.pdf

7/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-15 SB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	SB Left	0.852	30.7	C
2	I-15 NB Ramps (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	NB Right	0.980	32.0	C
3	Wildomar Trail (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	SB Left	0.933	30.7	C
4	Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Thru	1.036	69.6	E
5	Salida Del Sol (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	6.137	10,000.0	F
6	Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	6.093	9,558.0	F
7	Jana Ln (NS) at Clinton Keith Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	6.300	10,000.0	F
8	Nutmeg St (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.778	20.4	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-15 SB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	30.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.852

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	2	0	1	0	0	0	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	680.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	523	1	394	0	1004	519	279	1092	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0404	1.0404	1.0000	1.0404	1.0404	1.0404	1.0404	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	276	0	60	0	272	34	290	242	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	820	1	470	0	1317	574	580	1378	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9490	0.9490	0.9490	1.0000	0.9490	0.9490	0.9490	0.9490	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	216	0	124	0	347	151	153	363	0
Total Analysis Volume [veh/h]	0	0	0	864	1	495	0	1388	605	611	1452	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	120	0	0	120	0	120	120	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	80	0	0	19	0	11	30	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	L	C
C, Cycle Length [s]		110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		29	29	29	47	47	22	73
g / C, Green / Cycle		0.27	0.27	0.27	0.43	0.43	0.20	0.66
(v / s)_i Volume / Saturation Flow Rate		0.23	0.23	0.17	0.26	0.36	0.17	0.27
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	3459	5094
c, Capacity [veh/h]		474	474	749	2181	680	681	3368
d1, Uniform Delay [s]		38.52	38.52	35.59	24.28	28.18	42.66	8.66
k, delay calibration		0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		22.50	22.48	4.03	0.27	3.05	3.25	0.08
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.87	0.87	0.63	0.60	0.84	0.85	0.41
d, Delay for Lane Group [s/veh]		61.02	61.00	39.62	24.55	31.23	45.91	8.74
Lane Group LOS		E	E	D	C	C	D	A
Critical Lane Group		Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		13.38	13.38	5.93	8.57	13.49	7.78	4.59
50th-Percentile Queue Length [ft/ln]		334.58	334.52	148.27	214.18	337.33	194.50	114.87
95th-Percentile Queue Length [veh/ln]		19.38	19.38	9.92	13.37	19.52	12.35	8.11
95th-Percentile Queue Length [ft/ln]		484.57	484.49	248.12	334.18	487.94	308.86	202.75

Movement, Approach, & Intersection Results

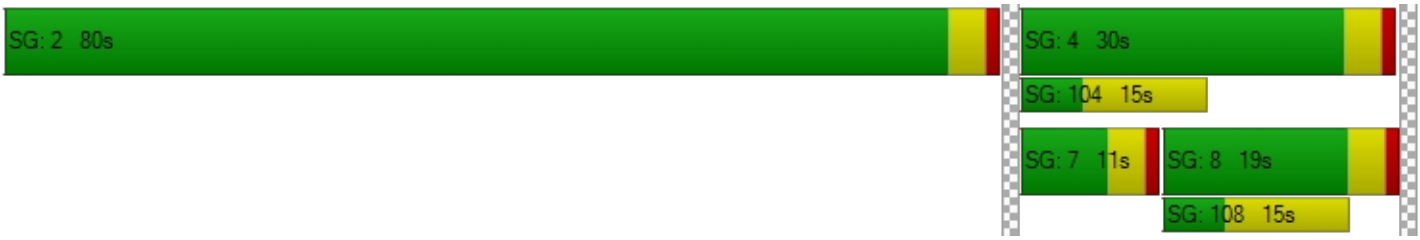
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	61.01	61.00	39.62	0.00	24.55	31.23	45.91	8.74	0.00
Movement LOS				E	E	D		C	C	D	A	
d_A, Approach Delay [s/veh]	0.00			53.22			26.58			19.75		
Approach LOS	A			D			C			B		
d_I, Intersection Delay [s/veh]	30.67											
Intersection LOS	C											
Intersection V/C	0.852											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.39	46.39	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.289	2.563	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1381	273	473
d_b, Bicycle Delay [s]	55.02	5.26	41.04	32.09
I_b,int, Bicycle LOS Score for Intersection	4.132	3.690	2.600	2.637
Bicycle LOS	D	D	B	B

Sequence

Ring 1	2	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: I-15 NB Ramps (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.980

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	2	0	0	0	0	0
Entry Pocket Length [ft]	650.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	538	0	364	0	0	0	353	1174	0	0	839	549
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	51	497	0	0	532	288
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	560	0	379	0	0	0	418	1718	0	0	1405	859
Peak Hour Factor	0.9620	0.9620	0.9620	1.0000	1.0000	1.0000	0.9620	0.9620	1.0000	1.0000	0.9620	0.9620
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	146	0	98	0	0	0	109	446	0	0	365	223
Total Analysis Volume [veh/h]	582	0	394	0	0	0	435	1786	0	0	1460	893
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

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

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	120	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	24	0	0	0	0	16	71	0	0	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	95	95	95		95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		12	67	51	51
g / C, Green / Cycle	0.21	0.21	0.21		0.13	0.70	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.19		0.12	0.34	0.28	0.54
s, saturation flow rate [veh/h]	1781	1735	1589		3459	5094	5094	1589
c, Capacity [veh/h]	378	368	337		437	3584	2726	851
d1, Uniform Delay [s]	35.83	36.01	36.63		41.25	6.30	14.18	22.09
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	22.26	25.83	45.96		16.09	0.10	0.15	39.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.85	0.92		0.96	0.48	0.52	1.01
d, Delay for Lane Group [s/veh]	58.10	61.83	82.59		57.34	6.40	14.33	61.17
Lane Group LOS	E	E	F		E	A	B	F
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.20	9.51	11.21		5.72	4.09	5.95	25.95
50th-Percentile Queue Length [ft/ln]	230.05	237.85	280.19		142.98	102.18	148.70	648.82
95th-Percentile Queue Length [veh/ln]	14.18	14.57	16.70		9.64	7.36	9.95	34.59
95th-Percentile Queue Length [ft/ln]	354.42	364.31	417.44		241.04	183.93	248.69	864.68

Movement, Approach, & Intersection Results

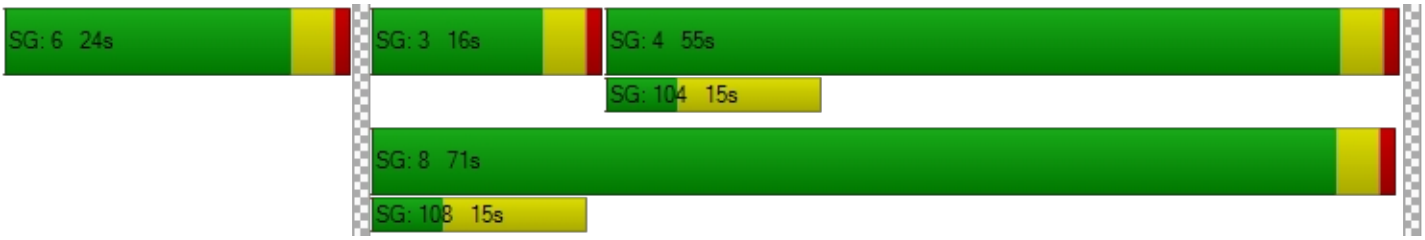
d_M, Delay for Movement [s/veh]	59.74	61.83	78.94	0.00	0.00	0.00	57.34	6.40	0.00	0.00	14.33	61.17
Movement LOS	E	E	E				E	A			B	F
d_A, Approach Delay [s/veh]	67.43			0.00			16.37			32.10		
Approach LOS	E			A			B			C		
d_I, Intersection Delay [s/veh]	32.02											
Intersection LOS	C											
Intersection V/C	0.980											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	38.93	38.93	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.364	2.342	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	421	0	1410	1073
d_b, Bicycle Delay [s]	29.61	47.51	4.13	10.20
I_b,int, Bicycle LOS Score for Intersection	3.109	4.132	2.734	2.805
Bicycle LOS	C	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 3: Wildomar Trail (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	30.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.933

