Appendix L

Transportation

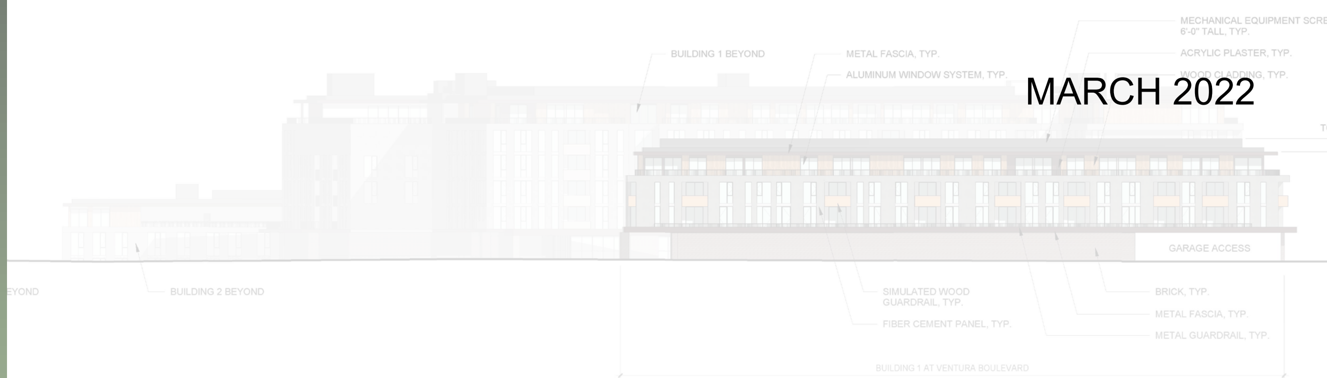
Appendix L.1

Transportation Assessment

DRAFT

TRANSPORTATION ASSESSMENT FOR THE RESIDENCES AT SPORTSMEN'S LODGE

STUDIO CITY, CALIFORNIA



MARCH 2022

PREPARED FOR

SPORTSMEN'S LODGE OWNER, LLC

PREPARED BY

Gibson transportation consulting, inc.

DRAFT

TRANSPORTATION ASSESSMENT
FOR
THE RESIDENCES AT SPORTSMEN'S LODGE

STUDIO CITY, CALIFORNIA

March 2022

Prepared for:

SPORTSMEN'S LODGE OWNER, LLC

Prepared by:

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Chapter 1
Introduction

This study presents the transportation assessment for the proposed development of The Residences at Sportsman's Lodge (Project) at 12825 Ventura Boulevard (Project Site) in the Studio City neighborhood and the *Sherman Oaks - Studio City -Toluca Lake - Cahuenga Pass Community Plan* (Los Angeles Department of City Planning [LADCP], 1998) (Community Plan) area of Los Angeles (City), California. The methodology and base assumptions used in the analysis were established in conjunction with the Los Angeles Department of Transportation (LADOT).

PROJECT DESCRIPTION

The Project proposes the construction of 442 market rate apartment units, 78 affordable apartment units, 27,926 square feet (sf) of retail space, and 18,019 sf of restaurant space in one seven-story building and one three-story building with three levels of subterranean parking provided on-site. The existing 200-room hotel would be removed and replaced as part of the Project design. Access to the Project would be provided via one full-access existing driveway on Coldwater Canyon Avenue and one full-access existing driveway on Ventura Boulevard. An Americans with Disabilities Act (ADA) compliant passenger loading area is proposed on Ventura Boulevard adjacent to the southern boundary of the Project Site, which would eliminate a third existing driveway and widen the street by 10 feet. Additional sidewalk width could be provided on-site to connect the passenger pick-up/drop-off lane to the Project and to provide a continuous 10-foot wide sidewalk. The passenger pick-up/drop-off lane is a voluntary improvement proposed by the Applicant. The design and installation must be approved by LADOT. A pedestrian paseo connecting the public right-of-way (ROW) on Ventura Boulevard to the Project and the Los Angeles River path north of the Project Site would also be constructed as part of the Project. The Project is anticipated to be complete in Year 2027.

The conceptual Project site plan is shown in Figure 1.

PROJECT LOCATION

The Project Site is within Council District 2 and is contained within Assessor Parcel Numbers 2375021027, 2375021028, and 2375021029. As shown in Figure 2, the Project Site is bounded by the Los Angeles River to the north, retail uses to the east, Ventura Boulevard to the south, and Coldwater Canyon Avenue to the west.

The Project is located approximately 0.70 miles south of the Ventura Freeway (US 101), which provides regional transportation between downtown Los Angeles and Ventura. The Project Site is served by major streets such as Ventura Boulevard, Coldwater Canyon Avenue, Moorpark Street, and Whitsett Avenue.

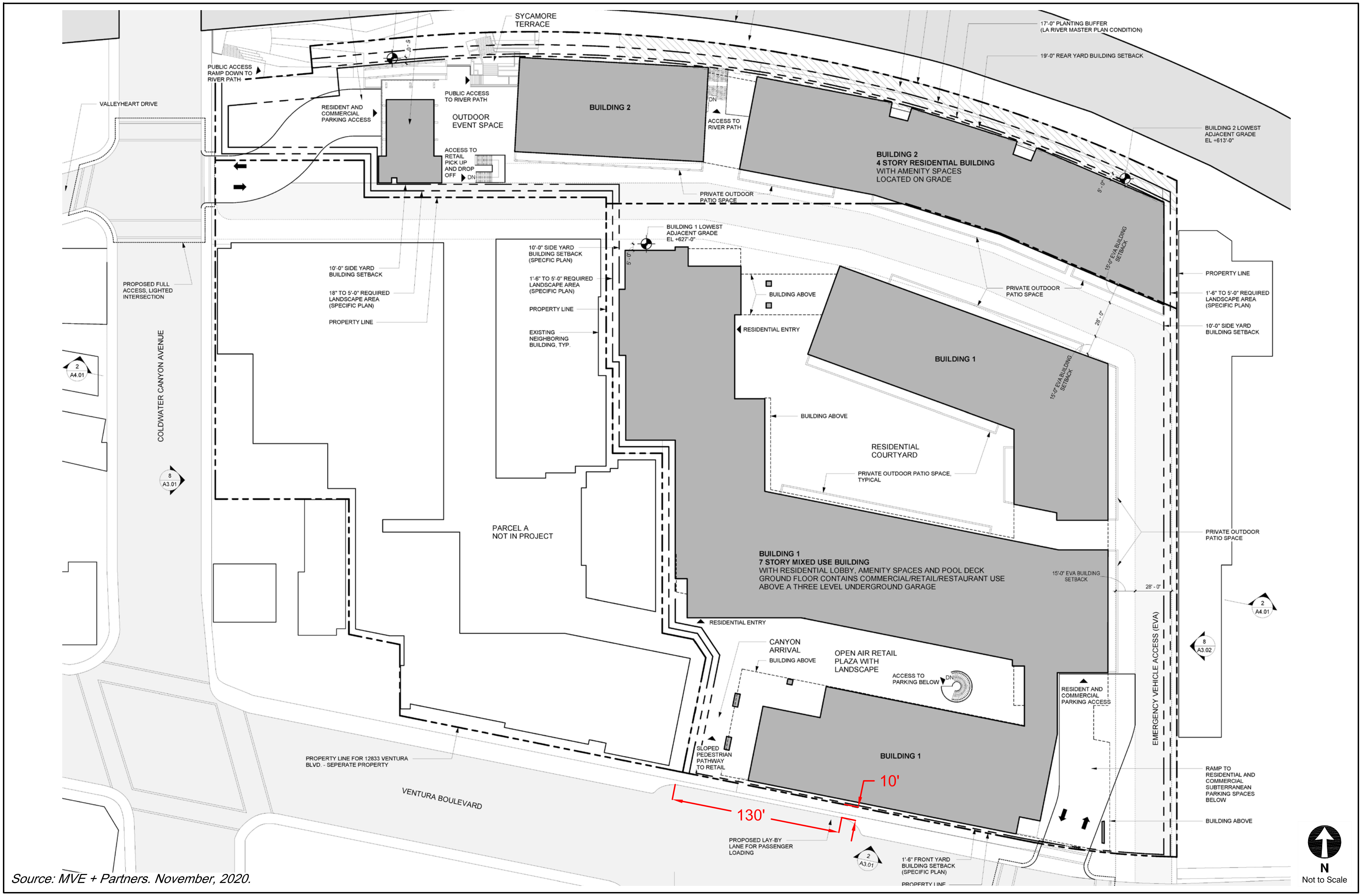
Transit service is provided along Ventura Boulevard within the Project Study Area. Additionally, the Project Site is located adjacent to multiple Los Angeles County Metropolitan Transportation Authority (Metro) bus lines at Ventura Boulevard & Coldwater Canyon Avenue. Metro Line 240 connects to the Metro B (Red) Line at the Universal City station.

STUDY SCOPE

The scope of analysis for this study was developed in consultation with LADOT and is consistent with *Transportation Assessment Guidelines* (LADOT, July 2020) (TAG) and in compliance with the California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations, Title 14, Section 15000 and following). The base assumptions and technical methodologies (i.e., trip generation, study locations, analysis methodology, etc.) were identified as part of the study approach and were outlined in a Memorandum of Understanding (MOU) that was approved by LADOT in March 2021 and is provided in Appendix A.

ORGANIZATION OF REPORT

This report is divided into six chapters, including this introduction. Chapter 2 describes the Project context including the existing and future circulation system, traffic volumes, and traffic conditions in the Project area. Chapter 3 provides the Project traffic and trip distribution. Chapter 4 presents the CEQA analysis of transportation impacts. Chapter 5 details the non-CEQA transportation analyses. Chapter 6 summarizes the analyses and study conclusions. The appendices contain supporting documentation, including the signed MOU that outlines the study scope and assumptions, and additional details supporting the technical analyses.



Source: MVE + Partners. November, 2020.

PROJECT SITE PLAN

FIGURE 1

PROJECT SITE LOCATION

FIGURE 2

Chapter 2
Project Context

A comprehensive data collection effort was undertaken to develop a detailed description of existing and future conditions in the Project area.

The Existing Conditions analysis includes an assessment of the existing transportation infrastructure and conditions including freeway and street systems and transit service, as well as pedestrian and bicycle circulation, at the time the MOU was approved in March 2021. Fieldwork (lane configurations, signal phasing, parking restrictions, etc.) for the analyzed intersections was collected in Year 2021.

In addition, this Chapter contains a discussion of the future condition assumptions used to develop the Future without Project Conditions in Year 2027, which corresponds to projected occupancy of the Project.

STUDY AREA

The Project's transportation analysis Study Area, shown in Figure 3, includes intersections along Coldwater Canyon Avenue and Ventura Boulevard. This Study Area was established in consultation with LADOT based on the following factors identified in the TAG:

1. Primary Project driveway(s)
2. Intersections at either end of the block on which the Project is located or up to 600 feet from the primary Project driveway(s)
3. Unsignalized intersections adjacent to the Project Site that are expected to be integral to the Project's site access and circulation plan
4. Signalized intersections in proximity to the Project Site where 100 or more net new Project peak hour trips would be added

A total of five intersections (Study Intersections), listed in Table 1, were identified for detailed analysis during the MOU process. The existing lane configurations at the analyzed intersections are provided in Figure 4.

EXISTING TRANSPORTATION CONDITIONS

Existing Street System

The existing street system in the Study Area consists of a regional roadway system including arterials and local streets that provide regional, sub-regional, or local access and circulation within the Study Area. These transportation facilities generally provide two to four travel lanes and usually allow parking on one or both sides of the street. Typically, the speed limits range between 25 and 40 miles per hour (mph) on the streets and 55 mph on the freeways.

Street classifications for the City roadways are designated in *Mobility Plan 2035, An Element of the General Plan* (LADCP, September 2016) (Mobility Plan). The Mobility Plan defines specific street standards in an effort to provide an enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. Per the Mobility Plan, street classifications are defined as follows:

- Boulevards represent the widest arterial streets that typically provide regional access to major destinations and include two categories:
  - Boulevard I provides up to four travel lanes in each direction with a target operating speed of 40 mph and generally includes an ROW width of 136 feet and pavement width of 100 feet.
  - Boulevard II provides up to three travel lanes in each direction with a target operating speed of 35 mph, with ROW widths varying from 110 feet and pavement widths from 80 feet.
- Avenues are narrower arterial streets which pass through both residential and commercial areas and include three categories:
  - Avenue I provides up to two travel lanes in each direction with a target operating speed of 35 mph, with a ROW width of 100 feet and pavement width of 70 feet.

- Avenue II provides up to two travel lanes in each direction with a target operating speed of 30 mph, with a ROW width of 86 feet and pavement width of 56 feet.

- Avenue III provides up to two travel lanes in each direction with a target operating speed of 25 mph, with a ROW width of 72 feet and pavement width of 46 feet.

- Collector Streets are generally located in residential neighborhoods and provide access to and from arterial streets for local traffic and are not intended for cut-through traffic. They provide one travel lane in each direction with a target operating speed of 25 mph, with a ROW width of generally 66 feet and pavement width of 40 feet.

- Local Streets are intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street. They provide one travel lane in each direction with a target operating speed of 15 to 20 mph. Pavement widths will vary between 30-36 feet within a ROW width of 50-60 feet. Local Streets include two categories:
    - Continuous Local Streets connect to other streets at both ends.
    - Non-continuous Local Streets lead to a dead-end.

Primary regional access to the Project Site is provided by US 101. In proximity to the Project Site, the Study Area is served by arterial streets such as Ventura Boulevard, Coldwater Canyon Avenue, Moorpark Street, and Whitsett Avenue. The following is a brief description of the roadways in the Study Area, including their classifications under the Mobility Plan:

Freeways

- US 101 – US 101 generally runs in the east-west direction and is located 0.70 miles north of the Project Site. In the vicinity of the Project Site, US 101 provides four travel lanes in each direction. Access to and from US 101 is available via an interchange at Coldwater Canyon Avenue.

Roadways

- Coldwater Canyon Avenue – Coldwater Canyon Avenue is a designated Avenue II that runs in the north-south direction and is located adjacent to the western boundary of the Project Site. It provides between three and five travel lanes, with one to two in each direction, and a two-way left-turn median. Limited unmetered on-street parking is provided on both sides of the street. Inside lane widths are typically 10 feet wide and the total paved width is typically 52 to 64 feet.

- Whitsett Avenue – Whitsett Avenue is a designated Avenue II that runs in the north-south direction and is located to the east of the Project Site. It provides four travel lanes, two in each direction. Unmetered on-street parking is generally provided on both sides of the street. Inside lane widths are typically 10 feet wide and the total paved width is typically 56 to 64 feet.

- Laurel Terrace Drive – Laurel Terrace Drive is a designated Collector Street that runs in the northwest-southeast direction and is located to the east of the Project Site. It provides two travel lanes, one in each direction. Unmetered on-street parking is generally provided on the north side of the street. The total paved width is typically 30 feet.

- Moorpark Street – Moorpark Street is a designated Avenue II that runs in the east-west direction and is located to the north of the Project Site. It provides three travel lanes, one in each direction, and a two-way left-turn median. Unmetered on-street parking is generally provided on both sides of the street. The total paved width is typically 52 to 60 feet. Bicycle lanes in both directions are provided to the east of Coldwater Canyon Avenue.

- Ventura Boulevard – Ventura Boulevard is a designated Boulevard II that runs in the east-west direction and is located adjacent to the southern boundary of the Project Site. It provides five travel lanes, two in each direction, and a two-way left-turn median. Metered on-street parking is generally provided on both sides of the street. Inside lane widths are typically 10 feet wide and the total paved width is typically 70 feet.

The existing intersection mobility facilities at the Study Intersections are shown in Figure 5, and the Mobility Plan roadway designations and pedestrian destinations are illustrated in Figure 6.

Existing Transit System

Figure 7 illustrates the existing public transit service in the Study Area, which is served by bus lines operated by Metro and LADOT Downtown Area Short Hop (DASH). Metro's NextGen Bus Plan was evaluated for consideration under existing conditions, as changes were implemented in the area in June 2021.

Table 2 summarizes the existing transit service operating in the Study Area for each of the service providers in the region, the type of service (peak vs. off-peak, express vs. local), and frequency of service. The average headways during the peak hour were estimated using detailed trip and ridership data from April 2019 provided by Metro, as well as collected data from the other transit operators.

Tables 3A and 3B summarize the total capacity of the nearby Metro transit system during the morning and afternoon peak hours based on the frequency of service of each line, detailed ridership data provided by Metro, and the maximum seated and standing capacity of each bus or train. Due to the recent NextGen Bus Plan significant improvements and updates to bus service in this area, ridership information is not available at this time and was omitted from the analysis. However, given that Metro is increasing frequency and accelerating bus routes through implementation of the NextGen Bus Plan, it is likely that ample bus capacity would be available. Bus and rail lines with stop locations located more than 0.25 miles from the Project Site were excluded from the summary.

Additionally, because of Line 240, Ventura Boulevard is considered a High-Quality Transit Corridor as defined by *Connect SoCal – 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy* (Southern California Association of Governments [SCAG], Adopted September 2020) (RTP/SCS). The line provides headways of less than 15 minutes during peak hours.

Existing Bicycle System

Based on the Mobility Plan and *2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element* (LADCP, Adopted March 1, 2011) (2010 Bicycle Plan), the existing bicycle system in the Study Area is limited. The components of the 2010 Bicycle Plan have been incorporated into the bicycle network of the Mobility Plan.