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	95.00	100.00	100.00	95.00	100.00	100.00	125.00	100.00	100.00	295.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Speed [mph]	25.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	37	79	90	38	111	182	1072	28	109	958	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	118	0	31	97	0	103	70	263	56	23	412	115
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	165	38	113	191	40	218	259	1378	85	136	1409	162
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	10	30	51	11	58	69	365	23	36	374	43
Total Analysis Volume [veh/h]	175	40	120	203	42	231	275	1461	90	144	1494	172
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	16	38	0	13	35	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	15	15	15	15	12	36	36	7	31	31
g / C, Green / Cycle	0.22	0.22	0.22	0.22	0.22	0.17	0.51	0.51	0.10	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.16	0.10	0.17	0.02	0.15	0.16	0.30	0.30	0.08	0.44	0.11
s, saturation flow rate [veh/h]	1009	1487	1112	1683	1431	1603	3204	1633	1603	3204	1431
c, Capacity [veh/h]	277	321	219	364	309	275	1629	830	167	1414	631
d1, Uniform Delay [s]	28.62	23.95	32.79	22.04	25.39	28.66	12.13	12.14	30.69	19.52	12.33
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.39	4.95	46.75	0.61	13.61	19.47	0.35	0.69	9.85	19.50	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.47	0.87	0.11	0.71	0.94	0.59	0.60	0.81	1.00	0.26
d, Delay for Lane Group [s/veh]	38.01	28.90	79.54	22.65	38.99	48.13	12.48	12.83	40.54	39.01	12.54
Lane Group LOS	D	C	E	C	D	D	B	B	D	D	B
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.37	2.56	5.92	0.55	4.23	5.50	4.55	4.72	2.58	13.56	1.45
50th-Percentile Queue Length [ft/ln]	84.37	64.00	147.99	13.76	105.87	137.57	113.65	117.97	64.60	339.04	36.29
95th-Percentile Queue Length [veh/ln]	6.07	4.61	9.91	0.99	7.61	9.35	8.04	8.28	4.65	19.60	2.61
95th-Percentile Queue Length [ft/ln]	151.87	115.19	247.74	24.77	190.24	233.75	201.07	207.03	116.28	490.03	65.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.01	28.90	28.90	79.54	22.65	38.99	48.13	12.58	12.83	40.54	39.01	12.54
Movement LOS	D	C	C	E	C	D	D	B	B	D	D	B
d_A, Approach Delay [s/veh]	33.66			54.78			17.94			36.62		
Approach LOS	C			D			B			D		
d_I, Intersection Delay [s/veh]	30.67											
Intersection LOS	C											
Intersection V/C	0.933											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
I_p,int, Pedestrian LOS Score for Intersection	2.085	2.415	3.343	3.405
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	429	429	971	886
d_b, Bicycle Delay [s]	21.61	21.61	9.26	10.87
I_b,int, Bicycle LOS Score for Intersection	2.081	2.300	2.507	2.968
Bicycle LOS	B	B	B	C

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report

Intersection 4: Inland Valley Dr (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	69.6
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.036

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	300.00	100.00	100.00	210.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	45.00			30.00			35.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	374	0	82	0	0	0	0	907	310	31	743	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0000	1.0404	1.0000	1.0000	1.0000	1.0404	1.0404	1.0404	1.0404	1.0404	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	116	0	11	0	0	0	0	289	106	20	441	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	505	0	96	0	0	0	0	1233	429	52	1214	0
Peak Hour Factor	0.9650	1.0000	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650	0.9650	0.9650	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	131	0	25	0	0	0	0	319	111	13	315	0
Total Analysis Volume [veh/h]	523	0	99	0	0	0	0	1278	445	54	1258	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	0	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	120	0	0	0	0	0	120	120	0	120	120	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	37	0	0	0	0	0	11	45	0	38	72	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No						No	No		No	No	
Maximum Recall	No						No	No		No	No	
Pedestrian Recall	No						No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R		L	C	R	L	C
C, Cycle Length [s]	120	120		120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	33	33		0	69	69	6	75
g / C, Green / Cycle	0.28	0.28		0.00	0.58	0.58	0.05	0.62
(v / s)_i Volume / Saturation Flow Rate	0.28	0.06		0.00	0.35	0.27	0.03	0.65
s, saturation flow rate [veh/h]	1781	1589		1781	3560	1589	1781	1870
c, Capacity [veh/h]	490	437		2	2051	915	88	1167
d1, Uniform Delay [s]	43.58	33.62		0.00	16.54	14.81	55.99	22.60
k, delay calibration	0.11	0.11		0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	74.75	0.25		0.00	1.32	1.73	6.45	101.03
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.03	0.22		0.00	0.60	0.47	0.59	1.04
d, Delay for Lane Group [s/veh]	118.33	33.87		0.00	17.86	16.54	62.44	123.63
Lane Group LOS	F	C		A	B	B	E	F
Critical Lane Group	Yes	No		No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	24.12	2.14		0.00	10.77	6.92	1.67	60.58
50th-Percentile Queue Length [ft/ln]	602.92	53.44		0.00	269.30	172.93	41.66	1514.45
95th-Percentile Queue Length [veh/ln]	32.80	3.85		0.00	16.15	11.23	3.00	76.05
95th-Percentile Queue Length [ft/ln]	820.05	96.19		0.00	403.87	280.76	74.98	1901.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	118.33	0.00	33.87	0.00	0.00	0.00	0.00	17.86	16.54	62.44	123.63	0.00
Movement LOS	F		C				A	B	B	E	F	
d_A, Approach Delay [s/veh]	104.84			0.00			17.52			121.12		
Approach LOS	F			A			B			F		
d_I, Intersection Delay [s/veh]	69.56											
Intersection LOS	E											
Intersection V/C	1.036											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.40	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.483	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	549	0	683	1132
d_b, Bicycle Delay [s]	31.59	60.06	26.06	11.31
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.931	3.649
Bicycle LOS	A	D	C	D

Sequence

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

Intersection Level Of Service Report
Intersection 5: Salida Del Sol (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	6.137

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	9	0	7	7	979	0	0	768	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	65	7	14	5	7	0	0	259	0	23	396	19
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	7	14	14	7	7	7	1278	0	23	1195	37
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	2	4	4	2	2	2	337	0	6	315	10
Total Analysis Volume [veh/h]	69	7	15	15	7	7	7	1350	0	24	1262	39
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	6.14	0.32	0.07	1.40	0.31	0.03	0.01	0.01	0.00	0.04	0.01	0.00
d_M, Delay for Movement [s/veh]	10000.0	10000.0	10000.0	2096.19	1894.89	1752.85	11.45	0.00	0.00	11.65	0.00	0.00
Movement LOS	F	F	F	F	F	F	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	39.66	39.66	39.66	10.10	10.10	10.10	0.04	0.00	0.00	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	991.49	991.49	991.49	252.54	252.54	252.54	0.94	0.00	0.00	0.98	0.98	0.98
d_A, Approach Delay [s/veh]	10000.00			1960.03			0.06			0.21		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	344.85											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 6: Elizabeth Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9,558.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	6.093

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	3	0	4	3	0	39	46	930	8	0	743	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	172	0	27	4	0	13	12	295	0	32	253	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	0	31	7	0	54	60	1263	8	32	1026	14
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	0	8	2	0	14	16	334	2	8	272	4
Total Analysis Volume [veh/h]	185	0	33	7	0	57	64	1338	8	34	1087	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	6.09	0.00	0.07	0.20	0.00	0.11	0.09	0.01	0.00	0.06	0.01	0.00
d_M, Delay for Movement [s/veh]	9557.98	9578.94	9441.18	114.19	158.50	20.03	10.96	0.00	0.00	12.05	0.00	0.00
Movement LOS	F	F	F	F	F	C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	89.74	89.74	89.74	1.29	1.29	1.29	0.30	0.00	0.00	0.19	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2243.54	2243.54	2243.54	32.29	32.29	32.29	7.44	0.00	0.00	4.70	0.00	0.00
d_A, Approach Delay [s/veh]	9540.40			30.83			0.49			0.36		
Approach LOS	F			D			A			A		
d_I, Intersection Delay [s/veh]	737.17											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 7: Jana Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	6.300

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	7	4	929	7	2	740
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	176	127	301	40	168	210
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	131	1268	47	170	980
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	35	338	13	45	261
Total Analysis Volume [veh/h]	195	140	1352	50	181	1045
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	6.30	0.32	0.01	0.00	0.33	0.01
d_M, Delay for Movement [s/veh]	10000.00	10000.00	0.00	0.00	15.23	0.00
Movement LOS	F	F	A	A	C	A
95th-Percentile Queue Length [veh/ln]	136.73	136.73	0.00	0.00	1.44	0.00
95th-Percentile Queue Length [ft/ln]	3418.34	3418.34	0.00	0.00	35.96	0.00
d_A, Approach Delay [s/veh]	10000.00		0.00		2.25	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	1130.83					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Nutmeg St (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.778

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	175.00	100.00	100.00	50.00	100.00	100.00	180.00	100.00	100.00	225.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	45.00			40.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	37	279	63	28	18	47	680	68	346	677	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	0	0	28	46	139	7	0	115	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	38	290	66	29	47	95	846	78	360	819	98
Peak Hour Factor	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	10	77	18	8	12	25	225	21	96	217	26
Total Analysis Volume [veh/h]	63	40	308	70	31	50	101	898	83	382	869	104
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	22	21	0	20	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	18	18	18	18	18	6	17	17	14	25	25
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.29	0.29	0.09	0.28	0.28	0.23	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.04	0.02	0.18	0.06	0.02	0.03	0.05	0.24	0.05	0.20	0.23	0.06
s, saturation flow rate [veh/h]	1323	1870	1589	1052	1870	1589	1781	3560	1589	1781	3560	1589
c, Capacity [veh/h]	466	549	467	392	549	467	168	975	435	415	1469	656
d1, Uniform Delay [s]	17.14	15.32	18.36	17.63	15.24	15.46	26.06	20.81	16.68	22.17	13.48	11.06
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	0.24	6.27	0.93	0.18	0.43	3.01	2.59	0.20	5.96	0.33	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.07	0.62	0.17	0.05	0.10	0.57	0.87	0.18	0.87	0.56	0.15
d, Delay for Lane Group [s/veh]	17.70	15.56	24.63	18.56	15.43	15.90	29.07	23.40	16.88	28.13	13.81	11.16
Lane Group LOS	B	B	C	B	B	B	C	C	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	0.36	3.74	0.74	0.28	0.47	1.30	5.08	0.72	4.86	3.37	0.67
50th-Percentile Queue Length [ft/ln]	15.35	8.92	93.43	18.47	6.94	11.66	32.52	127.01	18.07	121.50	84.24	16.68
95th-Percentile Queue Length [veh/ln]	1.11	0.64	6.73	1.33	0.50	0.84	2.34	8.78	1.30	8.48	6.07	1.20
95th-Percentile Queue Length [ft/ln]	27.63	16.06	168.18	33.25	12.48	20.98	58.53	219.42	32.52	211.88	151.63	30.03

Movement, Approach, & Intersection Results

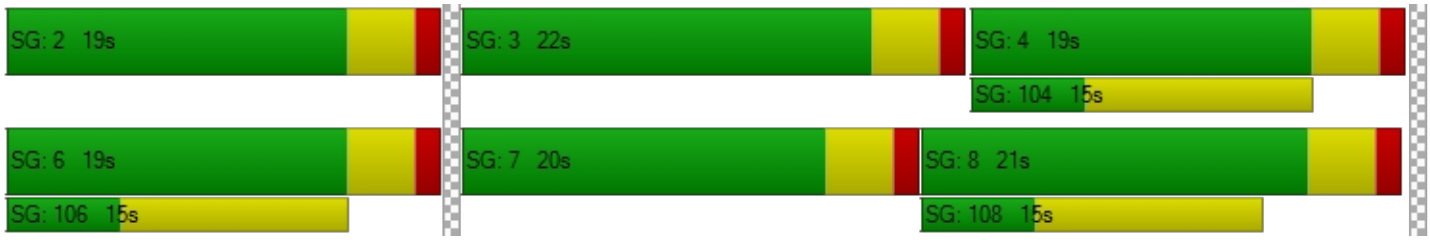
d_M, Delay for Movement [s/veh]	17.70	15.56	24.63	18.56	15.43	15.90	29.07	23.40	16.88	28.13	13.81	11.16
Movement LOS	B	B	C	B	B	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	22.68			17.04			23.43			17.64		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	20.39											
Intersection LOS	C											
Intersection V/C	0.778											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	21.71	0.00	21.71
I_p,int, Pedestrian LOS Score for Intersection	2.424	2.233	0.000	3.132
Crosswalk LOS	B	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	499	566	499
d_b, Bicycle Delay [s]	16.91	16.91	15.44	16.91
I_b,int, Bicycle LOS Score for Intersection	2.198	1.794	2.400	2.613
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Beyond Food Mart (Clinton Keith & Jana)

Vistro File: G:\...\AME.vistro

Scenario 5 Existing Plus Ambient Growth Plus Project Plus Cumulative AM Peak Hour - With Improvements

Report File: G:\...\AMEAPCI.pdf

10/18/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
4	Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.759	12.9	B
5	Salida Del Sol (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.822	13.3	B
6	Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.476	9.4	A
7	Jana Ln (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.567	11.5	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 4: Inland Valley Dr (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.759

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	300.00	100.00	100.00	210.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Speed [mph]	45.00			30.00			35.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	239	0	37	0	0	0	0	611	437	112	795	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0000	1.0404	1.0000	1.0000	1.0000	1.0404	1.0404	1.0404	1.0404	1.0404	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	82	0	24	0	0	0	0	301	58	9	246	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	331	0	62	0	0	0	0	937	513	126	1073	0
Peak Hour Factor	0.9640	1.0000	0.9640	1.0000	1.0000	1.0000	0.9640	0.9640	0.9640	0.9640	0.9640	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	0	16	0	0	0	0	243	133	33	278	0
Total Analysis Volume [veh/h]	343	0	64	0	0	0	0	972	532	131	1113	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	0	0	0	0	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	120	0	0	0	0	0	120	120	0	120	120	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	0	0	0	0	0	33	19	0	30	16	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No						No	No		No	No	
Maximum Recall	No						No	No		No	No	
Pedestrian Recall	No						No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R		L	C	R	L	C
C, Cycle Length [s]	51	51		51	51	51	51	51
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12		0	21	21	6	27
g / C, Green / Cycle	0.23	0.23		0.00	0.42	0.42	0.11	0.53
(v / s)_i Volume / Saturation Flow Rate	0.19	0.04		0.00	0.26	0.32	0.07	0.30
s, saturation flow rate [veh/h]	1781	1589		1781	3560	1589	1781	3560
c, Capacity [veh/h]	416	371		0	1480	661	205	1889
d1, Uniform Delay [s]	18.35	15.54		0.00	11.78	12.82	21.44	8.02
k, delay calibration	0.11	0.11		0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.61	0.21		0.00	0.45	2.04	3.03	0.27
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.17		0.00	0.63	0.78	0.62	0.57
d, Delay for Lane Group [s/veh]	21.96	15.75		0.00	12.24	14.86	24.47	8.29
Lane Group LOS	C	B		A	B	B	C	A
Critical Lane Group	Yes	No		No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.36	0.49		0.00	3.35	4.26	1.38	2.42
50th-Percentile Queue Length [ft/ln]	84.03	12.22		0.00	83.87	106.48	34.51	60.44
95th-Percentile Queue Length [veh/ln]	6.05	0.88		0.00	6.04	7.64	2.48	4.35
95th-Percentile Queue Length [ft/ln]	151.25	22.00		0.00	150.96	191.09	62.12	108.79