The Mobility Plan consists of a Bicycle Enhanced Network (Low-Stress Bikeway System) and a Bicycle Lane Network. The Bicycle Enhanced Network is a subset of, and supplemental to, the 2010 Bicycle Plan and is comprised of a network of streets that prioritize bicyclists and provide bicycle paths (Class I) and protected bicycle lanes (Class IV). Class IV protected bicycle lanes including cycle tracks, bicycle traffic signals, and demarcated areas to facilitate turns at intersections and along neighborhood streets, provide further protection from vehicular travel lanes. These Class IV networks typically provide mini-roundabouts, cross-street stop signs, crossing islands at major intersection crossings, improved street lighting, bicycle boxes, and bicycle-only left-turn pockets. Once implemented, these facilities would offer a safer environment for both cyclists and motorists. The Bicycle Lane Network consists of Class II bicycle lanes with striped separation and Class III bicycle lanes (sharrows). Currently within the Study Area, Moorpark Street provides Class II east/west bicycle lanes on both sides of the street to the east of Coldwater Canyon Avenue.

Existing Pedestrian Facilities

The walkability of existing facilities is based on the availability of pedestrian routes necessary to accomplish daily tasks without the use of an automobile. These attributes are quantified by Walk Score and assigned a score out of 100 points. With plentiful access to various commercial businesses, residences, and cultural centers near the Project Site, the walkability of the Study Area is approximately 88 points[1].

The sidewalks that serve as routes to the Project Site generally provide proper connectivity and adequate widths for a comfortable and safe pedestrian environment. An inventory of pedestrian attractors within a 0.25-mile walking distance from the Project Site is illustrated in Figure 6.

Vision Zero

As described in *Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025* (City of Los Angeles, August 2015), Vision Zero is a traffic safety policy that promotes strategies, including modifying the design of streets, to eliminate collisions that result in severe injury or death and increase safety for the most vulnerable road users. Vision Zero has identified the High Injury Network (HIN), a network of streets based on the collision data from the last five years, where strategic investments would have the biggest impact in reducing death and severe injury. Within the Study Area, Ventura Boulevard is identified as part of the HIN.

Existing Traffic Volumes

Traffic count data collection is generally conducted during times with typical travel demand patterns (i.e., when local schools are in session, businesses in full operation, weeks without holidays, etc.) However, due to the current traffic conditions related to the State of California and City response to COVID-19, LADOT has directed that transportation assessments utilize traffic

[1] Walk Score (www.walkscore.com) rates the Project Site (12852 Ventura Boulevard) with a score of 88 of 100 possible points (scores assessed on February 4, 2021, for the Studio City neighborhood). Walk Score calculates the walkability of specific addresses by taking into account the ease of living in the neighborhood with a reduced reliance on automobile travel.

counts collected prior to March 1, 2020. Given the uncertainty of the termination of the City's Safer-at-Home order, LADOT is allowing the use of historical traffic count data with application of an adjustment factor.

Intersection turning movement counts for typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods were collected in December 2018 and January 2019 while schools were in session. Per the TAG, a growth factor of 1% per year was applied to these intersections to simulate Year 2021 traffic volumes.

The existing intersection peak hour traffic volumes, representing Existing Conditions in Year 2021, are illustrated in Figure 8. Traffic volume data is provided in Appendix B.

FUTURE CUMULATIVE TRANSPORTATION CONDITIONS

The forecast of Future without Project Conditions was prepared in accordance with procedures outlined in the TAG, specifically two requirements for developing the cumulative traffic volume forecast:

> "The Transportation Assessment must estimate ambient traffic conditions for the study horizon year selected during the scoping phase and recorded in the executed MOU. The study must clearly identify the horizon year and annual ambient growth rate used for the study. The horizon year should align with the development project's expected completion year. For development projects constructed in phases over several years, the Transportation Assessment should analyze intermediary milestones before the buildout and completion of the project. The annual ambient growth rate shall be determined by LADOT staff during the scoping process and can be based on an adopted TSP, the most recent SCAG regional transportation model, the citywide transportation model, or other empirical information approved by LADOT.
>
> "The Transportation Assessment must consider related projects. For related development projects, this should include the associated trip generation for known development projects within one-half mile (2,640 foot) radius of the project site and one-quarter mile (1,320 foot) radius of the farthest outlying study intersections. Consultation with the Department of City Planning and LADOT may be required to compile the related projects list. The City's ZIMAS database can be used to assist in identifying development projects that have submitted applications to the City of Los Angeles. Project access and circulation constraints would be determined by adding project-generated trips to future base traffic volumes including ambient growth and related projects and conducting the operational analysis."

As described in detail below, this analysis includes increases to traffic from future projects and from regional growth projections. The ambient growth factor discussed below likely includes some traffic increases resulting from the Related Projects. Therefore, through some inherent double-counting of vehicles, the traffic analysis provides a highly conservative estimate of Future without Project traffic volumes.

The Future without Project traffic volumes, therefore, include ambient growth, which reflects increases in traffic due to regional growth and development outside the Study Area, as well as traffic generated by ongoing or entitled projects near or within the Study Area.

Ambient Traffic Growth

Existing traffic levels have historically been projected to increase as a result of regional growth and development; however, the implications of COVID-19 may influence those future rate projections. Nevertheless, to provide a conservative estimate of future background conditions, this analysis used the 1% annual growth precedent specified by LADOT, compounded annually to the existing traffic volumes to simulate Year 2027 traffic volumes. The total adjustment applied over the six-year period was 6.15%. This growth factor accounts for increases in traffic due to potential projects not yet proposed and projects located outside the Study Area.

Related Projects

In accordance with the CEQA Guidelines, this study also considered the effects of the Project in relation to the Related Projects. Including this analysis step, the potential impact of the Project was evaluated within the context of past, present, and probable future developments capable of producing cumulative impacts. The list of Related Projects is based on information provided by LADCP and LADOT in January 2021, as well as recent studies of development projects in the area up to August 2021. The Related Projects are detailed in Table 4 and their approximate locations are shown in Figure 9.

Though the buildout years of many of these Related Projects are uncertain and may be well beyond the buildout year of the Project, and notwithstanding that some may never be approved or developed, they were all considered as part of this transportation assessment and conservatively assumed to be completed by the Project buildout year of 2027. The traffic growth due to the development of Related Projects considered in this analysis is highly conservative and, by itself, substantially overestimates the actual traffic volume growth in the area that would likely occur prior to Project buildout years. With the addition of the 1% per year ambient growth factor previously discussed, the Future without Project cumulative condition is even more conservative.

Using these conservative assumptions, the potential traffic operations of the Project were evaluated. The development of estimated traffic volumes added to the Study Intersections as a result of Related Projects involves the use of a three-step process: trip generation, trip distribution, and trip assignment.

Trip Generation. Trip generation estimates for the Related Projects were provided by LADOT or were calculated using a combination of previous study findings and the trip generation rates contained in *Trip Generation Manual, 10th Edition*, (Institute of Transportation Engineers, September 2017*)*. The Related Projects trip generation estimates summarized in Table 4 are conservative in that they do not in every case account for either the trips generated by the existing uses to be removed or the likely use of other travel modes (e.g., transit, bus, bicycling, walking, carpool, etc.) Further, they do not account for the internal capture trips within a multi-use development or for the interaction of trips between multiple Related Projects, in which one Related Project serves as the origin for a trip destined for another Related Project.

Trip Distribution. The geographic distribution of the traffic generated by the Related Projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which the employees/residents and potential patrons of the proposed developments are drawn, and the location of these projects in relation to the surrounding street system. These factors were considered along with logical travel routes through the street system to develop a reasonable pattern of trip distribution.

Traffic Assignment. The trip generation estimates for the Related Projects were assigned to the local street system using the trip distribution pattern described above. Figure 10 shows the peak hour traffic volumes associated with these Related Projects at the Study Intersections.

Future without Project Traffic Volumes

The Related Projects volumes were then added to the existing traffic volumes after adjustment for ambient growth through the projected Project completion year of 2027. As discussed above, this is a conservative approach as many of the Related Projects may be reflected in the ambient growth rate. These volumes represent the Future without Project Conditions (i.e., ambient traffic growth and Related Project traffic added to existing traffic volumes) for Year 2027 without the Project at the Study Intersections and are shown in Figure 11.

Future Roadway Improvements

The analysis of Future Conditions accounted for roadway improvements that were funded and reasonably expected to be implemented prior to the buildout of the proposed Project. Any roadway improvement that would result in changes to the physical configuration at the study intersections was incorporated into the analysis.

Within the Study Area, two new traffic signals are proposed by the Project adjacent to the Project Site. These intersections, Coldwater Canyon Boulevard & Valleyheart Drive / Project Driveway (Intersection #2) and Goodland Avenue / Project Driveway & Ventura Boulevard (Intersection #4) were analyzed under the Future without Project and Future with Project Conditions with and without a traffic signal.

No additional future improvements are currently funded or expected to be implemented within the Study Area. Other proposed traffic / trip reduction strategies such as transportation demand management (TDM) programs for individual buildings and developments were omitted from the Future Conditions analyses.

Future Transportation Facilities Improvements

Figure 12 illustrates the future transportation facilities improvements, including any proposed transit, bicycle, and pedestrian facilities within the Study Area. Metro’s NextGen Bus Plan was evaluated for consideration under Future without Project Conditions:

NextGen Bus Plan. Metro's NextGen Bus Plan project would restructure the current Metro bus routes and schedules into a new competitive bus system that would provide fast, frequent, reliable, and accessible service. The plan was approved by Metro in October 2020 and would be implemented with a three-phase roll-out through the end of 2021. As part of the NextGen Bus Plan, the following Metro bus lines within the immediate vicinity of the Project Site would be improved with increased frequency in service operations and route consolidation. These transit operational improvements would not affect the lane configurations at the study intersections:

- Line 150 would no longer serve the Project Site.
- Line 240 would be consolidated with Line 750 to operate more frequent service adjacent to the Project Site. Headways would be improved to 10 minutes during weekday peak hour service.
- Line 750 would be terminated as part of the consolidation with Line 240.

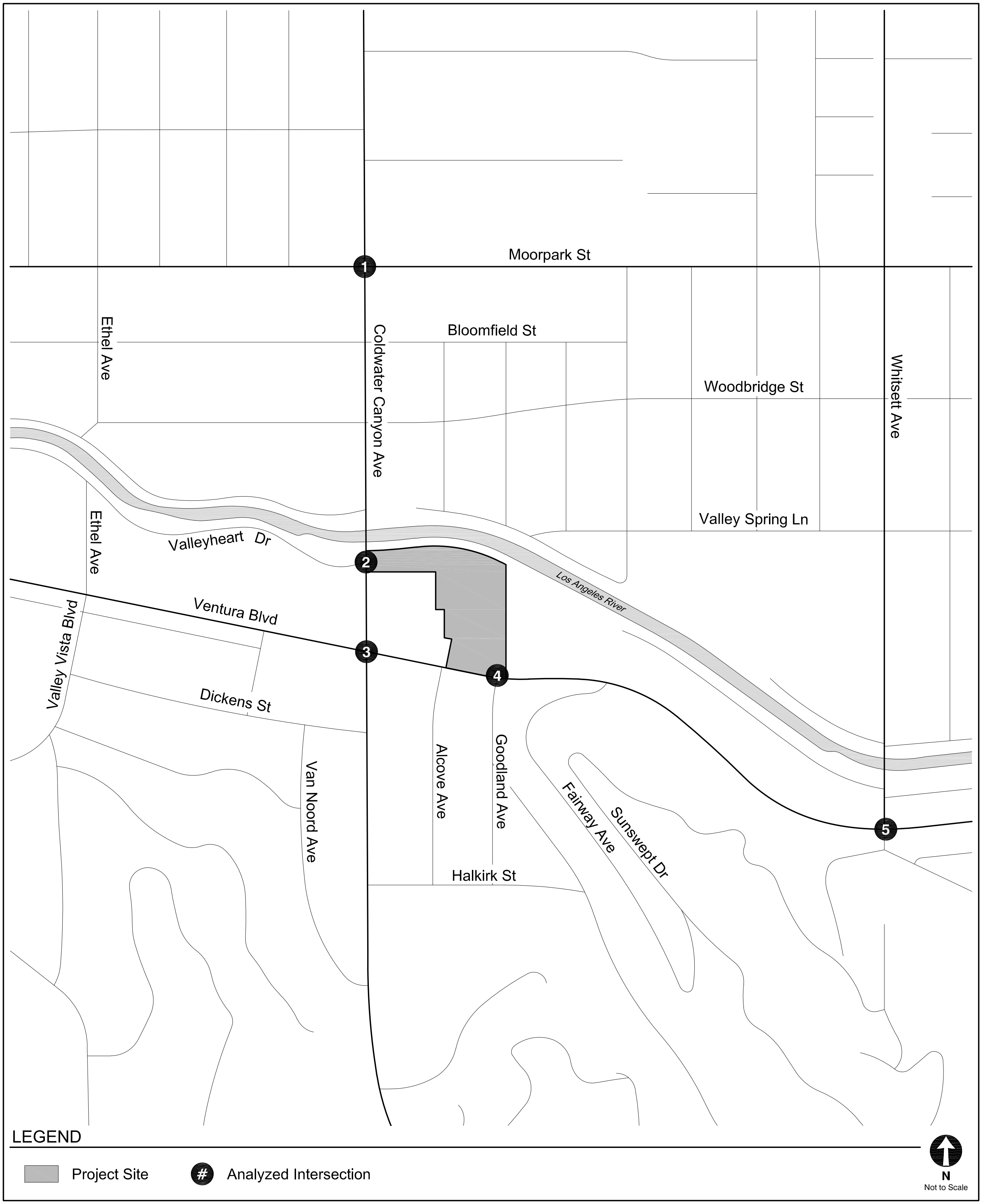
As many of these improvements were implemented in June 2021, the existing and future conditions account for the NextGen Bus Plan updates.

Other Future Roadway and Street Improvements

As described below, there are several other transportation-related projects in various stages of development that could change the physical configuration at the study intersections and affect the transportation operations in the Study Area. The Mobility Plan was investigated to determine its potential effects on the future roadway configurations, and it was determined that it would not influence the Future without Project Conditions due to either the current development stage or speculative completion date:

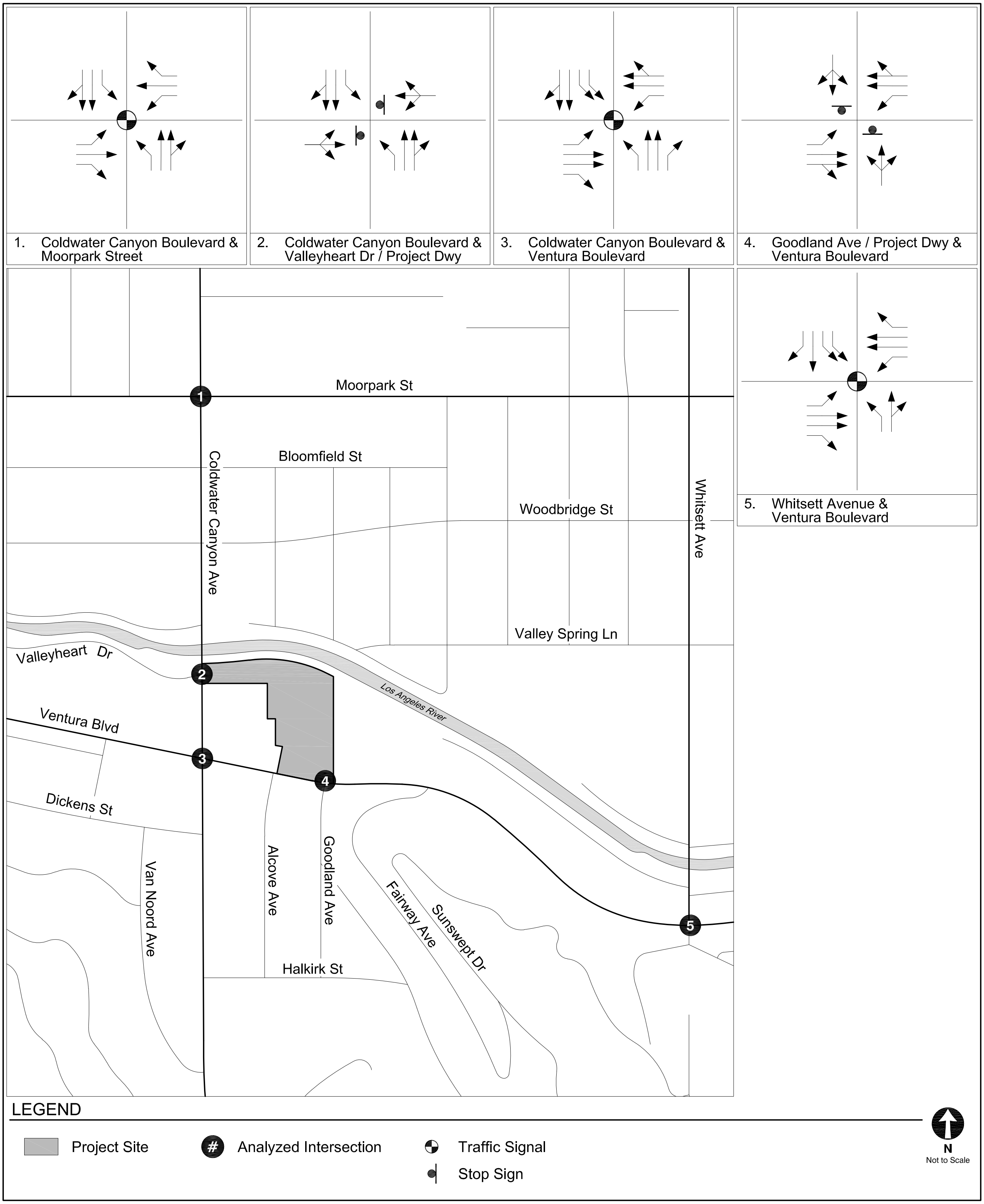
Mobility Plan. In the Mobility Plan, the City identifies key corridors as components of various "mobility-enhanced networks." Each network is intended to focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The specific improvements that may be implemented in those networks have not yet been identified, nor is there a proposed schedule for their implementation. Therefore, no changes to vehicular lane configurations were made as a result of future Mobility Plan improvements. The following mobility-enhanced networks included corridors within 0.25 miles of the Project Site and are depicted in Figure 12:

- Transit Enhanced Network: Ventura Boulevard is identified as part of the Transit-Enhanced Network.
- Bicycle Enhanced Network: The Valley LA River Bicycle Path is identified as part of the Bicycle Enhanced Network.
- Bicycle Lane Network: Moorpark Street and Ventura Boulevard are identified as part of the Bicycle Network.
- Pedestrian Enhanced District: Coldwater Canyon Avenue and Ventura Boulevard are identified as part of the Pedestrian Enhanced District.