Movement, Approach, & Intersection Results

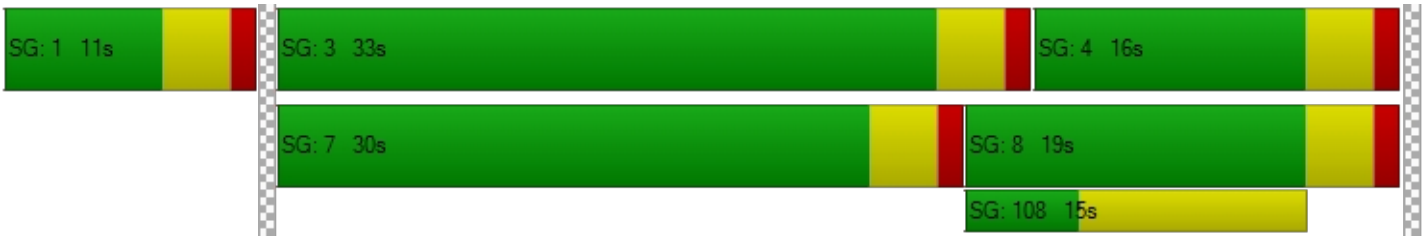
d_M, Delay for Movement [s/veh]	21.96	0.00	15.75	0.00	0.00	0.00	0.00	12.24	14.86	24.47	8.29	0.00
Movement LOS	C		B				A	B	B	C	A	
d_A, Approach Delay [s/veh]	20.98			0.00			13.16			9.99		
Approach LOS	C			A			B			A		
d_I, Intersection Delay [s/veh]	12.92											
Intersection LOS	B											
Intersection V/C	0.759											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.17	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.415	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	276	0	591	473
d_b, Bicycle Delay [s]	18.85	25.37	12.59	14.79
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.756	2.549
Bicycle LOS	A	D	C	B

Sequence

Ring 1	1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Salida Del Sol (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.822

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	17	0	8	10	636	0	0	888	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	44	5	9	6	5	0	0	295	0	16	211	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	5	9	24	5	8	10	957	0	16	1135	35
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	1	2	6	1	2	3	256	0	4	303	9
Total Analysis Volume [veh/h]	47	5	10	26	5	9	11	1024	0	17	1214	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	11	0	0	11	0	12	98	0	11	97	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	7	7	2	98	3	99
g / C, Green / Cycle	0.06	0.06	0.06	0.06	0.02	0.82	0.02	0.82
(v / s)_i Volume / Saturation Flow Rate	0.03	0.01	0.02	0.01	0.01	0.57	0.01	0.70
s, saturation flow rate [veh/h]	1261	1512	1259	1518	1603	1683	1603	1674
c, Capacity [veh/h]	103	87	102	88	28	1375	41	1381
d1, Uniform Delay [s]	58.08	53.89	57.22	53.85	58.38	4.66	57.69	6.13
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.79	0.85	1.16	0.77	7.41	2.98	6.19	7.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.16	0.23	0.15	0.35	0.70	0.39	0.85
d, Delay for Lane Group [s/veh]	60.87	54.74	58.39	54.62	65.78	7.63	63.89	13.18
Lane Group LOS	E	D	E	D	E	A	E	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.39	0.41	0.73	0.38	0.35	6.75	0.54	11.55
50th-Percentile Queue Length [ft/ln]	34.65	10.36	18.36	9.61	8.81	168.71	13.45	288.63
95th-Percentile Queue Length [veh/ln]	2.49	0.75	1.32	0.69	0.63	11.01	0.97	17.12
95th-Percentile Queue Length [ft/ln]	62.37	18.65	33.05	17.29	15.86	275.22	24.22	427.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.87	54.74	54.74	58.39	54.62	54.62	65.78	7.63	7.63	63.89	13.18	13.18
Movement LOS	E	D	D	E	D	D	E	A	A	E	B	B
d_A, Approach Delay [s/veh]	59.39			57.06			8.24			13.86		
Approach LOS	E			E			A			B		
d_I, Intersection Delay [s/veh]	13.33											
Intersection LOS	B											
Intersection V/C	0.822											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.40	51.40	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	1.994	1.998	0.000	0.000
Crosswalk LOS	A	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	117	117	1565	1548
d_b, Bicycle Delay [s]	53.27	53.27	2.84	3.06
I_b,int, Bicycle LOS Score for Intersection	1.655	1.621	3.155	3.517
Bicycle LOS	A	A	C	D

Sequence

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

Intersection Level Of Service Report
Intersection 6: Elizabeth Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.476

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	4	0	4	6	0	38	18	626	7	5	872	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	39	0	6	4	0	10	9	180	0	119	186	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	0	10	10	0	50	28	831	7	124	1093	10
Peak Hour Factor	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	0	3	3	0	13	8	224	2	33	294	3
Total Analysis Volume [veh/h]	46	0	11	11	0	54	30	895	8	133	1177	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	30	0	11	19	0	11	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	4	4	3	37	37	6	41	41
g / C, Green / Cycle	0.07	0.07	0.07	0.07	0.04	0.62	0.62	0.10	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.04	0.01	0.01	0.03	0.02	0.25	0.25	0.08	0.33	0.33
s, saturation flow rate [veh/h]	1219	1431	1264	1431	1603	1683	1678	1603	1683	1678
c, Capacity [veh/h]	138	108	173	108	72	1046	1043	165	1144	1140
d1, Uniform Delay [s]	29.87	25.87	27.83	26.62	27.91	5.74	5.74	26.22	4.60	4.60
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.26	0.36	0.14	3.06	3.38	1.15	1.16	6.93	1.47	1.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.09	0.06	0.46	0.39	0.40	0.40	0.75	0.48	0.48
d, Delay for Lane Group [s/veh]	31.14	26.23	27.97	29.67	31.30	6.89	6.90	33.14	6.06	6.07
Lane Group LOS	C	C	C	C	C	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.66	0.14	0.14	0.75	0.42	1.86	1.86	1.85	1.91	1.91
50th-Percentile Queue Length [ft/ln]	16.58	3.49	3.53	18.86	10.52	46.51	46.40	46.30	47.78	47.68
95th-Percentile Queue Length [veh/ln]	1.19	0.25	0.25	1.36	0.76	3.35	3.34	3.33	3.44	3.43
95th-Percentile Queue Length [ft/ln]	29.85	6.29	6.35	33.94	18.94	83.71	83.51	83.34	86.00	85.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.14	26.23	26.23	27.97	29.67	29.67	31.30	6.89	6.90	33.14	6.07	6.07
Movement LOS	C	C	C	C	C	C	C	A	A	C	A	A
d_A, Approach Delay [s/veh]	30.21			29.39			7.68			8.80		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	9.44											
Intersection LOS	A											
Intersection V/C	0.476											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	21.71	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	1.971	1.947	0.000	0.000
Crosswalk LOS	A	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	866	866	499	499
d_b, Bicycle Delay [s]	9.66	9.66	16.91	16.91
I_b,int, Bicycle LOS Score for Intersection	1.647	1.659	2.274	2.572
Bicycle LOS	A	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 7: Jana Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.567

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	4	637	7	1	878
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	190	143	167	37	191	236
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	193	147	830	44	192	1149
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	40	224	12	52	310
Total Analysis Volume [veh/h]	208	159	896	48	207	1241
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	13	0	19	0	28	47
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	31	31	8	44
g / C, Green / Cycle	0.14	0.14	0.52	0.52	0.14	0.73
(v / s)_i Volume / Saturation Flow Rate	0.11	0.09	0.23	0.24	0.11	0.32
s, saturation flow rate [veh/h]	1781	1589	1870	1837	1781	3560
c, Capacity [veh/h]	250	223	974	957	248	2587
d1, Uniform Delay [s]	24.93	24.49	9.01	9.06	24.96	3.32
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.22	3.35	1.50	1.58	5.27	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.66	0.45	0.46	0.77	0.44
d, Delay for Lane Group [s/veh]	30.15	27.85	10.52	10.64	30.23	3.87
Lane Group LOS	C	C	B	B	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.89	2.10	2.92	2.95	2.69	1.04
50th-Percentile Queue Length [ft/ln]	72.36	52.57	73.03	73.70	67.24	25.92
95th-Percentile Queue Length [veh/ln]	5.21	3.79	5.26	5.31	4.84	1.87
95th-Percentile Queue Length [ft/ln]	130.26	94.63	131.45	132.67	121.04	46.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.15	27.85	10.58	10.64	30.23	3.87
Movement LOS	C	C	B	B	C	A
d_A, Approach Delay [s/veh]	29.15		10.58		7.65	
Approach LOS	C		B		A	
d_I, Intersection Delay [s/veh]	11.51					
Intersection LOS	B					
Intersection V/C	0.567					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.077	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	499	1432
d_b, Bicycle Delay [s]	21.71	16.91	2.43
I_b,int, Bicycle LOS Score for Intersection	1.560	2.281	2.666
Bicycle LOS	A	B	B

Sequence

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

Beyond Food Mart (Clinton Keith & Jana)

Vistro File: G:\...\PME.vistro

Scenario 5 Existing Plus Ambient Growth Plus Project Plus Cumualtive PM Peak Hour - With Improvements

Report File: G:\...\PMEAPCI.pdf

10/18/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
4	Inland Valley Dr (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.808	19.2	B
5	Salida Del Sol (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	EB Left	0.917	23.9	C
6	Elizabeth Ln (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.645	14.4	B
7	Jana Ln (NS) at Clinton Keith Rd (EW)	Signalized	HCM 7th Edition	WB Left	0.693	12.6	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 4: Inland Valley Dr (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.808

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	300.00	100.00	100.00	210.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Speed [mph]	45.00			30.00			35.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	374	0	82	0	0	0	0	907	310	31	743	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0000	1.0404	1.0000	1.0000	1.0000	1.0404	1.0404	1.0404	1.0404	1.0404	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	116	0	11	0	0	0	0	289	106	20	441	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	505	0	96	0	0	0	0	1233	429	52	1214	0
Peak Hour Factor	0.9650	1.0000	0.9650	1.0000	1.0000	1.0000	0.9650	0.9650	0.9650	0.9650	0.9650	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	131	0	25	0	0	0	0	319	111	13	315	0
Total Analysis Volume [veh/h]	523	0	99	0	0	0	0	1278	445	54	1258	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	0	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	120	0	0	0	0	0	120	120	0	120	120	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	24	0	0	0	0	0	11	29	0	12	30	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	10	0	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No							No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No						No	No		No	No	
Maximum Recall	No						No	No		No	No	
Pedestrian Recall	No						No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R		L	C	R	L	C
C, Cycle Length [s]	65	65		65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20		0	29	29	4	33
g / C, Green / Cycle	0.31	0.31		0.00	0.44	0.44	0.07	0.51
(v / s)_i Volume / Saturation Flow Rate	0.28	0.06		0.00	0.35	0.27	0.03	0.34
s, saturation flow rate [veh/h]	1781	1589		1781	3560	1589	1781	3560
c, Capacity [veh/h]	548	489		3	1568	700	122	1805
d1, Uniform Delay [s]	21.85	16.66		0.00	15.65	14.01	29.19	12.05
k, delay calibration	0.11	0.11		0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.93	0.19		0.00	4.19	4.05	2.38	2.04
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.20		0.00	0.79	0.61	0.43	0.67
d, Delay for Lane Group [s/veh]	29.78	16.85		0.00	19.84	18.06	31.57	14.09
Lane Group LOS	C	B		A	B	B	C	B
Critical Lane Group	Yes	No		No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.53	0.94		0.00	7.51	4.90	0.79	5.43
50th-Percentile Queue Length [ft/ln]	188.33	23.59		0.00	187.66	122.41	19.84	135.78
95th-Percentile Queue Length [veh/ln]	12.03	1.70		0.00	12.00	8.53	1.43	9.25
95th-Percentile Queue Length [ft/ln]	300.86	42.46		0.00	299.99	213.13	35.72	231.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.78	0.00	16.85	0.00	0.00	0.00	0.00	19.84	18.06	31.57	14.09	0.00
Movement LOS	C		B				A	B	B	C	B	
d_A, Approach Delay [s/veh]	27.71			0.00			19.38			14.81		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	19.16											
Intersection LOS	B											
Intersection V/C	0.808											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.20	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.453	0.000	0.000	0.000
Crosswalk LOS	B	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	614	0	767	798
d_b, Bicycle Delay [s]	15.64	32.57	12.37	11.76
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.931	2.604
Bicycle LOS	A	D	C	B

Sequence

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

Intersection Level Of Service Report
Intersection 5: Salida Del Sol (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	23.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.917

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	9	0	7	7	979	0	0	768	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	65	7	14	5	7	0	0	259	0	23	396	19
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	7	14	14	7	7	7	1278	0	23	1195	37
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	2	4	4	2	2	2	337	0	6	315	10
Total Analysis Volume [veh/h]	69	7	15	15	7	7	7	1350	0	24	1262	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	11	0	0	11	0	12	98	0	11	97	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	7	7	2	97	4	100
g / C, Green / Cycle	0.06	0.06	0.06	0.06	0.01	0.81	0.03	0.83
(v / s)_i Volume / Saturation Flow Rate	0.05	0.01	0.01	0.01	0.00	0.76	0.01	0.74
s, saturation flow rate [veh/h]	1259	1506	1252	1547	1603	1683	1603	1674
c, Capacity [veh/h]	106	89	100	91	21	1361	52	1386
d1, Uniform Delay [s]	58.53	53.98	56.93	53.71	58.79	9.15	57.10	6.75
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.69	1.35	0.63	0.77	8.90	17.58	5.88	9.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.24	0.14	0.15	0.33	0.94	0.44	0.89
d, Delay for Lane Group [s/veh]	64.22	55.32	57.56	54.48	67.70	26.73	62.99	16.66
Lane Group LOS	E	E	E	D	E	C	E	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.13	0.63	0.42	0.41	0.26	21.47	0.76	13.86
50th-Percentile Queue Length [ft/ln]	53.18	15.66	10.61	10.32	6.48	536.78	18.89	346.40
95th-Percentile Queue Length [veh/ln]	3.83	1.13	0.76	0.74	0.47	29.07	1.36	19.96
95th-Percentile Queue Length [ft/ln]	95.73	28.18	19.10	18.58	11.66	726.76	34.01	499.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.22	55.32	55.32	57.56	54.48	54.48	67.70	26.73	26.73	62.99	16.66	16.66
Movement LOS	E	E	E	E	D	D	E	C	C	E	B	B
d_A, Approach Delay [s/veh]	62.05			56.02			26.96			17.51		
Approach LOS	E			E			C			B		
d_I, Intersection Delay [s/veh]	23.93											
Intersection LOS	C											
Intersection V/C	0.917											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.40	51.40	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.012	1.994	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	117	117	1565	1548
d_b, Bicycle Delay [s]	53.27	53.27	2.84	3.06
I_b,int, Bicycle LOS Score for Intersection	1.702	1.606	3.680	3.630
Bicycle LOS	A	A	D	D

Sequence

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

Intersection Level Of Service Report
Intersection 6: Elizabeth Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.645

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	3	0	4	3	0	39	46	930	8	0	743	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	172	0	27	4	0	13	12	295	0	32	253	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	0	31	7	0	54	60	1263	8	32	1026	14
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	0	8	2	0	14	16	334	2	8	272	4
Total Analysis Volume [veh/h]	185	0	33	7	0	57	64	1338	8	34	1087	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	120	0	0	120	0	120	120	0	120	120	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	17	0	0	17	0	11	45	0	13	47	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13	13	5	47	47	4	45	45
g / C, Green / Cycle	0.17	0.17	0.17	0.17	0.07	0.62	0.62	0.05	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.14	0.02	0.01	0.04	0.04	0.38	0.38	0.02	0.31	0.31
s, saturation flow rate [veh/h]	1215	1431	1240	1431	1603	1683	1679	1603	1683	1675
c, Capacity [veh/h]	241	249	262	249	110	1041	1039	77	1006	1001
d1, Uniform Delay [s]	33.90	26.25	28.41	26.69	33.91	8.79	8.79	34.83	8.82	8.82
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.24	0.22	0.04	0.43	4.19	2.70	2.71	3.64	1.92	1.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.12	0.03	0.22	0.54	0.61	0.61	0.42	0.52	0.52
d, Delay for Lane Group [s/veh]	38.14	26.47	28.45	27.12	38.10	11.49	11.50	38.47	10.74	10.75
Lane Group LOS	D	C	C	C	D	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.47	0.48	0.11	0.85	1.12	5.25	5.24	0.61	4.17	4.15
50th-Percentile Queue Length [ft/ln]	86.79	11.94	2.79	21.22	27.98	131.20	131.02	15.27	104.17	103.75
95th-Percentile Queue Length [veh/ln]	6.25	0.86	0.20	1.53	2.01	9.00	8.99	1.10	7.50	7.47
95th-Percentile Queue Length [ft/ln]	156.22	21.49	5.02	38.19	50.36	225.12	224.87	27.48	187.51	186.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.14	26.47	26.47	28.45	27.12	27.12	38.10	11.50	11.50	38.47	10.75	10.75
Movement LOS	D	C	C	C	C	C	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	36.39			27.27			12.70			11.57		
Approach LOS	D			C			B			B		
d_I, Intersection Delay [s/veh]	14.41											
Intersection LOS	B											
Intersection V/C	0.645											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.11	29.11	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	1.999	1.969	0.000	0.000
Crosswalk LOS	A	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	346	346	1091	1144
d_b, Bicycle Delay [s]	25.70	25.70	7.76	6.88
I_b,int, Bicycle LOS Score for Intersection	1.900	1.660	2.658	2.444
Bicycle LOS	A	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 7: Jana Ln (NS) at Clinton Keith Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.693