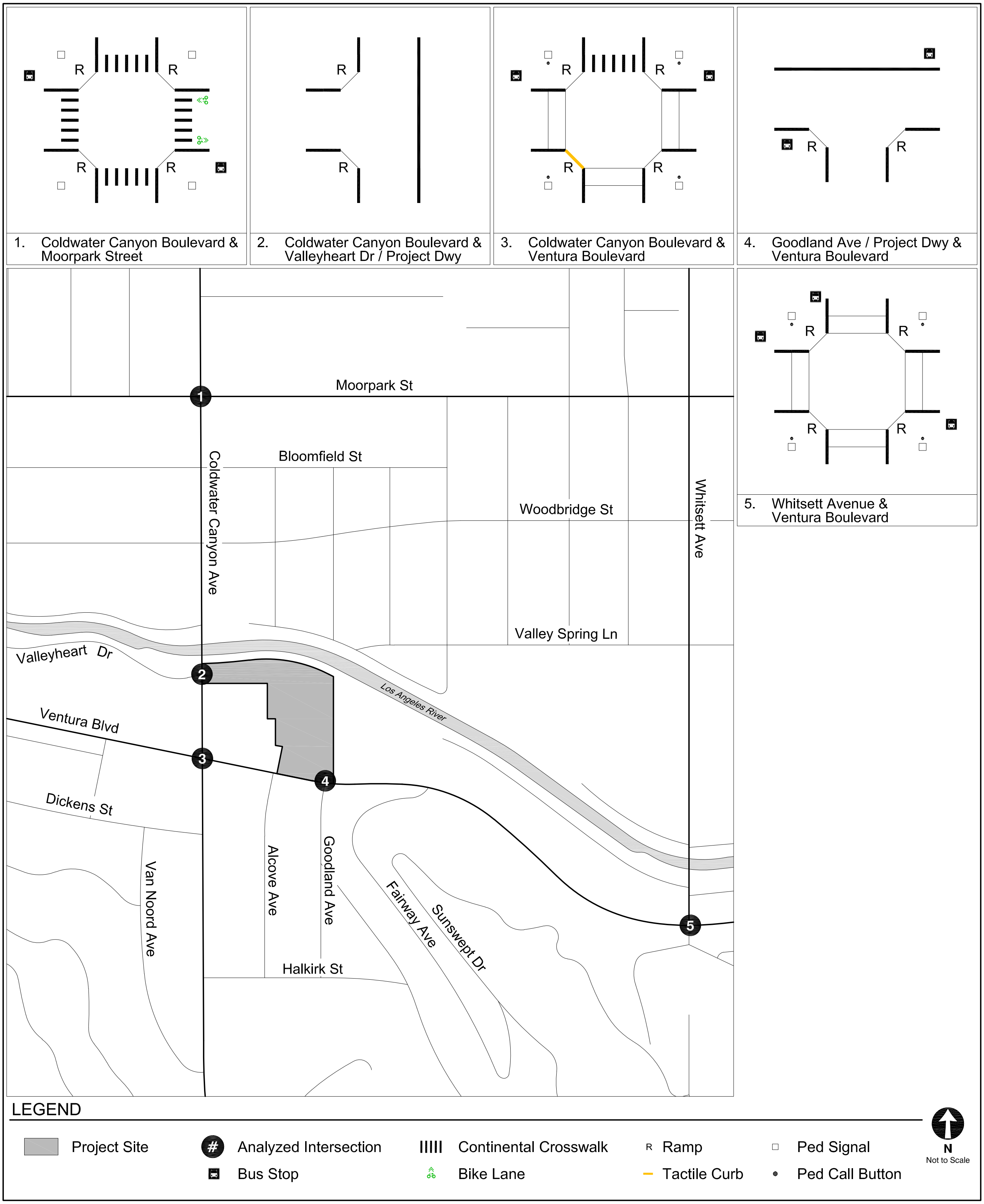
STUDY AREA & ANALYZED INTERSECTIONS

FIGURE 3



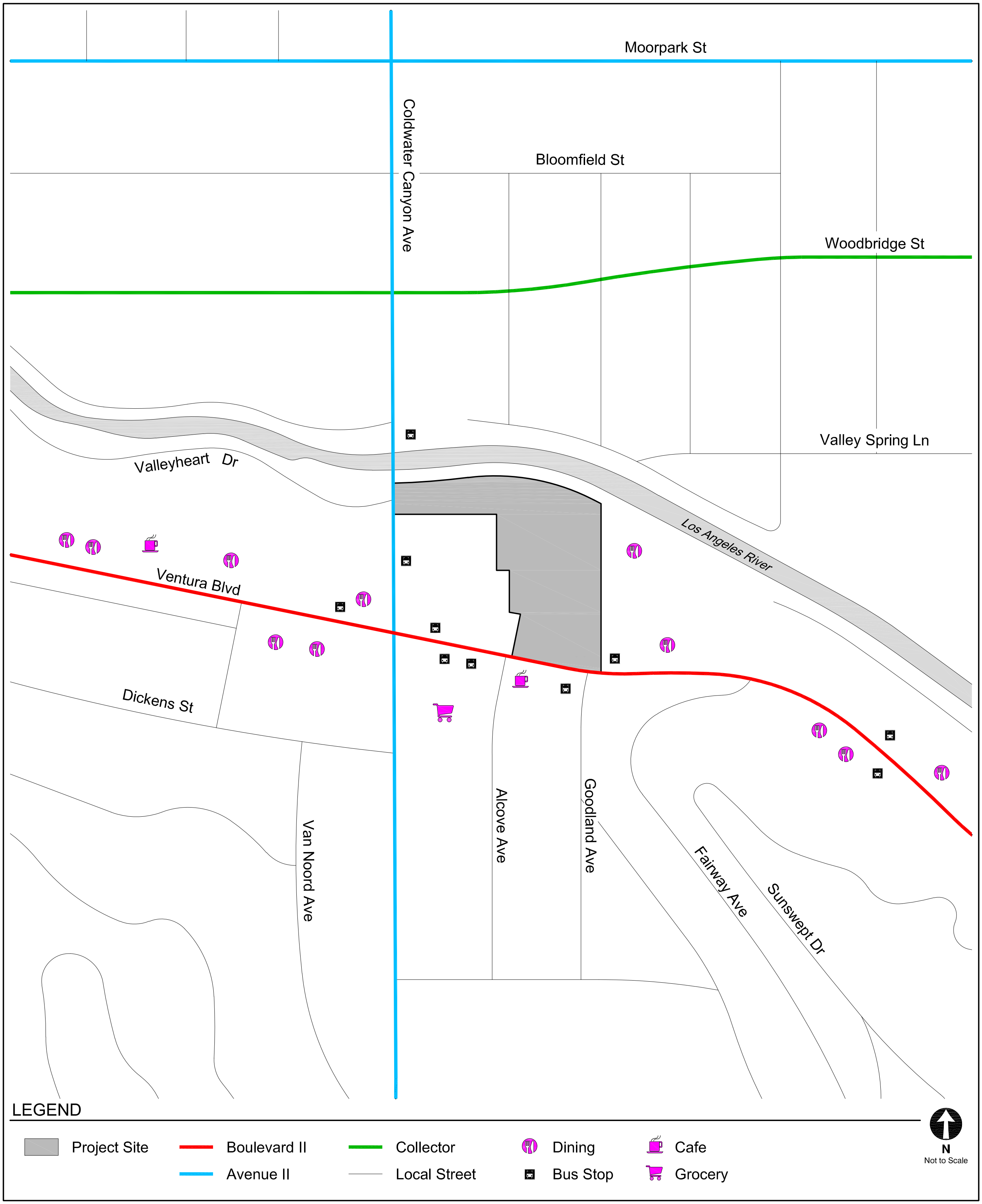
EXISTING INTERSECTION LANE CONFIGURATIONS

FIGURE 4



EXISTING INTERSECTION MOBILITY FACILITIES

FIGURE 5

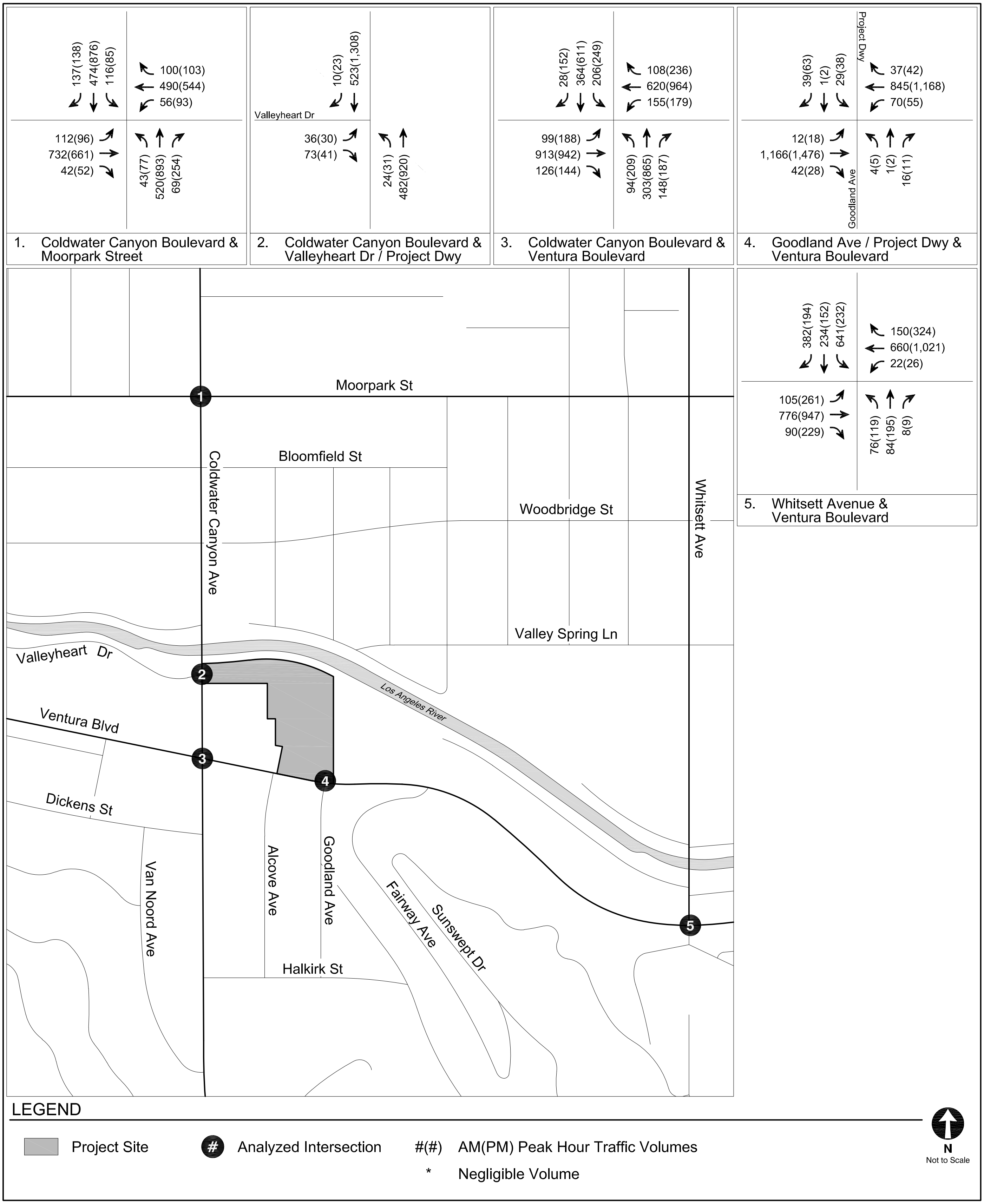


EXISTING TRANSPORTATION DESIGNATIONS AND PEDESTRIAN DESTINATIONS

FIGURE 6

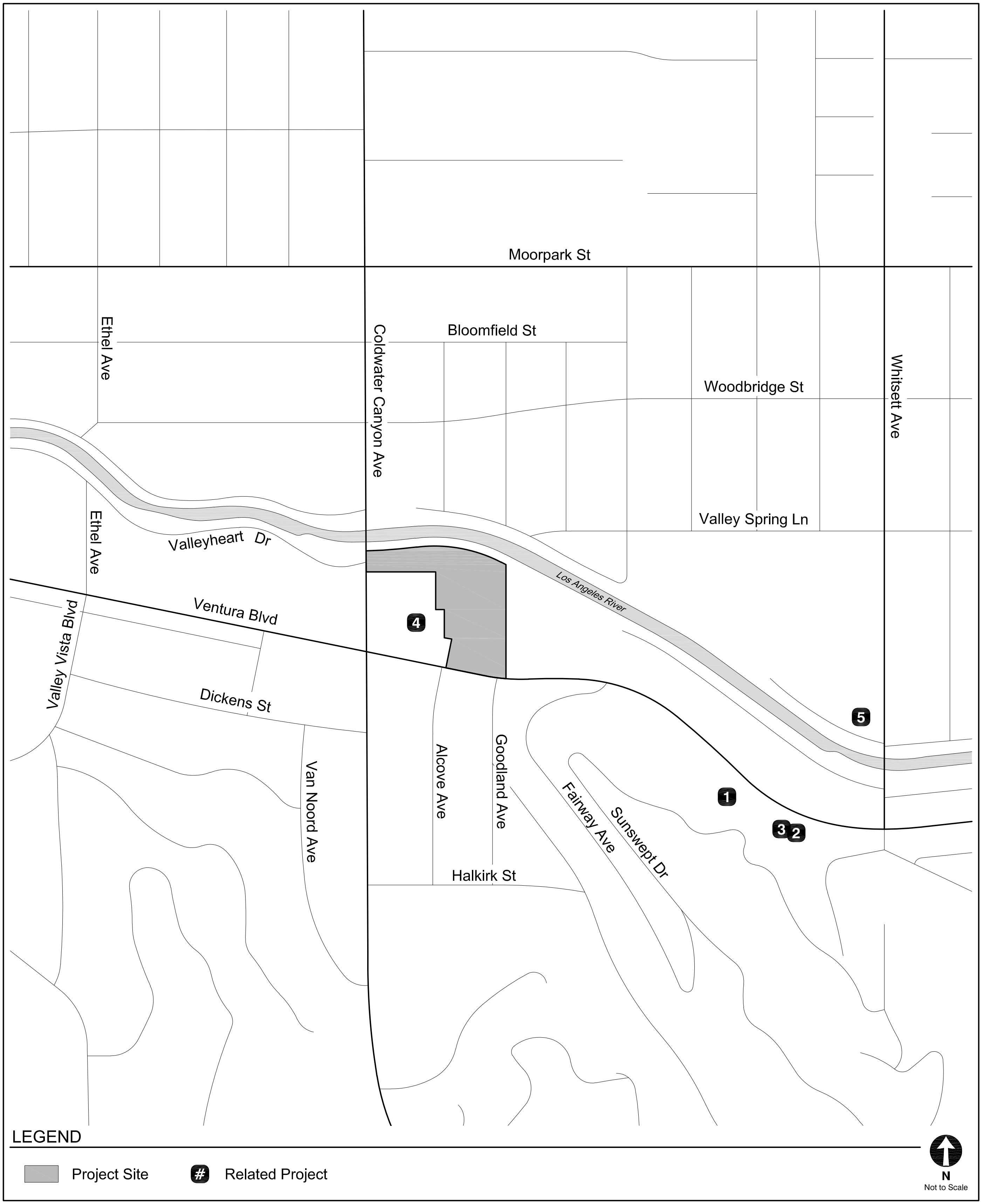
EXISTING TRANSIT SERVICE

FIGURE 7



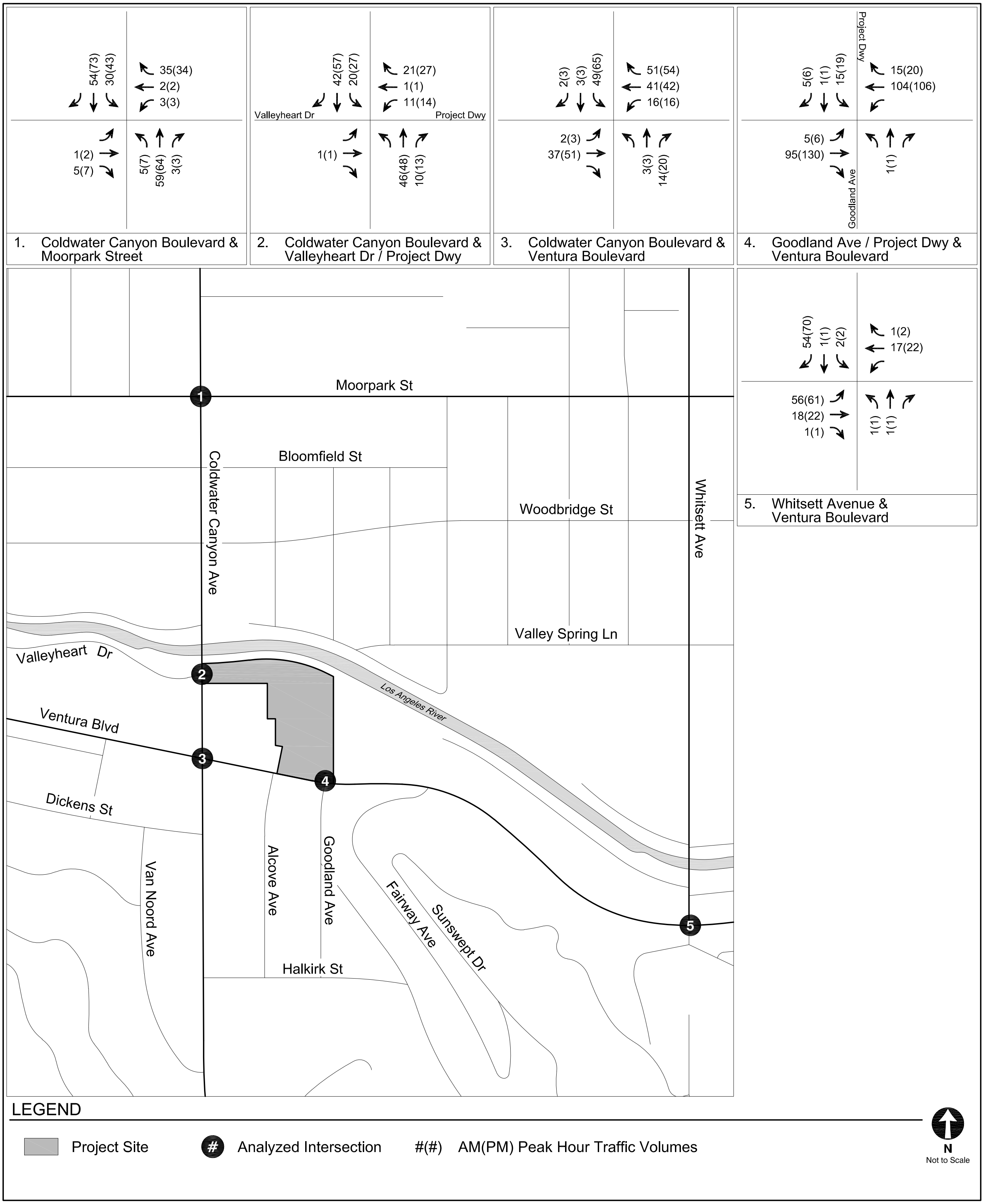
EXISTING CONDITIONS (YEAR 2021)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
8