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	7	4	929	7	2	740
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	176	127	301	40	168	210
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	131	1268	47	170	980
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	35	338	13	45	261
Total Analysis Volume [veh/h]	195	140	1352	50	181	1045
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	120	0	120	0	120	120
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	12	0	19	0	29	48
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	33	33	7	44
g / C, Green / Cycle	0.13	0.13	0.54	0.54	0.12	0.73
(v / s)_i Volume / Saturation Flow Rate	0.10	0.08	0.35	0.36	0.10	0.28
s, saturation flow rate [veh/h]	1781	1589	1870	1847	1781	3560
c, Capacity [veh/h]	237	212	1014	1001	223	2613
d1, Uniform Delay [s]	25.18	24.62	9.73	9.80	25.44	2.94
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.45	2.97	3.26	3.42	5.51	0.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.62	0.65	0.66	0.76	0.38
d, Delay for Lane Group [s/veh]	30.64	27.59	12.99	13.22	30.95	3.35
Lane Group LOS	C	C	B	B	C	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.77	1.86	5.03	5.10	2.42	0.74
50th-Percentile Queue Length [ft/ln]	69.23	46.53	125.85	127.39	60.44	18.49
95th-Percentile Queue Length [veh/ln]	4.98	3.35	8.71	8.80	4.35	1.33
95th-Percentile Queue Length [ft/ln]	124.61	83.75	217.83	219.94	108.80	33.28

Movement, Approach, & Intersection Results

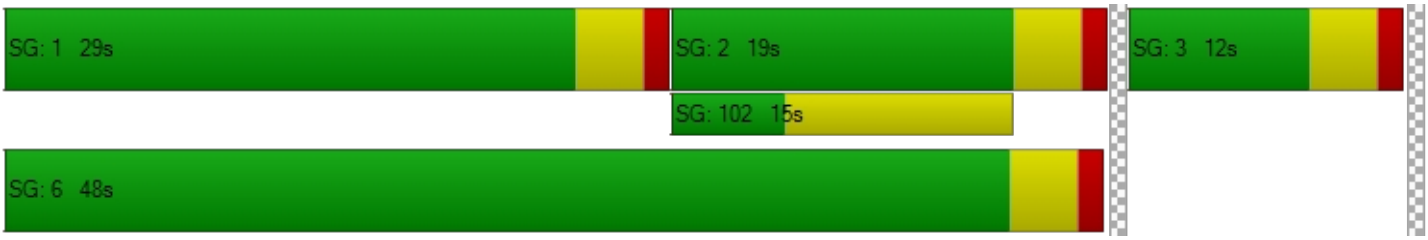
d_M, Delay for Movement [s/veh]	30.64	27.59	13.10	13.22	30.95	3.35
Movement LOS	C	C	B	B	C	A
d_A, Approach Delay [s/veh]	29.36		13.11		7.43	
Approach LOS	C		B		A	
d_I, Intersection Delay [s/veh]	12.60					
Intersection LOS	B					
Intersection V/C	0.693					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.065	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	266	499	1465
d_b, Bicycle Delay [s]	22.57	16.91	2.15
I_b,int, Bicycle LOS Score for Intersection	1.560	2.644	2.508
Bicycle LOS	A	B	B

Sequence

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



APPENDIX E

TRAFFIC SIGNAL WARRANT WORKSHEETS

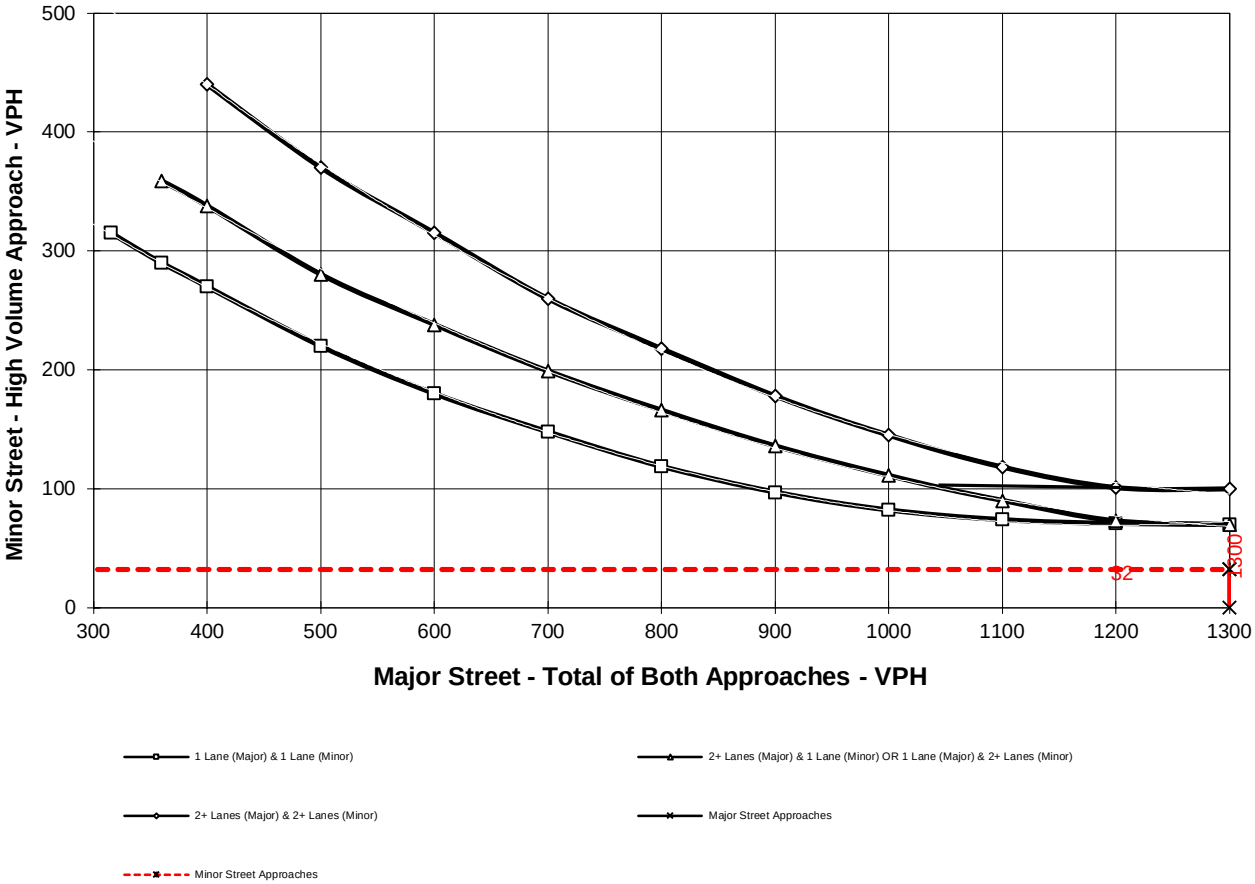
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Ambient Growth Plus Project - AM Peak Hour

Major Street Name = **Clinton Keith Road** Total of Both Approaches (VPH) = **1733**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Salida Del Sol** High Volume Approach (VPH) = **32**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



* NOTE:

Warrant includes adjustments to right turning movements from the minor approach consistent with CAMUTCD procedures.