LOCATIONS OF RELATED PROJECTS

FIGURE 9



RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
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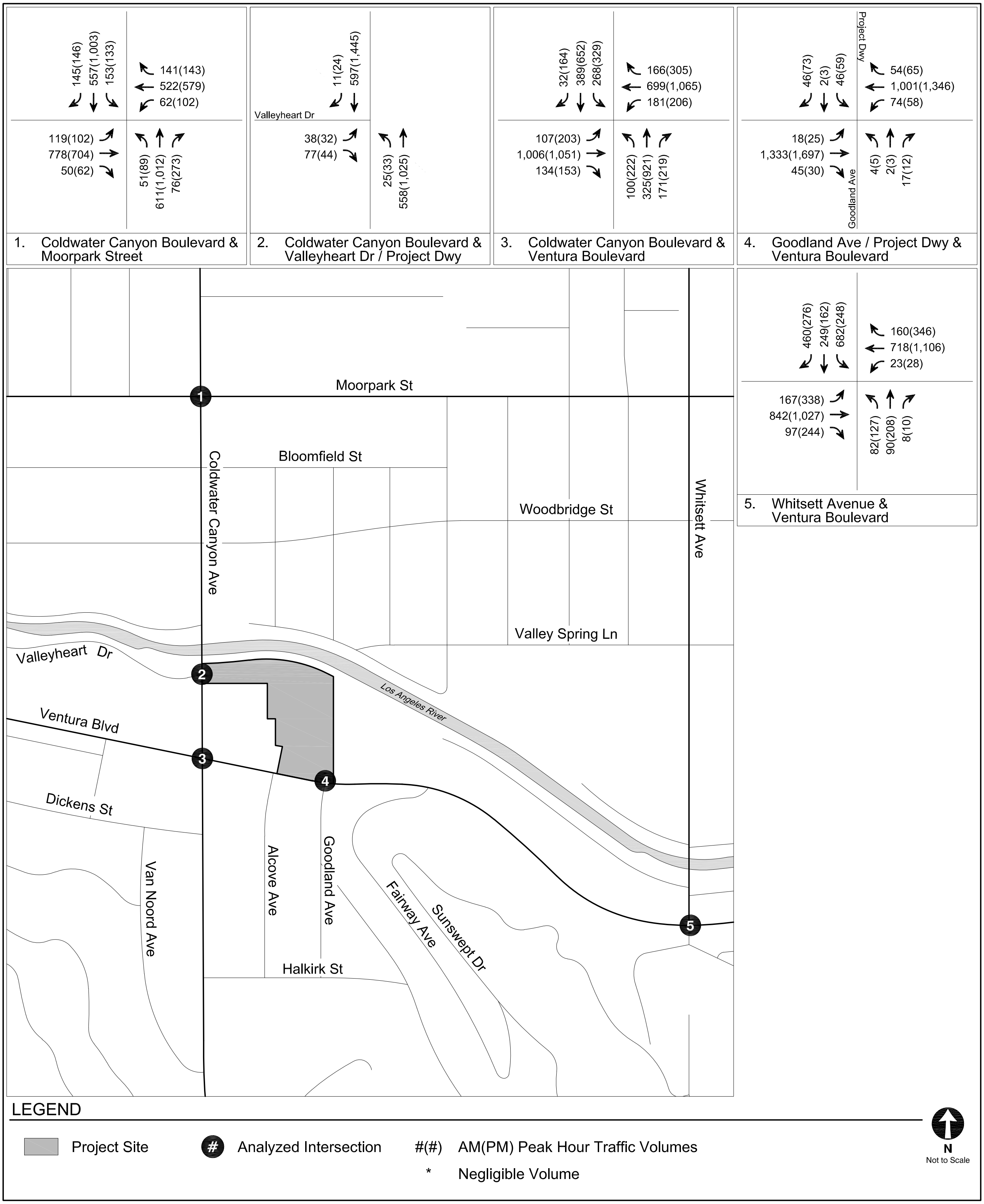


FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2027)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 11

FUTURE TRANSPORTATION FACILITIES AND ROADWAY MODAL PRIORITIES

FIGURE 12

TABLE 1
STUDY INTERSECTIONS

No.	Intersection	Jurisdiction
Signalized Intersections		
1.	Coldwater Canyon Avenue & Moorpark Street	City of Los Angeles
2. [a]	Coldwater Canyon Avenue & Valleyheart Drive / Driveway	City of Los Angeles
3.	Coldwater Canyon Avenue & Ventura Boulevard	City of Los Angeles
4. [a]	Goodland Avenue / Driveway & Ventura Boulevard	City of Los Angeles
5.	Whitsett Avenue & Ventura Boulevard	City of Los Angeles

Notes:

[a] Currently the intersections of Coldwater Canyon Boulevard & Valleyheart Drive and Goodland Avenue & Ventura Boulevard are unsignalized. However, the adjacent related project proposes to install driveways and signalize both intersections upon completion.

TABLE 2
EXISTING TRANSIT SERVICE

Provider, Route, and Service Area			Service Type	Hours of Operation	Average Headway (minutes)			
					Morning Peak Period		Afternoon Peak Period	
					NB/EB	SB/WB	NB/EB	SB/WB
Metro Bus								
	167	Studio City - Chatsworth via Ventura Boulevard	Local	5:30 A.M. - 11:00 P.M.	48	60	60	60
[a]	240	Canoga Park / Northridge - Universal City via Ventura Boulevard	Local	24 Hours	13	11	11	13
LADOT DASH								
	VN / SC	Van Nuys - Studio City Loop	Local	6:00 A.M. - 7:30 P.M.	30	30	30	30

Notes:
Metro: Los Angeles County Metropolitan Transportation Authority
LADOT DASH: Los Angeles Department of Transportation Downtown Area Short Hop.
Morning Peak from 6-10 AM
Afternoon Peak from 3-7 PM
[a] As part of the NextGen update, Line 150 and Line 240 merged to create Line 240 on this portion of Ventura Boulevard. Line 750 was discontinued.

TABLE 3A
TRANSIT SYSTEM CAPACITY IN STUDY AREA - MORNING PEAK HOUR

Provider, Route, and Service Area		Stop Location	Capacity per Trip [a]	Peak Hour Ridership				Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
				Peak Load		Average Load					
				NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Metro Bus Service											
167	Studio City - Chatsworth via Ventura Boulevard	Ventura / Coldwater Canyon	50	*Transit Capacity unavailable [b]*							
240	Canoga Park / Northridge - Universal City via Ventura Boulevard	Ventura / Coldwater Canyon	50								
Total Remaining Peak Hour Bus Ridership Capacity										**N/A**	

Notes:
Metro: Los Angeles County Metropolitan Transportation Authority
[a] Capacity assumptions:
Metro Bus - 40 seated / 50 seated and standing
[b] Ridership information is typically based on data from Metro for April 2019, prior to the NextGen Update and COVID-19 pandemic. Due to the significant NextGen changes in this area, no ridership information was available for the updated transit service.

TABLE 3B
TRANSIT SYSTEM CAPACITY IN STUDY AREA - AFTERNOON PEAK HOUR

Provider, Route, and Service Area		Stop Location	Capacity per Trip [a]	Peak Hour Ridership [b]				Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
				Peak Load		Average Load					
				NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Metro Bus Service											
167	Studio City - Chatsworth via Ventura Boulevard	Ventura / Coldwater Canyon	50	*Transit Capacity unavailable [b]*							
240	Canoga Park / Northridge - Universal City via Ventura Boulevard	Ventura / Coldwater Canyon	50								
								Total Remaining Peak Hour Bus Ridership Capacity		**N/A**	

Notes:
Metro: Los Angeles County Metropolitan Transportation Authority
[a] Capacity assumptions:
Metro Bus - 40 seated / 50 seated and standing
[b] Ridership information is typically based on data from Metro for April 2019, prior to the NextGen Update and COVID-19 pandemic. Due to the significant NextGen changes in this area, no ridership information was available for the updated transit service.

TABLE 4
RELATED PROJECTS LIST

No	Project Name	Address	Description	Trip Generation [a]						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
1	Mixed-Use	12582 W Ventura Boulevard	Mixed-Use	997	36	28	64	38	32	70
2	Mixed-Use	12544 W Ventura Boulevard	28 apartment units, 16,580 sf restaurant	1,879	93	82	175	104	62	166
3	Mixed-Use	12548 W Ventura Boulevard	Mixed-Use	1,000	23	41	64	46	34	80
4 [b]	Sportsman's Lodge MXD	12833 Ventura Boulevard	Addition of health club and restaurants	2,001	50	54	104	68	68	136
5 [c]	Harvard-Westlake River Park Project	4047-4155 N. Whitsett Avenue	17.2 acre park and 80,249 sf gymnasium	2,319	93	48	141	88	98	186

Notes:
[a] Source: Related project information based on available information provided by LADOT and Department of City Planning on January 14, 2021, and recent studies. Related Projects include developments within one-quarter mile radius of the furthest outlying intersection, as suggested in the Transportation Assessment Guidelines. Therefore, related projects within 0.75 miles of the Project Site were considered.
[b] Assumed to be constructed under existing conditions.
[c] Source: Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017.

Chapter 3
Project Traffic

Trip generation estimates, trip distribution patterns, and trip assignments were prepared for the Project. These components form the basis of the Project's Non-CEQA traffic analysis.

PROJECT TRIP GENERATION

The number of trips expected to be generated by the Project was estimated using rates for retail, restaurant, and multi-family housing uses published in *Trip Generation Manual, 10th Edition.* These rates are based on surveys of similar land uses at sites around the country and are utilized to calculate the number of vehicle trips traveling to and from the Project Site during the morning and afternoon peak hours relative to the size of development.

The Project is located adjacent to a Metro Rapid Bus stop at Ventura Boulevard & Coldwater Canyon Avenue. Therefore, in consultation with LADOT, a 15% transit/walk-in adjustment was made to Project trips to account for transit usage and walking arrivals from the surrounding neighborhoods and adjacent commercial developments.

As shown in Table 5, after accounting for the adjustments above, the Project is expected to generate 230 net new morning peak hour trips (78 inbound trips, 152 outbound trips) and 261 net new afternoon peak hour trips (162 inbound trips, 99 outbound trips).

PROJECT TRIP DISTRIBUTION

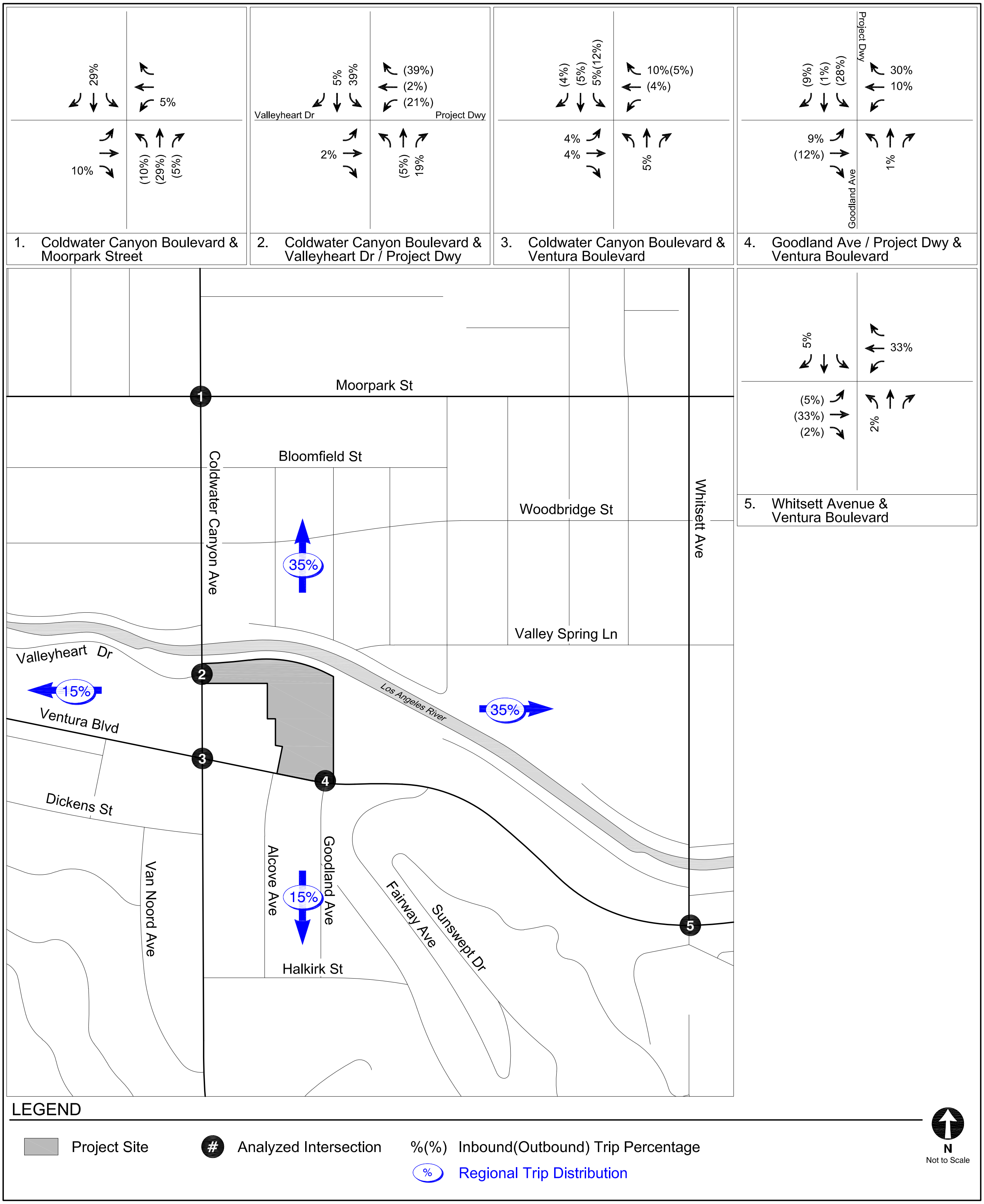
The geographic distribution of trips generated by the Project is dependent on the location of employment, residential, and commercial centers to and from which employees and patrons of the Project would be drawn, characteristics of the street system serving the Project Site, the location of the Project driveways, existing traffic patterns, as well as input from LADOT staff.

The intersection-level trip distribution pattern for Project traffic at the Study Intersections is shown in Figure 13. Generally, the regional pattern is as follows:

- 15% to/from the north
- 20% to/from the east
- 35% to/from the south
- 30% to/from the west

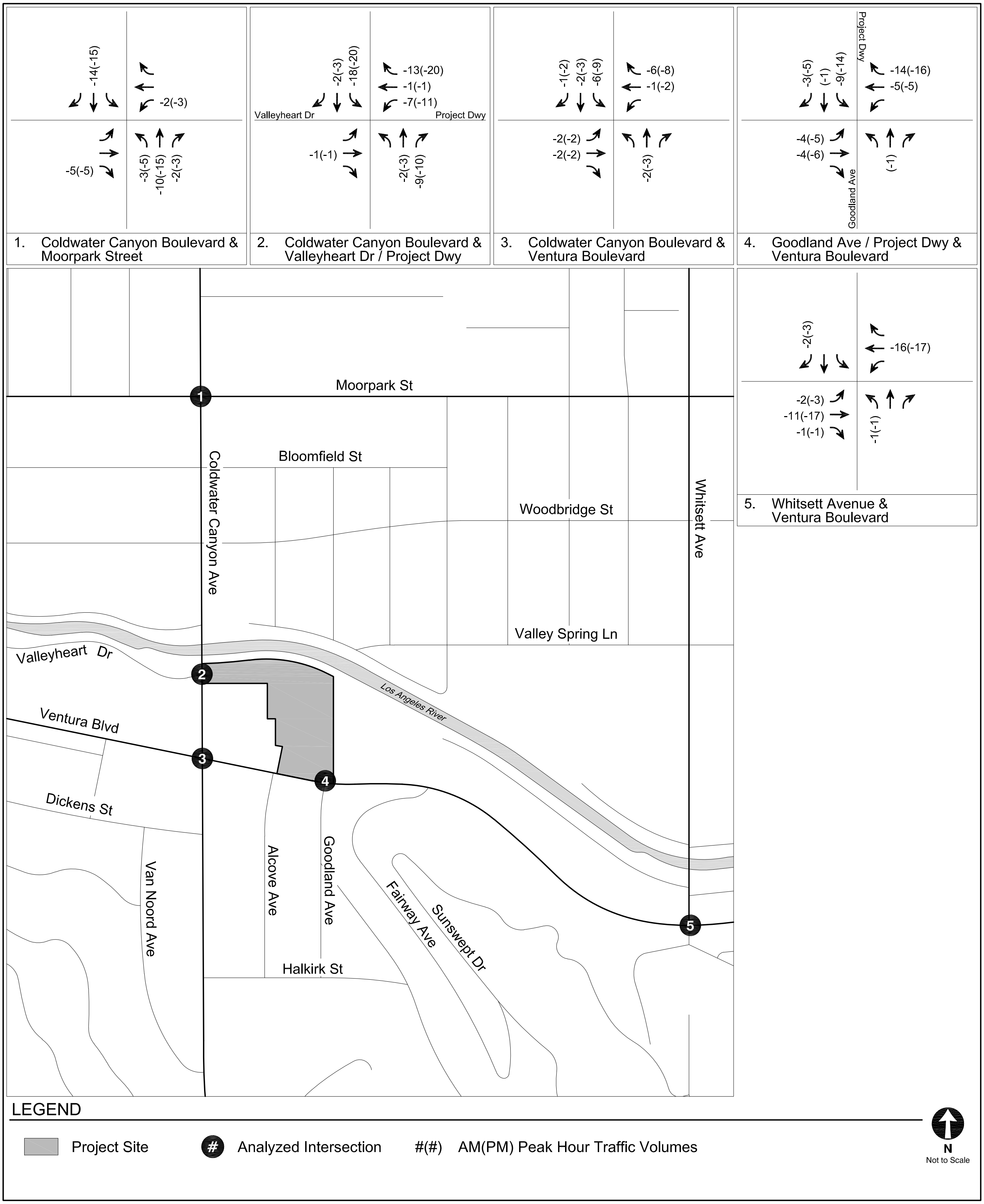
PROJECT TRIP ASSIGNMENT

The Project trip generation estimates summarized in Table 5 and the trip distribution pattern shown in Figure 13 were used to assign the Project-generated traffic through the Study Intersections. Figure 14A details the existing use (hotel) traffic to be removed from the Study Intersections. Figure 14B illustrates the Project-only traffic volumes for the Project at the Study Intersections and Project driveways during typical weekday morning and afternoon peak hours.



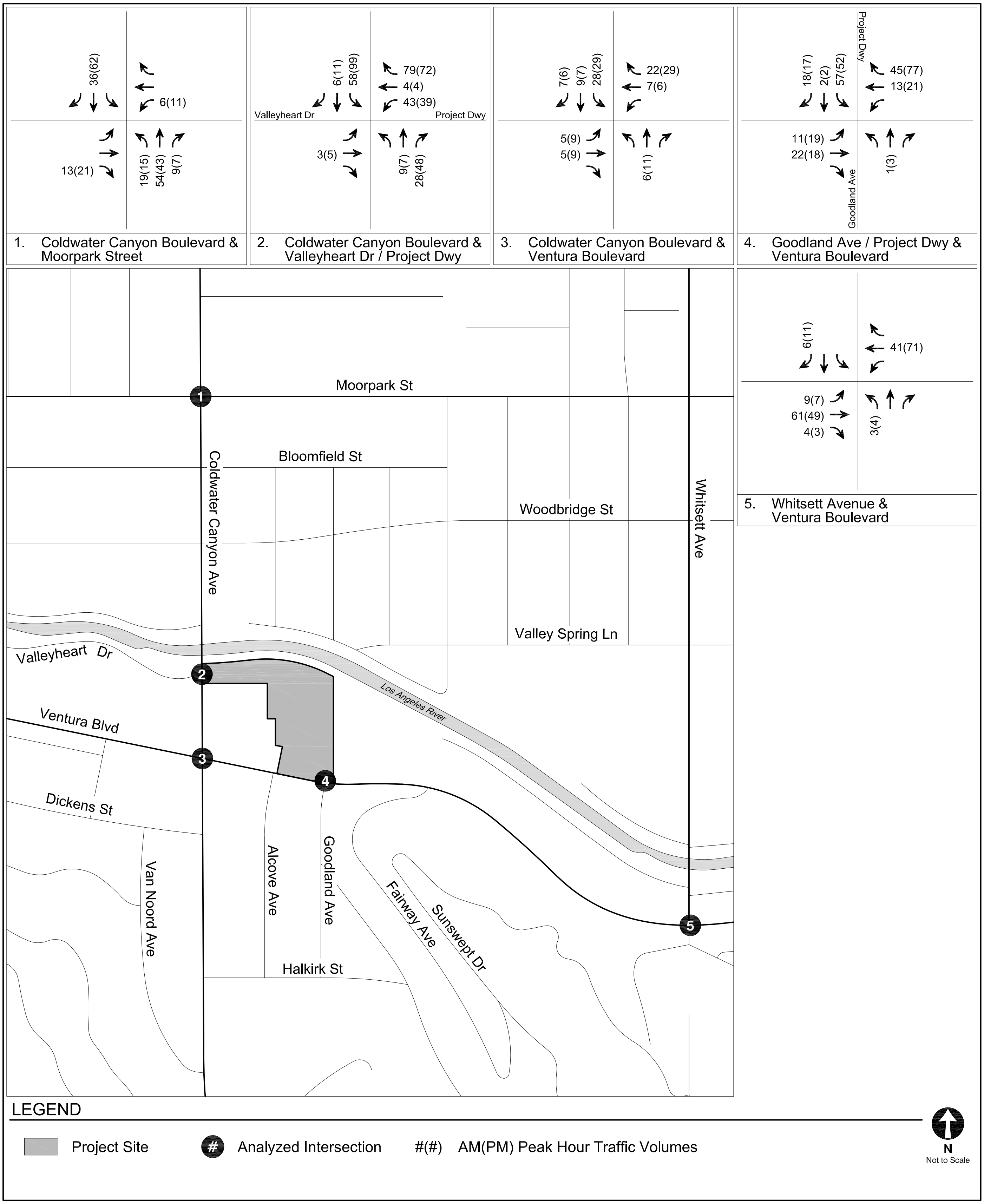
PROJECT TRIP DISTRIBUTION

FIGURE 13



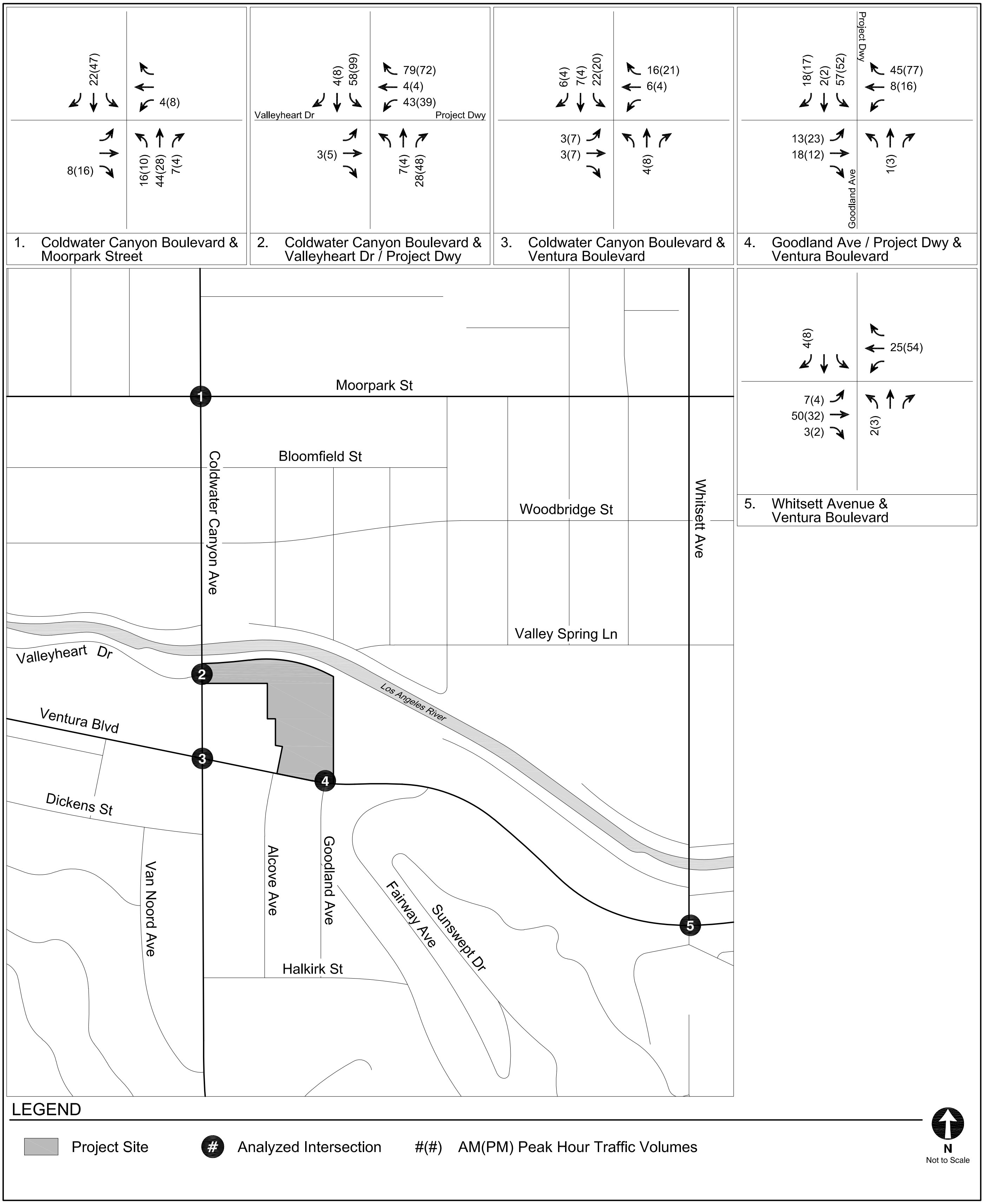
EXISTING USES TO BE REMOVED
PEAK HOUR TRAFFIC VOLUMES

FIGURE 14A



TOTAL PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
14B



NET PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
14C

TABLE 5
PROJECT TRIP GENERATION ESTIMATES
SPORTSMEN'S LODGE

Land Use	ITE Land Use	Rate	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Trip Generation Rates [a]								
Hotel	310	per room	59%	41%	0.47	51%	49%	0.60
Multi-Family Housing (Mid-Rise) - 3-10 floors	221	per dwelling unit	26%	74%	0.36	61%	39%	0.44
Affordable Housing - Family	[b]	per dwelling unit	40%	60%	0.55	55%	45%	0.43
Shopping Center	820	per ksf	62%	38%	0.94	48%	52%	3.81
Quality Restaurant	931	per ksf	60%	40%	0.73	67%	33%	7.80
High-Turnover (Sit-Down) Restaurant	932	per ksf	55%	45%	9.94	62%	38%	9.77
Existing Uses to be Removed								
Hotel	310	200 rooms	(55)	(39)	(94)	(61)	(59)	(120)
Transit/Walk-In Reduction - 15% [c]			*8*	*6*	*14*	*9*	*9*	*18*
TOTAL - EXISTING USES TO BE REMOVED			**(47)**	**(33)**	**(80)**	**(52)**	**(50)**	**(102)**
Proposed Project Uses								
Multi-Family Housing (Mid-Rise) - 3-10 floors	221	442 du	41	118	159	118	76	194
Transit/Walk-In Reduction - 15% [c]			*(6)*	*(18)*	*(24)*	*(18)*	*(11)*	*(29)*
Affordable Housing - Family	[b]	78 du	17	26	43	19	15	34
Shopping Center	820	27.926 ksf	16	10	26	51	55	106
Transit/Walk-In Reduction - 15% [c]			*(2)*	*(2)*	*(4)*	*(8)*	*(8)*	*(16)*
Passby Reduction - 50% [d]			*(7)*	*(4)*	*(11)*	*(22)*	*(24)*	*(46)*
High-Turnover (Sit-Down) Restaurant	932	18.019 ksf	98	81	179	109	67	176
Transit/Walk-In Reduction - 15% [c]			*(15)*	*(12)*	*(27)*	*(16)*	*(10)*	*(26)*
Passby Reduction - 20% [d]			*(17)*	*(14)*	*(31)*	*(19)*	*(11)*	*(30)*
TOTAL - PROPOSED PROJECT TRIPS			**125**	**185**	**310**	**214**	**149**	**363**
NEW NEW PROJECT TRIPS			**78**	**152**	**230**	**162**	**99**	**261**

Notes:
ksf: 1,000 square feet, du: dwelling unit
[a] Source: *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017.
[b] Affordable housing trip generation rates based on LADOT *Transportation Assessment Guidelines* (TAG) for affordable housing - family uses. Although the project is served by Metro bus lines within 1/4 mile, and although the adjacent bus services qualify as a High Quality Transit Corridor, the transit service does not meet the City's definition for a Transit Priority Area. Therefore, the affordable housing - family rate for outside a transit priority area were used.
[c] The Project Site is located less than 1/4 mile from a former Metro Rapid Bus Stop at Ventura Boulevard/Coldwater Canyon Boulevard. The NextGen Bus eliminated the 750 Rapid Bus and replaced it with higher frequencies on Line 240. Thus, per *LADOT's Transportation Assessment Guidelines*, a 15% reduction was applied to account for transit usage and pedestrian connections to/from the surrounding neighborhoods and adjacent developments.
[d] Pass-by reduction accounts for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.

Chapter 4
CEQA Analysis of Transportation Impacts

This chapter presents an analysis of potential CEQA-related transportation impacts. The analysis also discusses the consistency of the Project with adopted City plans and policies and the improvements, if necessary, associated with the results of a vehicle miles traveled (VMT) analysis compliant with State requirements under *State of California Senate Bill 743* (Steinberg, 2013) (SB 743).

METHODOLOGY

SB 743 required the Governor's Office of Planning and Research to change the CEQA Guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis shifted from vehicular delay (level of service [LOS]) to VMT, with the intent of reducing greenhouse gas emissions (GHG), creating multimodal networks, and promoting mixed-use developments.

LADOT's TAG defines and provides the required CEQA methodology of analyzing a project's transportation impacts in accordance with SB 743. Per the TAG, the CEQA transportation analysis contains the following thresholds for identifying significant impacts:

- Threshold T-1: Conflicting with Plans, Programs, Ordinances, or Policies
- Threshold T-2.1: Causing Substantial VMT
- Threshold T-2.2: Substantially Inducing Additional Automobile Travel
- Threshold T-3: Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use

These thresholds were reviewed and analyzed, as detailed in the following Sections 4A-4D.

In addition, Section 4E provides a review of California Department of Transportation (Caltrans) facilities in accordance with *Interim Guidance for Freeway Safety Analysis* (LADOT, May 2020) (City Freeway Guidance), which identifies the City requirements for a CEQA safety analysis of Caltrans facilities.

Section 4A: Threshold T-1
Conflicting with Plans, Programs, Ordinances, or Policies Analysis

Threshold T-1 states that a project would result in an impact if it conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities.

PLANS, PROGRAMS, ORDINANCES, AND POLICIES

Table 2.1-1 of the TAG identified the City plans, policies, programs, ordinances, and standards relevant in determining project consistency. Attachment D of the TAG, *Plans, Policies, and Programs Consistency Worksheet,* provides a structured approach to evaluate whether a project conflicts with the City plans, programs, ordinances, or policies and to streamline the review by highlighting the most relevant plans, policies, and programs when assessing potential impacts to the City transportation system. The *Plan, Policies, and Programs Consistency Worksheet* was completed for the Project and is provided in Appendix C.

As stated in Section 2.1.4 of the TAG, a project that generally conforms with and does not obstruct the City development policies and standards will generally be considered to be consistent. As discussed below, the Project is consistent and does not conflict with the City plans, policies, programs, ordinances and standards listed in Table 2.1-1 of the TAG; therefore, the Project would not result in a significant impact under Threshold T-1. Detailed discussion of the plans, programs, ordinances, or policies related is provided below.

<u>Mobility Plan</u>

The Mobility Plan combines “complete street” principles with the following five goals that define the City mobility priorities:

1. Safety First: Design and operate streets in a way that enables safe access for all users, regardless of age, ability, or transportation mode of choice.

2. World Class Infrastructure: A well-maintained and connected network of streets, paths, bikeways, trails, and more provides Angelenos with the optimum variety of mode choices.

3. Access for All Angelenos: A fair and equitable system must be accessible to all and must pay particularly close attention to the most vulnerable users.

4. Collaboration, Communication, and Informed Choices: The impact of new technologies on our day-to-day mobility demands will continue to become increasingly important to the future. The amount of information made available by new technologies must be managed responsibly in the future.

5. Clean Environments and Healthy Communities: Active transportation modes such as bicycling and walking can significantly improve personal fitness and create new opportunities for social interaction, while lessening impacts on the environment.

A detailed analysis of the Project's consistency with the Mobility Plan is provided in Table 6. As detailed in Chapter 2, the Mobility Plan identifies key corridors within the Study Area as components of various "mobility-enhanced networks." Though no new specific improvements have been identified and there is no schedule for implementation, the mobility-enhanced networks represent a focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The Project would be designed with the mobility-enhanced networks as a top priority.