** NOTE:

100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

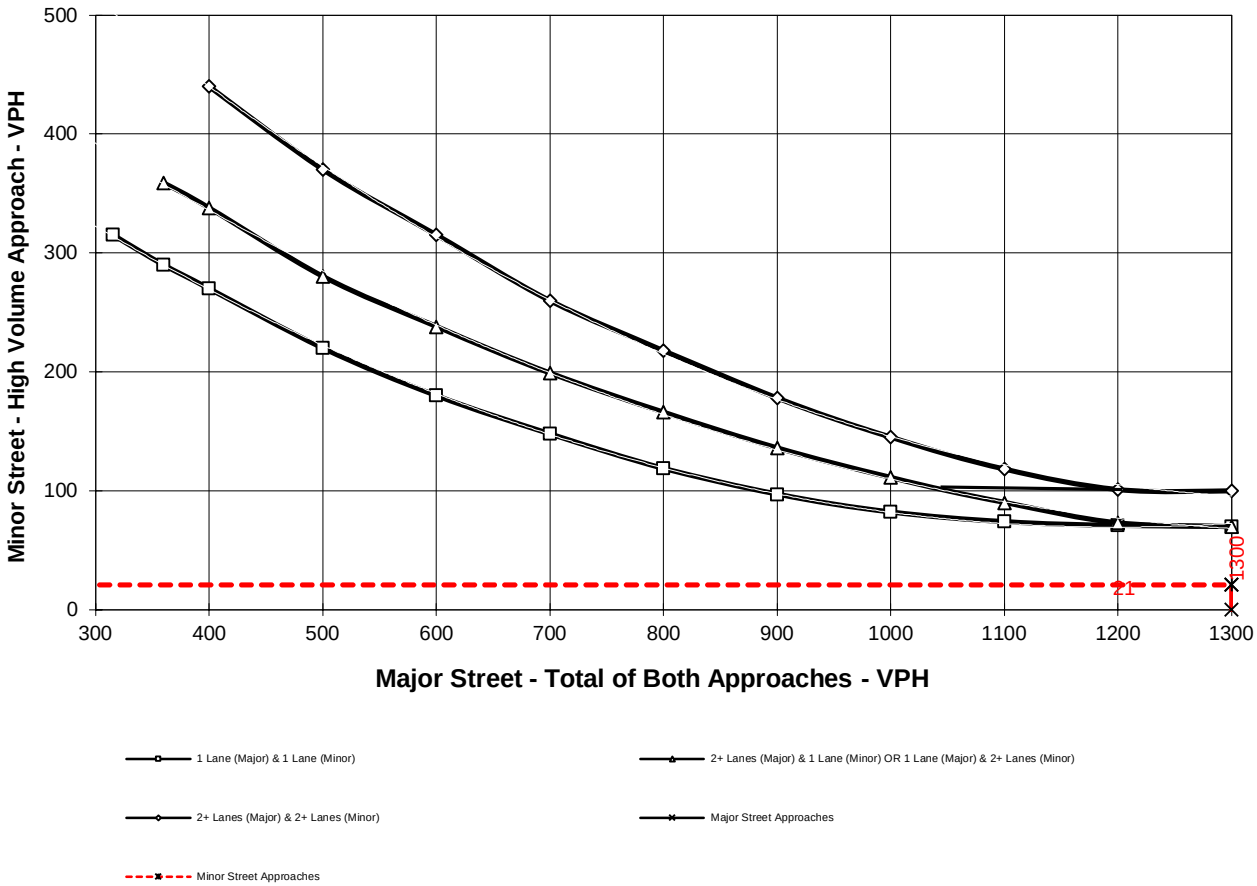
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Ambient Growth Plus Project - PM Peak Hour

Major Street Name = **Clinton Keith Road** Total of Both Approaches (VPH) = **1957**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Salida Del Sol** High Volume Approach (VPH) = **21**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



* NOTE:

Warrant includes adjustments to right turning movements from the minor approach consistent with CAMUTCD procedures.

** NOTE:

100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Ambient Growth Plus Project - PM Peak Hour

Major Street Name = **Clinton Keith Road**

Total of Both Approaches (VPH) = **1974**

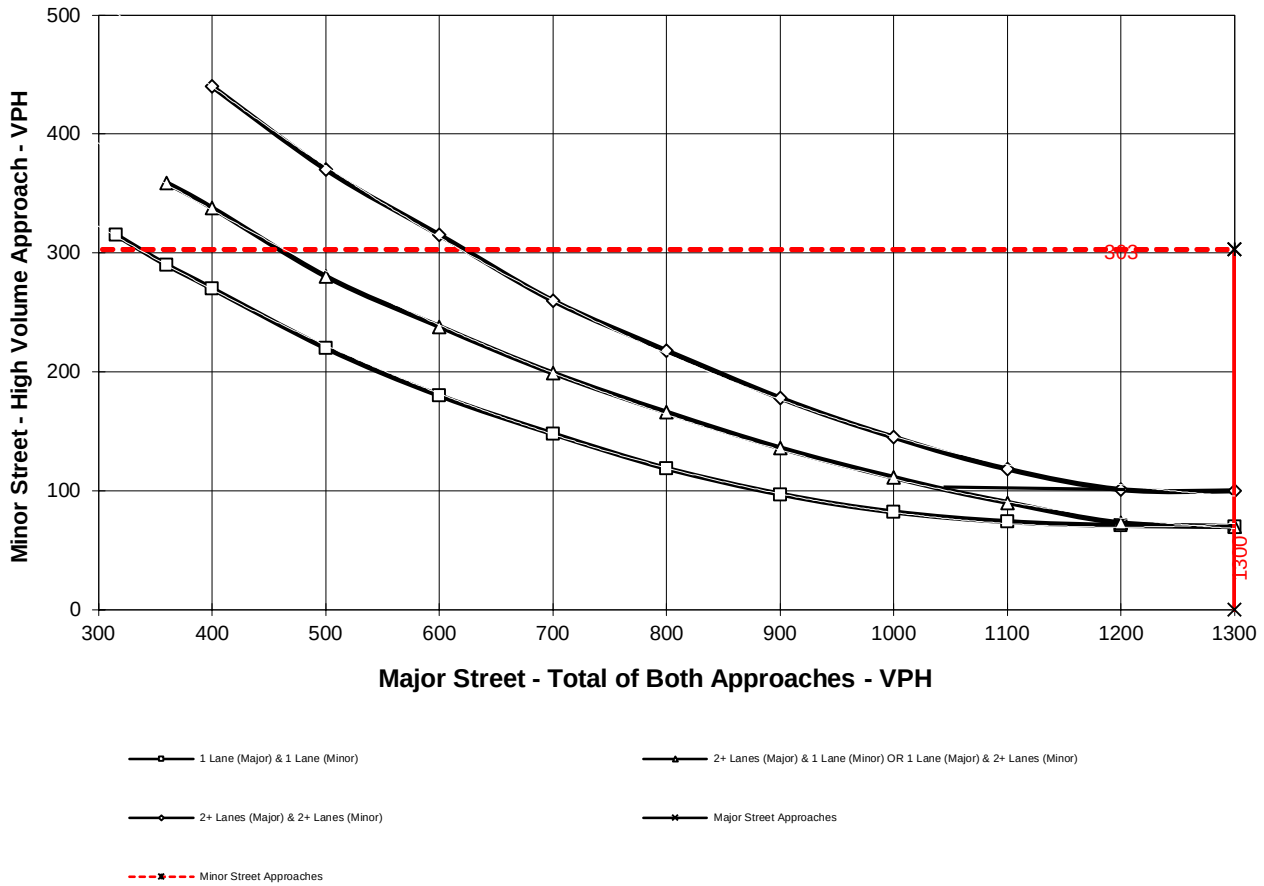
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Jana Lane**

High Volume Approach (VPH) = **303**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



* NOTE:

Warrant includes adjustments to right turning movements from the minor approach consistent with CAMUTCD procedures.