With the development of the Project, Coldwater Canyon Avenue and Ventura Boulevard along the Project frontage would be improved to provide adequate pedestrian safety, as well as add landscaping, crosswalks, and sidewalks that meet the designated widths and conform to the goals and long-term needs of the Mobility Plan with the exception of a section of Ventura Boulevard where the sidewalk on public property would be reduced to five feet wide to accommodate a 10-foot wide passenger pick-up/drop-off lane. Additional sidewalk width could be provided on-site to connect the passenger pick-up/drop-off lane to the Project and to provide a continuous 10-foot wide sidewalk.

Access to the Project will be provided via one full-access existing driveway on Coldwater Canyon Avenue that will be relocated to align with Valleyheart Drive and one full-access existing driveway on Ventura Boulevard that will be relocated to align with Goodland Avenue. A passenger loading area is proposed on Ventura Boulevard adjacent to the southern boundary of the site, which would eliminate a third existing driveway. Both driveways were analyzed for signal warrants and are proposed to be signalized by the Project. This provides the opportunity to provide additional crossing opportunities and improve safety at the conflict points between vehicles and pedestrians/bicyclists. Further, removing the third existing driveway would eliminate a conflict point between vehicles and pedestrians/bicyclists, making passage safer for all road users.

The Project would also provide an ADA compliant passenger loading zone along Ventura Boulevard within a “lay-by” configuration. The loading area would widen Ventura Boulevard by approximately 10 feet, leaving a five-foot sidewalk to accommodate the loading zone. As described above, additional sidewalk width could be provided on-site to connect the passenger pick-up/drop-off lane to the Project and to provide a continuous 10-foot wide sidewalk. The loading zone would reduce the potential for queuing issues related to passenger pick-ups/drop-offs and maintain the existing street ROW for other Mobility Plan enhancements such as bike lanes or transit improvements. Appropriate ADA access ramps would be provided for the loading zone.

As detailed in Section 5G, the Project would provide sufficient off-street parking to satisfy vehicular parking requirements for the Project and to replace the existing parking spaces that will be removed.

The Project would also enhance pedestrian access along the Project frontage by providing improvements to the sidewalks and landscaping. A pedestrian paseo connecting the public ROW on Ventura Boulevard to the Project and the Los Angeles River path north of the Project Site would also be constructed as part of the Project. In addition, the Project does not propose modifying, removing, or otherwise affecting existing bicycle infrastructure, and will ensure driveways are constructed to provide maximum visibility between drivers, cyclists, and pedestrians. Secured bicycle parking facilities within the Project Site would also be provided. These measures would promote active transportation modes such as biking and walking, thereby reducing the Project VMT compared to the average for the area, as demonstrated in Section 4B.

Thus, the Project would be consistent with the goals of the Mobility Plan.

Plan for a Healthy Los Angeles

Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan (LADCP, March 2015) introduces guidelines to enhance the position of the City as a regional leader in health and equity, encourage healthy design and equitable access, and increase awareness of equity and environmental issues. The components of this plan focus on health and wellness through increased quality of life, economic development, equity and environmental justice, housing and community stability, mobility, and open space.

A detailed analysis of the Project's consistency with *Plan for a Healthy Los Angeles* is provided in Table 7. The Project prioritizes safety and access for all individuals utilizing the Project Site by complying with all ADA requirements and providing direct connections to pedestrian and bicycle amenities. Further, the Project supports healthy lifestyles by locating jobs nearby transit (Metro bus lines with connections to the Metro B (Red) Line at the Universal City station), providing bicycle amenities, and enhancing the pedestrian environment by providing landscaping for a more comfortable environment for pedestrians.

Thus, the Project would be consistent with the goals of *Plan for a Healthy Los Angeles*.

Community Plan

As detailed in the Community Plan, the Project Site sits along Ventura Boulevard, a designated Boulevard II, and is on the northeast corner of Coldwater Canyon Avenue & Ventura Boulevard. The Project Site is located in a commercial zone and would be part of a multiple family residential neighborhood.

The Community Plan lists various site and building design guidelines to be considered for a multiple family development. These policies would ensure measures such as reducing vehicular trips, preserving the character of the neighborhood, and promote housing for all communities of people.

The Project aligns with each of these goals and policies of multiple family developments within the Community Plan by providing measures to reduce vehicle trips and VMT as detailed in this report, creating attractive frontages with complement the existing Ventura Boulevard corridor and providing housing at different income levels with the provision of affordable housing.

A detailed analysis of the Project's compliance with the Community Plan is provided in Table 8.

Los Angeles Municipal Code (LAMC) Section 12.21.A.16

LAMC Section 12.21.A.16 details the bicycle parking requirements for new developments. However, new bicycle parking requirements have been developed by the City, and the Project would follow the new requirements. Per the updated LAMC, the Project would require a total of 40 short-term and 224 long-term bicycle parking spaces. The Project would also be required to relocate 49 existing bicycle parking spaces on site in addition to the LAMC requirement.

The Project's proposed 40 short-term and 273 long-term bicycle spaces meet the LAMC requirements for on-site bicycle parking supply. Detailed information about the proposed parking supply is provided in Section 5E.

LAMC Section 12.26J

LAMC Section 12.26J, the TDM Ordinance (1993), establishes trip reduction requirements for non-residential projects in excess of 25,000 sf. The Project would incorporate TDM measures as part of the Project design. Project design features include pedestrian connections on-site, including the paseo, and bicycle parking per the LAMC. In addition, the Project will include mitigation programs including reduced parking supply, unbundled parking, and a voluntary travel behavior change program promotions and marketing of nearby transit options to encourage use of alternative transportation modes consistent with the requirements set forth in the TDM Ordinance.

Vision Zero Action Plan / Vision Zero Corridor Plans

As noted previously, the primary goal of Vision Zero is to eliminate traffic deaths in the City by Year 2025 through a number of strategies, including modifying the design of streets to increase safety. Vision Zero implements projects that are designed to increase safety for the most vulnerable road users. The City has identified numerous streets as part of the HIN where City projects will be targeted. The City has also created an Action Plan identifying the types of improvements that will be implemented.

The Project Site is located adjacent to Ventura Boulevard, a street identified on the HIN. As of April 2021, no Vision Zero improvements have been made within the Study Area. However, development of the Project would not preclude the City from making any Vision Zero improvements.

Citywide Design Guidelines for Residential, Commercial, and Industrial Development

The Pedestrian-First Design approach of the *Citywide Design Guidelines* (LADCP Urban Design Studio, October 2019) focuses on design strategies that "create human scale spaces in response to how people actually engage with their surroundings, by prioritizing active street frontages, clear paths of pedestrian travel, legible wayfinding, and enhanced connectivity. Pedestrian-First Design promotes healthy living, increases economic activity at the street level, enables social interaction, creates equitable and accessible public spaces, and improves public safety by putting eyes and feet on the street."

The Pedestrian-First Design guidelines are as follows:

- *Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all.*
- *Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.*
- *Guideline 3: Design projects to actively engage with streets and public space and maintain human scale.*

A detailed analysis of the Project's consistency with the guidelines of the Pedestrian-First Design approach is provided in Table 9.

The Project Site does not propose a new curb cutout or driveway along a designated Avenue or Boulevard in the Mobility Plan. Thus, no new conflict point between pedestrians, bicyclists, and vehicles would be created. All driveways would be designed to be consistent with City guidelines.

The Project promotes pedestrian-first accommodations through street landscaping, high visibility connections, and proximity to transit. No transportation elements of the Project are in conflict with *Citywide Design Guidelines*.

CUMULATIVE ANALYSIS

The Project is consistent with the City plans and policies listed in Table 2.1-1 of the TAG along with the described documents above; therefore, the Project would not result in a significant impact under Threshold T-1.

In addition to potential Project-specific impacts, the TAG requires that the Project be reviewed in combination with nearby Related Projects to determine if there may be a cumulatively significant impact resulting from inconsistency with a particular program, plan, policy, or ordinance. In accordance with the TAG, the cumulative analysis must include consideration of any Related Projects within 0.75 miles of the Project Site and any transportation system improvements in the vicinity. Table 4 provides a list of Related Projects located within 0.75 miles of the Project Site.

One Related Project is located immediately to the west of the Project Site at 12833 Ventura Boulevard. This Related Project is currently in the early stages of construction and anticipated to be operational in Year 2021, prior to the development of the Project. Both the Related Project and Project would also comply with all of City plans and policies outlined in this report and would not interfere with each other. Thus, the Project and the Related Project would not result in a cumulative impact that would preclude the City from serving the transportation needs as defined in its adopted programs, plans, ordinances, or policies.

Each of the Related Projects considered in this cumulative analysis of consistency with programs, plans, policies, and ordinances would be separately reviewed and approved by the City, including a check for their consistency with applicable policies. Therefore, the Project, together with the

Related Projects identified in Table 4, would not create inconsistencies nor result in cumulative impacts with respect to the identified programs, plans, policies, and ordinances.

TABLE 6
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
Chapter 1 - Safety First	
Policy 1.1, Roadway User Vulnerability Design, plan, and operate streets to prioritize the safety of the most vulnerable roadway user.	**Consistent.** The Project design includes pedestrian enhancements along the perimeter of the Project Site, which include wider pedestrian walkways and crosswalks along Ventura Boulevard and Coldwater Canyon Avenue. Separate pedestrian and bicycle access to the Project Site would be provided via entrances along Ventura Boulevard and Coldwater Canyon Avenue. All right-of-way and roadway widths would be designed to meet the goals and serve the long-term needs of the Mobility Plan. Further, the Project does not propose modifying, removing, or otherwise affecting existing bicycle infrastructure. All driveways would be designed to be compliant with LADOT guidelines.
Chapter 2 - World Class Infrastructure	
Policy 2.2 Complete Streets Design Guide Establish the Complete Streets Design Guide as the City's document to guide the operations and design of streets and other public rights-of-way.	**Consistent.** The Project would conform to all design element requirements which may affect public rights-of-way, including proper driveway alignment, adequate sidewalk widths, improved lighting elements, and landscaping design which does not hinder sight distance, mobility, or accessibility.
Policy 2.3 Pedestrian Infrastructure Recognize walking as a component of every trip, and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.	**Consistent.** The Project would improve pedestrian accessibility within and around the Project Site by providing new lanscaping, walkways, crosswalks, and sidewalks that meet their designated width. No additional curb cuts are proposed; the existing driveways will be realigned and provide the only vehicular access to the Project Site. One existing driveway would be removed with the Project's construction, thus reducing the total vehicle conflict points with pedestrians. Each driveway would all be designed to provide safe access for pedestrains.
Policy 2.5 Transit Network Improve the performance and reliability of existing and future bus service.	**Consistent.** Ventura Boulevard is part of the Transit Enhanced Network. No new access points to the Project Site are provided along this street segment identified in the Transit Enhanced Network and thus, would not interfere with future improvements to existing and future transit services. The Project would encourage more transit usage by developing a mixed-use development with convenient access to both rail and bus transit services.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 6 (CONTINUED)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
Policy 2.6 Bicycle Networks Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities. (includes scooters, skateboards, rollerblades, etc.)	**Consistent.** The Mobility Plan designated the Valley Los Angeles River Bicyle Path as part of the Bicycle Enhanced Network and Moorpark Street east of Coldwater Canyon Avenue as part of the Bicycle Lane Network. The Project does not propose to modify either of these streets or pathways and Project vehicular access points would not create any conflict points with the bicycle lanes. Thus, the Project would not cause interference with cyclists using the existing or potential future facilities. The Project provides infrastructure and services to encourage bicycling for residents and visitors to the Project Site. The Project will meet the LAMC required on-site bicycle space supply.
Policy 2.9 Multiple Networks Consider the role of each mode enhanced network when designing a street that included multiple modes.	**Consistent. T**he Study Area includes a mix of enhanced networks identified as part of the Mobility Plan. The Project would also improve the adjacent pedestrian facilities to enhance the pedestrian experience as well as to provide safe access to the adjacent bus stops.
Policy 2.10 Loading Areas Facilitate the provision of adequate on and off-street loading areas.	**Consistent.** The Project would provides a pick-up/drop-off zone on Ventura Bouelvard. The loading zone would be designed to meet the Project Site's loading needs without disrupting operations within the public right-of-way.
Policy 2.16 Scenic Highways Ensure that future modifications to any scenic highway do not impact the unique identity or characteristic of that scenic highway.	**Consistent.** The Project does not propose modifications to any scenic highway and would not impact the characteristics of a scenic highway**.**
Policy 2.17 Street Widenings Carefully consider the overall implications (costs, character, safety, travel, infrastructure, environment) of widening a street before requiring the widening, even when the existing right of way does not include a curb and gutter or the resulting roadway would be less than the standard dimension.	**Consistent.** The Project does not propose modifications to widen streets beyond their required Mobility Plan classifications.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 6 (CONTINUED)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Chapter 3 - Access for All Angelenos	
Policy 3.1 Access for All Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes – including goods movement – as integral components of the City's transportation system.	**Consistent.** The Project is committed to encouraging multi-modal transportation alternatives and access for all travel modes to and from the Project Site. The Project provides 944 underground vehicular parking spaces for residents who choose to own a car, as well as infrastructure (upgraded sidewalks adjacent to the Project Site, short- and long-term bicycle parking, future connection to bike paths) to encourage walking and bicycling. The Project encourages transit usage by developing a residential project adjacent to a Metro rapid bus stop and incentivizing non-vehicular trips through measures like reduced parking supply.
Policy 3.2 People with Disabilities Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.	**Consistent.** The Project's vehicular and pedestrian entrances would be designed in accordance with LADOT standards and would comply with Americans with Disabilities Act (ADA) requirements. The Project design would also be in compliance with all ADA requirements and would provide direct connections to pedestrian amenities at adjacent intersections.
Policy 3.3 Land Use Access and Mix Promote equitable land use decisions that result in fewer vehicle trips by providing greater proximity and access to jobs, destinations, and other neighborhood services.	**Consistent.** The Project's mix of residential, retail, and restaurant space located in studio city will encourage trips to nearby residential and commercial destinations and promote ridesharing and use of alternative mobility modes. Additionally, the Project includes several design features with TDM measures to reduce the number of single occupancy vehicle trips to the Project Site.
Policy 3.4 Transit Services Provide all residents, workers, and visitors with affordable, efficient, convenient, and attractive transit services.	**Consistent.** The Project is located adjacent to a Metro bus stop that is served by Lines 150 and 240, providing residents and visitors to the Project with multiple public transit services. Access to transit portals will be maintained with safe and convenient paths of travel from the Project Site.
Policy 3.8 Bicycle Parking Provide bicyclists with convenient, secure, and well-maintained bicycle parking facilities.	**Consistent.** The Project provides infrastructure and services to encourage bicycling for residents and visitors to the Project Site. The Project will meet the required on-site bicycle space supply of 40 short-term and 224 long-term spaces, with an additional 49 spaces to replace the existing bicycle parking.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 6 (CONTINUED)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Chapter 4 - Collaboration, Communication, & Informed Choices	
Policy 4.8 Transportation Demand Management Strategies Encourage greater utilization of Transportation Demand Management (TDM) strategies to reduce dependence on single-occupancy vehicles.	**Consistent.** The Project incorporates several design features and mitigations, which include TDM measures to reduce the number of single occupancy vehicle trips to the Project Site, including the following: • Reduce parking supply • Unbundled parking • Voluntary travel behavior change program • Include bike parking per LAMC, including short-term and long-term parking facilities • Pedestrian network improvements, within the Project site
Policy 4.13 Parking and Land Use Management Balance on-street and off-street parking supply with other transportation and land use objectives.	**Consistent.** The Project would provide sufficient off-street parking to accommodate Project parking demand. Limited on-street parking is provided adjacent to the Project Site on Ventura Boulevard, some of which may need to be removed to accommodate the passenger loading area.
Chapter 5 - Clean Environments & Healthy Communities	
Policy 5.1 Sustainable Transportation Encourage the development of a sustainable transportation system that promotes environmental and public health.	**Consistent.** The Project would provide secured bicycle parking facilities and pedestrian connections within the Project Site. This would promote active transportation modes such as biking and walking. Additionally, the Project is located adjacent to a Metro bus stop on Ventura Boulevard, providing residents and visitors to the Project with public transportation alternatives.
Policy 5.2 Vehicle Miles Traveled (VMT) Support ways to reduce vehicle miles traveled (VMT) per capita.	**Consistent.** Prior to mitigation, the Project is estimated to generate a higher VMT per capita for residents than the average for the area, as demonstrated in Section 4B. Therefore, the Project incorporates several design features and mitigations, which include TDM measures to reduce the number of single occupancy vehicle trips to the Project Site, including the following: • Reduce parking supply • Unbundled parking • Voluntary travel behavior change program • Include bike parking per LAMC, including short-term and long-term parking facilities • Pedestrian network improvements, within the Project site

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 7
PROJECT CONSISTENCY WITH PLAN FOR A HEALTHY LOS ANGELES

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Chapter 1 - Los Angeles, a Leader in Health and Equity	
Policy 1.5 Plan for Health Improve Angelenos' health and well-being by incorporating a health perspective into land use, design, policy, and zoning decisions through existing tools, practices, and programs.	**Consistent.** The Project would enhance pedestrian access within and around the Project Site through upgraded sidewalks on Coldwater Canyon Avenue and Ventura Boulevard with new signalized pedestrian crossings and a reduction in the total number of vehicle conflicts by removing an existing driveway. Further, the Project provides infrastructure and services to encourage bicycling and landscaping to provide an enjoyable and safe pedestrian experience, including a paseo connecting to the Los Angeles River path. As such, it would encourage the use of active travel modes and thereby promote healthy living.
Policy 1.7 Displacement and Health Reduce the harmful health impacts of displacement on individuals, families and communities by pursuing strategies to create opportunities for existing residents to benefit from local revitalization efforts by: creating local employment and economic opportunities for low-income residents and local small businesses; expanding and preserving existing housing opportunities available to low-income residents; preserving cultural and social resources; and creating and implementing tools to evaluate and mitigate the potential displacement caused by large-scale investment and development.	**Consistent.** The Project provides new housing opportunities in the Studio City community including the provision of 78 affordable housing units. These affordable housing units will help combat against community displacement. The Project would not involve the removal or demolition of any existing housing and would not displace any tenants with the Project's construction. Thus, the project would create an abundant amount of housing for different income levels and would help to prevent further displacement in the community.
Chapter 5 - An Environment Where Life Thrives	
Policy 5.7 Land Use Planning for Public Health and GHG Emission Reduction Promote land use policies that reduce per capita greenhouse gas emissions, result in improved air quality and decreased air pollution, especially for children, seniors and others susceptible to respiratory diseases.	**Consistent.** Prior to mitigation, the Project is estimated to generate a higher VMT per capita for residents than the average for the area, as demonstrated in Section 4B. Therefore, the Project incorporates several design features and mitigations, which include TDM measures to reduce the number of single occupancy vehicle trips to the Project Site, including the following: • Reduce parking supply • Unbundled parking • Voluntary travel behavior change program • Include bike parking per LAMC, including short-term and long-term parking facilities • Pedestrian network improvements, within the Project site VMT directly contributes to GHG emissions, so a reduced VMT per capita also reduces GHG per capita.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in *Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan* (Los Angeles Department of City Planning, March 2015).

TABLE 8
PROJECT CONSISTENCY WITH SHERMAN OAKS - STUDIO CITY - TOLUCA LAKE - CAHUENGA PASS COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Multiple Family Residential Neighborhoods	
Objective 1-2 To locate new housing in a manner which reduces vehicular trips and makes it accessible to services and facilities. **Policies** **1-2.1** Locate higher residential densities near commercial centers, rail transit stations and major bus routes where public services facilities, utilities and topography will accommodate this development. **1-2.2** Encourage multiple residential development in commercial zones	**Consistent.** The Project proposes to construct multifamily housing along Ventura Boulevard where local and rapid bus routes can take residents to numerous destinations in the region, including the Metro B Line Universal City Station. Further, the project includes various TDM measures to further reduce vehicular trips, as described in section 4B.
Objective 1-3 To preserve and enhance the varied and distinct residential character and integrity in existing single and multi-family neighborhoods. **Policies** **1-3.1** Seek a high degree of compatibility and landscaping for new infill development to protect the character and scale of existing residential neighborhoods. **1-3.2** Consider factors such as neighborhood character and identity, compatibility of land uses, impact on livability, impacts on services and public facilities, and impacts on traffic levels when changes in residential densities are proposed. **1-3.3** Preserve existing views in hillside areas.	**Consistent.** The Project would include attractive landscaping to be compatible with the existing community, thus preserving the existing residential neighborhood. The residential and retail land uses are compatible with the Ventura corridor and, as a mixed-use development near transit, the impact on traffic levels would be reduced.
Objective 1-4 To promote and insure the provision of adequate housing for all persons regardless of income, age or ethnic background. **Policies** **1-4.1** Promote greater individual choice in type, quality, price and location of housing. **1-4.2** Promote housing in mixed use projects in pedestrian oriented areas and transit oriented districts. **1-4.3** Ensure that new housing opportunities minimize displacement of the residents. **1-4.4** Provide for development of townhouses and other similar condominium type of housing units to increase home ownership options.	**Consistent.** The Project would provide new housing opportunities, including the provision of affordable housing units for Very Low Income households at or below 50% of the Area Median Income. This will promote the housing choices for individuals while minimzing the displacement of current residents. Further, the project is located adjacent to multiple Metro bus lines and would contribute to the walkablity of the area with landscaping and ground floor retail.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in the *Sherman Oaks - Studio City - Toluca Lake - Cahuenga Pass* Community Plan (Los Angeles Department of City Planning, 1998).

TABLE 9
PROJECT CONSISTENCY WITH CITYWIDE DESIGN GUIDELINES

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
Pedestrian-First Design	
Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all Design projects to be safe and accesible and contribute to a better public right-of-way for people of all ages, genders, and abilities, especially the most vulnerable - children, seniors, and people with disabilities. **Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience** Design to avoid pedestrian and vehiular conflicts and to create an inviting and comfortable public right-of-way. A pleasant and welcoming public realm reinforces walkability and improves the quality of life for users. **Guideline 3: Design projects to actively engage with streets and public space and maintain human scale** New projects should be designed to contribute to a vibrant and attractive public realm that promotes a sense of civic pride. Better connections within the built environment contribute to a livable and accessible city and a healthier public realm.	**Consistent.** The Project design includes the creation of accessible sidewalks, pedestrian amenities, and well-designed vehicular access driveways in accordance with the City's design considerations. The Project design also includes new signalized crosswalks at both driveways and landscaping which includes adequate shade and habitat to provide a more comfortable mobility environment for pedestrians. These measures would help to engage with the street and maintain a sense of human scale.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in the Citywide Design Guidelines (Los Angeles Department of City Planning, 2019).

Section 4B: Threshold T-2.1
Causing Substantial VMT Analysis

Threshold T-2.1 of the TAG analyzes whether a project causes substantial VMT and is generally applied to land use projects. Specifically, Threshold T-2.1 inquires whether a project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)(1), which states that (for land use projects) "vehicle miles travelled exceeding an applicable threshold of significance may indicate a significant impact." This subdivision also states that a lead agency has discretion to choose the most appropriate method to evaluate a project's VMT.

Per Section 2.2.2 of the TAG, a "no impact" determination can be made for a project if either of the following screening criteria are not met for Threshold T-2:

- *T-2.1-1: Would the land use project generate a net increase of 250 or more daily vehicle trips?*
- *T-2.1-2: Would the project generate a net increase in daily VMT?*

VMT METHODOLOGY

The following describes the methodology by which vehicle trips and VMT are calculated in *City of Los Angeles VMT Calculator Version 1.3* (LADOT, July 2020) (VMT Calculator), as detailed in *City of Los Angeles VMT Calculator Documentation* (LADOT and LADCP, May 2020). LADOT developed the VMT Calculator to estimate project-specific daily household VMT per capita and daily work VMT per employee for developments within City limits, which are based on the following types of one-way trips:

- <u>Home-Based Work Production</u>: trips to a workplace destination originating from a residential use
- <u>Home-Based Other Production</u>: trips to a non-workplace destination (e.g., retail, restaurant, etc.) originating from a residential use

- Home-Based Work Attraction: trips arriving to a workplace destination originating from a residential use

As detailed in *City of Los Angeles VMT Calculator Documentation*, the household VMT per capita threshold applies to Home-Based Work Production and Home-Based Other Production trips, and the work VMT per employee threshold applies to Home-Based Work Attraction trips, as the location and characteristics of residences and workplaces are often the main drivers of VMT, as detailed in Appendix 1 of *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Governor's Office of Planning and Research, December 2018). As noted in the TAG, small-scale commercial components less than 50,000 sf of larger mixed-use development projects are not considered for the purposes of identifying significant work VMT impacts, as those trips are assumed to be local serving and would have a negligible effect on VMT.

Table 2.2-1 of the TAG details the following daily household VMT per capita and daily work VMT per employee impact criteria for the Area Planning Commission (APC) areas:

APC	Daily Household VMT per Capita	Daily Work VMT per Employee
Central	6.0	7.6
East LA	7.2	12.7
Harbor	9.2	12.3
North Valley	9.2	15.0
South LA	6.0	11.6
South Valley	9.4	11.6
West LA	7.4	11.1

Source: TAG (LADOT, July 2020)

The Project is located in the South Valley APC.

Other types of trips generated in the VMT Calculator include Non-Home-Based Other Production (trips to a non-residential destination originating from a non-residential use), Home-Based Other Attraction (trips to a non-workplace destination originating from a residential use), and Non-Home-Based Other Attraction (trips to a non-residential destination originating from a non-residential use). These trip types are not factored into the VMT per capita and VMT per employee thresholds as those trips are typically localized and are assumed to have a negligible effect on the VMT impact assessment. However, those trips are factored into the calculation of total project VMT for screening purposes when determining if VMT analysis would be required.

Travel Behavior Zone (TBZ)

The City developed TBZ categories to determine the magnitude of VMT and vehicle trip reductions that could be achieved through TDM strategies. As detailed in *City of Los Angeles VMT Calculator Documentation*, the development of the TBZs considered the population density, land use density, intersection density, and proximity to transit of each census tract in the City and are categorized as follows:

1. *Suburban (Zone 1): Very low-density primarily centered around single-family homes and minimally connected street network*
2. *Suburban Center (Zone 2): Low-density developments with a mix of residential and commercial uses with larger blocks and lower intersection density*
3. *Compact Infill (Zone 3): Higher density neighborhoods that include multi-story buildings and well-connected streets*
4. *Urban (Zone 4): High-density neighborhoods characterized by multi-story buildings with a dense road network*

The VMT Calculator determines a project's TBZ based on the latitude and longitude of a project address. The Project is located in the Suburban Center (Zone 2) TBZ.

Mixed-Use Development Methodology

As detailed in *City of Los Angeles VMT Calculator Documentation*, the VMT Calculator accounts for the interaction of land uses within a mixed-use development and considers the following sociodemographic, land use, and built environment factors for a project area:

- A project's jobs/housing balance
- Land use density of a project
- Transportation network connectivity

- Availability of and proximity to transit
- Proximity to retail and other destinations
- Vehicle ownership rates
- Household size

Trip Lengths

The VMT Calculator determines a project's VMT based on trip length information from the City's Travel Demand Forecasting Model, which considers the traffic analysis zone where a project is located to determine the trip length and trip type that factor into the calculation of a project's VMT.

Population and Employment Assumptions

As previously stated, the VMT thresholds identified in the TAG are based on household VMT per capita and work VMT per employee. Thus, the VMT Calculator contains population assumptions developed based on census data for the City and employment assumptions derived from multiple data sources, including *2012 Developer Fee Justification Study* (Los Angeles Unified School District, 2012), *Trip Generation Manual, 9th Edition* (Institute of Transportation Engineers, 2012), the San Diego Association of Governments Activity Based Model, the United States Department of Energy, and other modeling resources. A summary of population and employment assumptions for various land uses is provided in Table 1 of *City of Los Angeles VMT Calculator Documentation.*

TDM Measures

Additionally, the VMT Calculator measures the reduction in VMT resulting from a project's incorporation of TDM strategies as project design features or mitigation measures. The following seven categories of TDM strategies are included in the VMT Calculator:

1. Parking
2. Transit
3. Education and Encouragement
4. Commute Trip Reductions
5. Shared Mobility
6. Bicycle Infrastructure
7. Neighborhood Enhancement

TDM strategies within each of these categories have been empirically demonstrated to reduce trip-making or mode choice in such a way as to reduce VMT, as documented in *Quantifying Greenhouse Gas Mitigation Measures* (California Air Pollution Control Officers Association, 2010).

PROJECT VMT ANALYSIS

The VMT Calculator was used to evaluate Project VMT for comparison to the VMT impact criteria. Based on guidance from the City, the VMT Calculator was modeled for the Project's land use and density as the primary input.

The following assumptions were identified in the VMT Calculator:

- APC: South Valley
    - Household VMT Impact Threshold: 9.4
    - Work VMT Impact Threshold: 11.6

- TBZ: Suburban Center
    - Maximum VMT Reduction: 20%

The VMT analysis results based on the VMT Calculator are summarized in Table 10 and the list of Project design features and mitigation measures are provided in Table 11. The detailed output from the VMT Calculator is provided in Appendix D.

Project VMT

As shown on Table 11, the Project incorporates design features that include measures to reduce the number of single occupancy vehicle trips to the Project Site. For the purposes of this analysis, the following Project design features were accounted for in the VMT evaluation:

- Bicycle parking, including short-term and long-term parking facilities, per the LAMC
- Pedestrian network improvements on-site, including the pedestrian paseo on Ventura Boulevard and connections to the Los Angeles River path to the north of the Project.

As shown in Table 10 and Appendix D, the VMT Calculator estimates that the Project would generate 12,638 daily household VMT. Thus, the Project would generate an average VMT per capita of 10.2. The average household VMT per capita would exceed the South Valley APC significant household VMT impact threshold of 9.4 and, therefore, the overall Project would result in a significant VMT impact.

In addition to the Project design features, additional mitigation measures are proposed to further enhance the mobility options for employees and visitors to the site. These include the following, as shown in Table 11:

- Voluntary travel behavior change program with 100% of residents eligible
- Reduce parking supply by 9%
- Unbundle parking with a $100 monthly charge

As shown in Table 10 and Appendix D, with the additional mitigation measures, the VMT Calculator estimates that the Project would generate 10,277 daily household VMT. Thus, the Project would generate an average VMT per capita of 8.3 including the voluntary improvements. This would further reduce the Project's VMT below the South Valley APC significant household VMT impact threshold of 9.4 and no additional mitigation is required.

The detailed output from the VMT Calculator is provided in Appendix D.

CUMULATIVE ANALYSIS

Cumulative effects of development projects are determined based on the consistency with the air quality and GHG reduction goals of the RTP/SCS in terms of development location, density, and intensity. The RTP/SCS presents a long-term vision for the region's transportation system through Year 2045 and balances the region's future mobility and housing needs with economic, environmental, and public health goals.

As detailed in the TAG, for projects that do not demonstrate a project impact by applying an efficiency-based impact threshold (i.e., household VMT per capita or work VMT per employee) in the project impact analysis, a less than significant impact conclusion is sufficient in demonstrating there is no cumulative VMT impact, as those projects are already shown to align with the long-term VMT and GHG goals of the RTP/SCS.

Including design features and mitigation, this Project would not result in a significant VMT impact, as described above. Therefore, the Project is not anticipated to result in a cumulative VMT impact under Threshold T-2.1, and no further evaluation or mitigation measures would be required.

Furthermore, the Project Site is well-served by various bus lines. The Project would also contribute to the productivity and use of the regional transportation system by providing employment and housing near transit and encourage active transportation by providing new bicycle parking infrastructure and active street frontages, in line with RTP/SCS goals. Thus, the Project encourages a variety of transportation options and is consistent with the RTP/SCS goal of maximizing mobility and accessibility in the region.

TABLE 10
VMT ANALYSIS SUMMARY

Project Information		
Land Use	**Size**	
Housing | Apartments	442 dwelling units	
Housing | Affordable Housing (Family)	78 dwelling units	
Retail | General Retail	27,926 sf	
Retail | High-Turnover Sit-Down Restaurant	18,019 sf	
Project Analysis [a]		
Project Area Planning Commission	South Valley	
Travel Behavior Zone	Suburban Center	
Maximum Allowable VMT Reduction	20%	
VMT Analysis [b]	**Proposed Project**	**Proposed Project with Mitigation**
Daily Vehicle Trips	5,657	4,967
Daily VMT	51,556	45,260
Household VMT per Capita [c]	10.2	8.3
Impact Threshold	9.4	9.4
Significant Impact	**YES**	NO
Work VMT per Employee [d]	N/A	N/A
Impact Threshold	11.6	11.6
Significant Impact	NO	NO

Notes
[a] Project Analysis based on the *City of Los Angeles VMT Calculator Version 1.3* (July 2020).
[b] The Proposed Project includes the Project design features of bicycle parking per the LAMC and pedestrian improvements on-site. The Proposed Project with mitigation features include reduced parking supply, unbundled parking, and a voluntary behavior change program.
[c] Based on home-based production trips only (see Appendix D, Report 4).
[d] Based on home-based work attraction trips only (see Appendix D, Report 4).

TABLE 11
TDM MEASURES SUMMARY

Mitigations Available [a]	VMT Reduction Allowed [b]	Level of Implementation [c]	Project Design Feature or Mitigation [d]
Parking			
Reduce Parking Supply	12.5%	9% reduction of parking	Mitigation
Unbundle Parking	26% Home VMT	$100 monthly cost	Mitigation
Education & Encouragement			
Voluntary Travel Behavior Change Program	8%	100% participation	Mitigation
Bicycle Infrastructure			
Include Bike Parking Per LAMC	0.625%	Implement	Project Design Feature
Neighborhood Enhancement			
Pedestrian Network Improvements	1%	Within Project	Project Design Feature

Notes:
[a] TDM Measures provided by the *City of Los Angeles VMT Calculator Version 1.3,* LADOT and Fehr & Peers, May 2020.
[b] Allowable VMT reduction for each TDM measure as provided in the VMT Calculator.
[c] The level of implementation shows how much mitigation the Project proposes to implement for each TDM measure.
[d] The Project proposes project design features and mitigations to mitigate the VMT impact.

Section 4C: Threshold T-2.2
Substantially Inducing Additional Automobile Travel Analysis

The intent of Threshold T-2.2 is to assess whether a transportation project would induce substantial VMT by increasing vehicular capacity on the roadway network, such as the addition of through traffic lanes on existing or new highways, including general purpose lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges.

The Project is not a transportation project that would induce automobile travel. Therefore, the Project would not result in a significant impact under Threshold T-2.2 and further evaluation is not required.

Section 4D: Threshold T-3

Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use Analysis

Threshold T-3 requires that a project undergo further evaluation if it proposes new driveways or new vehicle access points to the property from the public ROW or modifications along the public ROW (i.e., street dedications). Project access plans were reviewed to determine if the Project would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts, with consideration to the following factors: (1) the relative amount of pedestrian activity at Project access points; (2) design features/physical configurations that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists; (3) the type of bicycle facilities the Project driveway(s) crosses and the relative level of utilization; (4) the physical conditions of the site and surrounding area, such as curves, slopes, walks, landscaping or other barriers that could result in vehicle/pedestrian, vehicle/bicycle, or vehicle/vehicle impacts; (5) the Project location, or Project-related changes to the public ROW, relative to proximity to the HIN or a Safe Routes to School program area; (6) and any other conditions, including the approximate location of incompatible uses that would substantially increase a transportation hazard.