** NOTE:

100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

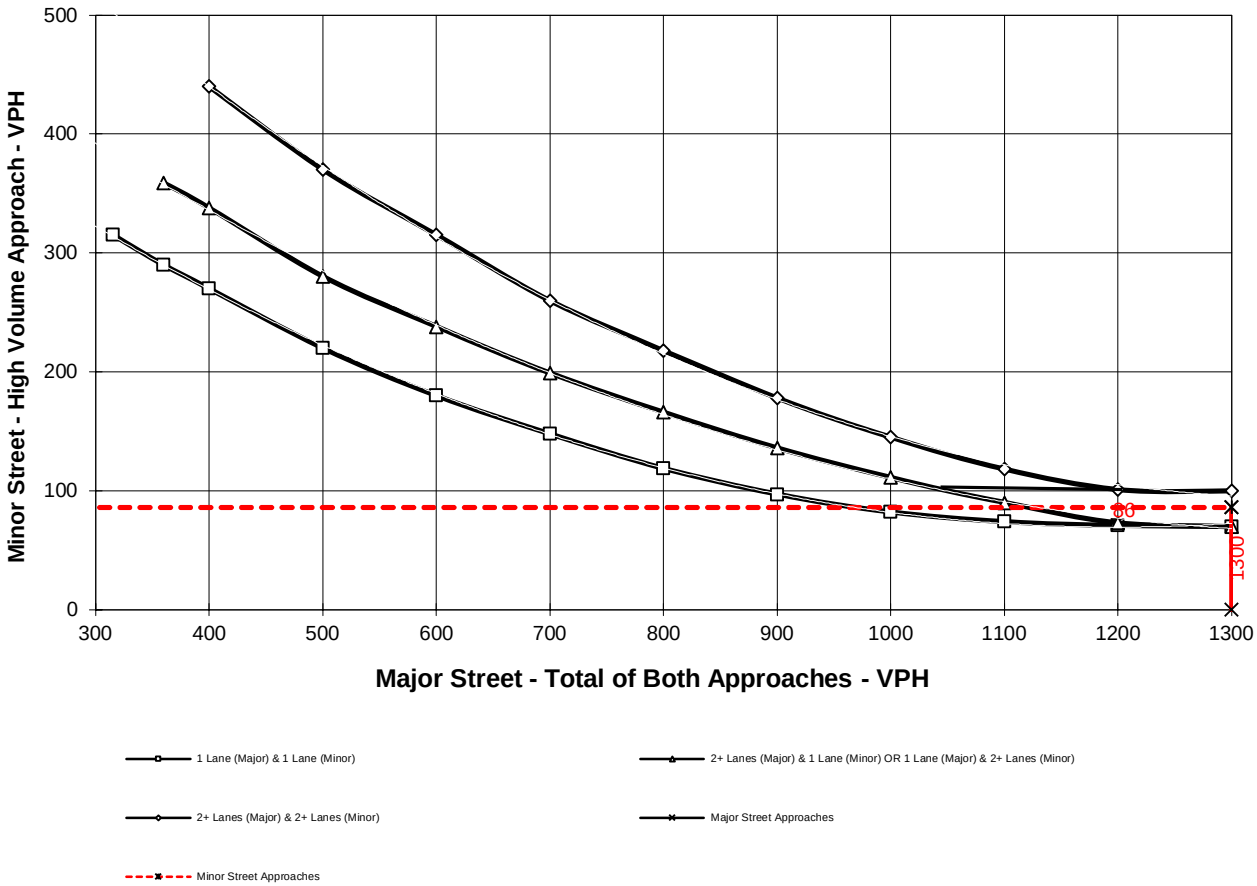
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Ambient Growth Plus Project Plus Cumulative - PM Peak Hour

Major Street Name = **Clinton Keith Road** Total of Both Approaches (VPH) = **2540**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Salida Del Sol** High Volume Approach (VPH) = **86**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



* NOTE:

Warrant includes adjustments to right turning movements from the minor approach consistent with CAMUTCD procedures.

** NOTE:

100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing Plus Ambient Growth Plus Project Plus Cumulative - PM Peak Hour

Major Street Name = **Clinton Keith Road**

Total of Both Approaches (VPH) = **2403**

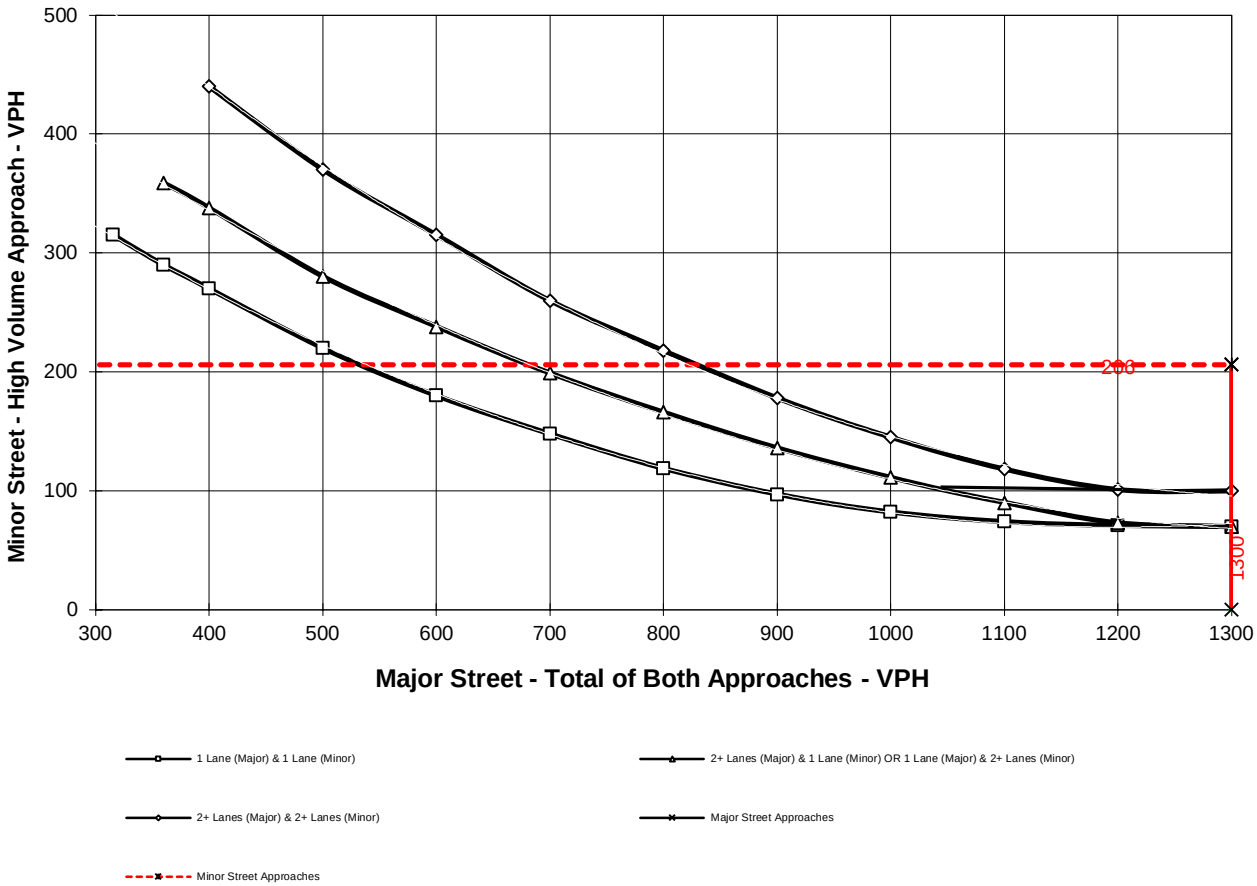
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Elizabeth Lane**

High Volume Approach (VPH) = **206**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



* NOTE:

Warrant includes adjustments to right turning movements from the minor approach consistent with CAMUTCD procedures.

** NOTE:

100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

GANDDINI GROUP INC.

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