DRIVEWAY DESIGN FEATURES

Access to the Project will be provided via one full-access existing driveway on Coldwater Canyon Avenue and one full-access existing driveway on Ventura Boulevard. A passenger loading area is proposed on Ventura Boulevard adjacent to the southern boundary of the site, which would eliminate a third existing driveway. Both active driveways are proposed to be signalized by the Project. None of the existing driveways present a significant safety hazard for pedestrians or bicyclists.

The section of Coldwater Canyon Avenue along which the Project's western driveway is located is constructed with six lanes: two northbound travel lanes, three southbound travel lanes, and a two-way left-turn median. The driveway would be modified to align with Valleyheart Drive to create a four-leg intersection. The section of Ventura Boulevard along which the Project's existing southern driveway is located is constructed with five travel lanes: two eastbound, two westbound, and a two-way left-turn median. No exceptional horizontal or vertical curvatures exist along either section of roadway that would create sight distance issues for Project traffic utilizing the driveways.

Street parking will be prohibited adjacent to the Project Site near the driveways to allow for maximum visibility. No unusual or new obstacles are presented in the Project design that would be considered hazardous to motorized vehicles, non-motorized vehicles, or pedestrians. The proposed driveways will be subject to review by LADOT.

Pedestrian and Bicycle Activity

The Project proposes to share two existing driveways, one on Coldwater Canyon Avenue and one on Ventura Boulevard, with the adjacent Related Project, and eliminate a third existing driveway on Ventura Boulevard. The western driveway on Coldwater Canyon Avenue would provide full access to the Project at a four-way intersection with Valleyheart Drive, which will be signalized by the Project. Coldwater Canyon Avenue is a designated Avenue II in the Mobility Plan and is identified as part of the Pedestrian Enhanced District. The southern driveway on Ventura Boulevard would provide full access to the Project at a four-way intersection with Goodland Avenue, also to be signalized by the Project for added protections. Ventura Boulevard is a designated Boulevard II in the Mobility Plan and is identified as part of the Pedestrian Enhanced District, Transit Enhanced Network, and Bicycle Lane Network.

Pedestrian and bicycle access points would be provided along Coldwater Canyon Avenue and Ventura Boulevard. Some bicycle access points would be shared with vehicles.

Based on traffic count data from December 2018 at the intersection of Coldwater Canyon Avenue & Ventura Boulevard, fewer than 60 pedestrians and bicyclists per peak hour, or approximately one per minute, traverse either driveway. Based on the trip generation estimates detailed in Table 5, the Project would generate fewer than four vehicles per minute at either of the Project driveways during either peak hour. Thus, pedestrians and bicyclists would have adequate gaps in vehicular traffic at the driveways to safely cross, and the Project is unlikely to result a substantial increase in vehicle-pedestrian and vehicle-bicycle conflicts.

The Project driveways would be designed to remain clear of hardscapes, vegetation, or signage that would impede sight lines. Sidewalk treatments across the driveways would be incorporated for increased safety and visibility.

Further, with signalization of both Project driveways, pedestrians and cyclists will have a dedicated phase to cross the street. This reduces conflict between automobiles and other road users and will provide for longer gaps in traffic flow.

Physical Terrain

The Project Site is located on a mostly flat parcel with a slight change in vertical elevation. However, no line-of-sight issues would be caused by changes in elevation and drivers would be able to safely identify approaching vehicles, pedestrians, and bicycles at the Project driveways. Driveways are designed to intersect the public ROW at right angles with adequate building setback to allow pedestrians and bicyclists to observe vehicles within the driveways.

The Project would provide landscaped elements and street trees for shade along the Project perimeter and within the Project Site to create a walkable and attractive pedestrian environment.

Project Location

The Project Site is located adjacent to Ventura Boulevard, which is identified as part of the HIN, Bicycle Lane Network, and Pedestrian Enhanced District. No improvements have been made to the corridor, nor have any been identified.

Review of the Safe Routes to School projects did not identify planned improvements within the Study Area.

Incompatible Uses

The mixed uses of the development would be compatible with the surrounding land uses and would encourage more pedestrian and transit trips in the area with sidewalk improvements, improved connectivity, and landscaping. Furthermore, the Project would not change the character of the local community and no elements of the Project's uses or design would be considered incompatible.

Summary

Based on the site plan review and design, the Project does not present any geometric design features that would substantially increase hazards related to traffic movement, mobility, or pedestrian accessibility and, thus, Project impacts are considered less than significant.

CUMULATIVE ANALYSIS

In addition to potential Project-specific impacts, the TAG requires that the Project be reviewed in combination with Related Projects with access points along the same block as the proposed project to determine if there may be a cumulatively significant impact. One Related Project, 12833 Ventura Boulevard, was identified west of the Project Site on the same block.

This Related Project proposes to construct two driveways, one on Coldwater Canyon Avenue and one on Ventura Boulevard, that would serve as full access driveways. Both driveways are proposed to be signalized by the Project. These intersections were analyzed in this report as Intersection #2 and Intersection #4.

As the driveways would be shared between the two sites, vehicle conflicts with pedestrians and bicyclists would be greatly reduced along both development sites, making the street safer for all road users. Additionally, the driveways would not cause any potentially significant hazards due to sightline issues or reduced pedestrian or cyclist visibility. Furthermore, by signalizing both shared driveways, traffic can be better managed along both corridors with designated phases for pedestrian and cyclist crossings. Both signals are located well over 300 feet away from any existing intersections, thus minimizing any queuing concerns with nearby signals. Therefore, the Project would not result in cumulative impacts that would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts.

Section 4E
Caltrans Analysis

The City Freeway Guidance identifies City requirements for a CEQA safety analysis of Caltrans facilities as part of a transportation assessment.

ANALYSIS METHODOLOGY

The City Freeway Guidance relates to the identification of potential safety impacts at freeway off-ramps as a result of increased traffic from development projects. It provides a methodology and significance criteria for assessing whether additional vehicle queueing at off-ramps could result in a safety impact due to speed differentials between the mainline freeway lanes and the queued vehicles at the off-ramp.

Based on the City Freeway Guidance, a transportation assessment for a development project must include analysis of any freeway off-ramp where the project adds 25 or more peak hour trips. A project would result in a significant impact at such a ramp if each of the following three criteria were met:

1. Under a scenario analyzing future conditions upon project buildout, with project traffic included, the off-ramp queue would extend to the mainline freeway lanes.[2]
2. A project would contribute at least two vehicle lengths (50 feet, assuming 25 feet per vehicle) to the queue.
3. The average speed of mainline freeway traffic adjacent to the off-ramp during the analyzed peak hour(s) is greater than 30 mph.

Should a significant impact be identified, mitigation measures to be considered include TDM measures to reduce a project's trip generation, investments in active transportation or transit

[2] If an auxiliary lane is provided on the freeway, then half the length of the auxiliary lane is added to the ramp storage length.

system infrastructure to reduce a project's trip generation, changes to the traffic signal timing or lane assignments at the ramp intersection, or physical changes to the off-ramp. Any physical change to the ramp would have to improve safety, not induce greater VMT, and not result in secondary environmental impacts.

PROJECT ANALYSIS

The nearest freeway off-ramps are located at Coldwater Canyon Avenue & US 101, outside the Project's Study Area. Based on the Project's trip generation estimates and trip assignments, which are detailed in Chapter 3, approximately 30% of Project traffic would come from the north along Coldwater Canyon Avenue. Of this 30%, it is likely much of the traffic would disperse into nearby residential neighborhoods or come from north of US 101. Assuming 10% of the inbound Project traffic came from the eastbound and westbound freeway off-ramps during both peak hours, both ramps would carry approximately eight Project vehicles in the morning peak period and 16 Project vehicles in the afternoon peak period. Therefore, the Project would not add 25 or more peak hour trips to any freeway off-ramp and no further freeway off-ramp queuing analysis is required. Furthermore, the Project would not result in a significant safety impact and no corrective measures at any freeway off-ramps would be required.

Chapter 5
Non-CEQA Transportation Analysis

This chapter summarizes the non-CEQA transportation analysis of the Project. It includes Project traffic, the expected access, safety, and circulation operations of the Project, and the nearby pedestrian, bicycle, and transit facilities. This chapter also evaluates the Project's operational conditions, parking supply and requirements, and potential effects due to Project construction.

Per Section 3.1 of the TAG, any deficiencies identified based on the non-CEQA transportation analysis is "not intended to be interpreted as thresholds of significance, or significance criteria for purposes of CEQA review unless otherwise specifically identified in Section 2." Section 3 of the TAG identifies the following four non-CEQA transportation analyses for reviewing potential transportation deficiencies that may result from a development project:

- Pedestrian, Bicycle, and Transit Access Assessment
- Project Access, Safety, and Circulation Evaluation
- Residential Street Cut-Through Analysis
- Project Construction

The four non-CEQA transportation analyses are reviewed in detail in Sections 5A-5D. In addition, a review of the proposed bicycle parking and the LAMC bicycle parking requirement for the Project is provided in Section 5E.

OPERATIONAL ANALYSIS METHODOLOGY

Intersection operations were evaluated for typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods. A total of five intersections in the vicinity of the Project Site were selected for detailed transportation analysis and are shown in Figure 3.

The following traffic conditions were developed and analyzed as part of this study:

- Existing with Project Conditions (Year 2021): This analysis condition projects the potential intersection operating conditions that could be expected if the Project were built under existing conditions.

- Future with Project Conditions (Year 2027): This analysis condition projects the potential intersection operating conditions that could be expected if the Project were occupied in the projected buildout year. In this analysis, the Project-generated traffic is added to Future without Project Conditions in Year 2027.

Operational Evaluation

In accordance with the TAG, the intersection delay and queue analyses for the operational evaluation were conducted using the *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) methodology, which was implemented using Synchro software and signal timing worksheets from the agency of jurisdiction to analyze intersection operating conditions. The HCM signalized methodology calculates the average delay, in seconds, for each vehicle passing through the intersections while the HCM unsignalized methodology calculates the control delay, in seconds, for individual approaches of an intersection. Table 12 presents a description of the LOS categories, which range from excellent, nearly free-flow traffic at LOS A, to stop-and-go conditions at LOS F, for signalized and unsignalized intersections. The queue lengths were estimated using Synchro, which reports the 95th percentile queue length, in vehicles per lane, for each approach lane. The reported queues are calculated using the HCM signalized and unsignalized intersection methodology.

LOS and queuing worksheets for each scenario are provided in Appendix E.

TABLE 12
LEVEL OF SERVICE DEFINITIONS FOR INTERSECTIONS

Level of Service	Definition	Delay [a]	
		Signalized Intersections	Unsignalized Intersections
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	0.0 - 10.0	0.0 - 10.0
B	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	10.1 - 20.0	10.1 - 15.0
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	20.1 - 35.0	15.1 - 25.0
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	35.1 - 55.0	25.1 - 35.0
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	55.1 - 80.0	35.1 - 50.0
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 80.0	> 50.0

Notes

Source: *Highway Capacity Manual, 6th Edition (* Transportation Research Board, 2016).

[a] Measured in seconds.

Section 5A
Pedestrian, Bicycle, and Transit Assessment

The TAG indicates that the pedestrian, bicycle, and transit facilities assessment is intended to determine a project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the proposed project. The deficiencies could be physical (through removal, modification, or degradation of facilities) or demand-based (by adding pedestrian or bicycle demand to inadequate facilities).

Factors to consider when assessing a project's potential effect on pedestrian, bicycle, and transit facilities, include the following:

- Would the project directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian, bicycle, or transit facilities?
- Would a project intensify use of existing pedestrian, bicycle, or transit facilities?

PROJECT MODIFICATIONS

As previously described, vehicular access to the Project will be provided via one full-access existing driveway on Coldwater Canyon Avenue and one full-access existing driveway on Ventura Boulevard. A passenger loading area is proposed on Ventura Boulevard adjacent to the southern boundary of the site, which would eliminate a third existing driveway. None of the driveways would create a new conflict point between pedestrians, bicyclists, and vehicles.

The Project would only utilize existing driveways with limited modifications to the curb cutouts as discussed previously. No new vehicular access points are proposed on a designated Boulevard or Avenue in the Mobility Plan, consistent with the guidelines. None of the existing driveways present a significant safety hazard for pedestrians or bicyclists.

The adjacent sidewalk facilities would meet ADA requirements for slopes and passable spaces, including ADA compliance at driveways and the loading zone. The Project would not remove or cause degradation of existing sidewalks, crosswalks, pedestrian refuge areas or curb extensions, nor would the Project narrow existing sidewalks, paths, crossings, or access points. The Project would not result in the deterioration of any existing bicycle facilities as no modifications are proposed that would prevent the inclusion of bike lanes on Ventura Boulevard. Nor would the Project result in the deterioration of any existing transit facilities.

INTENSIFICATION OF USE

The replacement of an existing hotel with a mixed-use development with 520 dwelling units, restaurant space, and retail space will likely intensify pedestrian, bicycle, and transit usage in this part of the Studio City neighborhood, which is desirable for reducing dependence on vehicles and the overall VMT attributable to the Project Site.

The Project supports the intensification of use through the design of enhanced sidewalks, natural landscapes, new crossings, a pedestrian paseo with access to the Los Angeles River path, and bicycle parking. The Project considers safety through well-designed, limited access points on an Avenue or Boulevard, improved or maintained public sidewalks with less vehicle conflict points, and increased lighting for safety.

Pedestrian Facilities

Increased pedestrian activity around the Project Site would utilize upgraded, compliant sidewalks for ease of travel with access internal to the site from all frontages. Sidewalk widths established by the Mobility Plan are wide to accommodate more demand, particularly in urban environments. With the proposed signals at the Project driveways and existing crosswalks at Coldwater Canyon Avenue & Ventura Boulevard southwest of the Project Site, pedestrians can safely maneuver without making illegal crossings.

Bicycle Facilities

Currently, no existing bicycle facilities are provided. The anticipated increase in bicyclists will be accommodated on-site through short- and long-term bicycle parking facilities accessible from public streets and sidewalks. Ventura Boulevard, adjacent to the Project Site, is identified as part of the Bicycle Lane Network, but does not currently have bicycle lanes. However, the Project would not preclude the City from implementing cycling improvements to fulfill the goals of the Mobility Plan.

Transit Facilities

Although the Project (and other Related Projects) will cumulatively add transit ridership, as detailed in Table 2, the Project Site and the Study Area are served by multiple bus lines.

As shown in Table 5, 55 and 71 total Project trips are expected to use transit during both the morning and afternoon peak hour trips, respectively. Based on the average vehicle occupancy factor of 1.55 for all trip purposes in Los Angeles County as identified in *SCAG Regional Travel Demand Model and 2012 Model Validation* (SCAG, March 2016), the total Project vehicle-transit trips correspond to 86 and 111 person-transit trips in the morning and afternoon peak hours, respectively. The adjacent transit capacity, with the increased frequency of bus service identified in the NextGen Bus Plan, would easily accommodate the intensification of transit usage attributable to the Project without significantly absorbing available excess capacity. No additional modifications to service would be required to accommodate the growth in ridership.

Furthermore, the recently adopted *2020 Long Range Transportation Plan* (Metro, Adopted 2020), outlines a range of transit and highway projects throughout Los Angeles County that are designed to improve mobility and address future growth. It is recognized that with these plans in place, Metro will continue to maintain and expand regional transit service in order to accommodate cumulative demand in the region.

Section 5B
Project Access, Safety, and Circulation Assessment

This section summarizes the site access, safety, and circulation of the Project Site. It includes an evaluation of the expected access and circulation operations of the Project.

VEHICLES

The proposed circulation plan for the Project includes two vehicular access points. One full-access existing driveway on Coldwater Canyon Avenue and one full-access existing driveway on Ventura Boulevard. A passenger loading area is proposed on Ventura Boulevard adjacent to the southern boundary of the site, which would eliminate a third existing driveway. All driveways would be constructed to meet the applicable City standards.

PEDESTRIANS AND BICYCLES

Pedestrian access to the Project would be provided along Coldwater Canyon Avenue and Ventura Boulevard. Pedestrian entrances would provide access from the adjacent pedestrian facilities and throughout the physical Project Site via a paseo. All roadways and driveways are designed to intersect at right angles to improve sight distance and minimize other potential impediments to driver and pedestrian visibility.

Visitors and employees arriving by bicycle would have the same access opportunities as pedestrians. In order to facilitate bicycle use, short-term and long-term bicycle parking spaces would be provided, consistent with LAMC Section 12.21 A16. None of the Project's planned infrastructure will reduce safety for vulnerable roadway users.

LOS ANALYSIS

The intersection analysis was conducted based on the HCM methodologies to identify delay and LOS at each of the Study Intersections with development of the Project. Detailed LOS calculation worksheets are provided in Appendix E.

This report analyzes the effects of the Project with and without signalization of the two driveways.

Existing with Project Conditions

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes, described in Chapter 3 and shown in Figure 14, were added to the existing morning and afternoon peak hour traffic volumes shown in Figure 8. The resulting volumes are illustrated in Figure 15 and represent Existing with Project Conditions, assuming Project operation under Existing Conditions.

Intersection LOS. Table 13 summarizes the weekday morning and afternoon peak hour LOS results for each of the Study Intersections under Existing and Existing with Project Conditions. As shown in Table 13, three of the five Study Intersections would operate at LOS D or better during both the morning and afternoon peak hours under Existing and Existing with Project Conditions. The remaining two intersections would operate at LOS F during at least one of the peak periods under Existing or Existing with Project Conditions.

Future with Project Conditions

All future cumulative traffic growth (i.e., ambient and Related Project traffic growth) and transportation infrastructure improvements described in Chapter 2 were incorporated into this analysis.

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes, described in Chapter 3 and shown in Figure 14, were added to the Future without Project (Year 2027) morning and afternoon peak hour traffic volumes shown in Figure 11. The resulting volumes are illustrated in Figure 16 and represent Future with Project Conditions after occupancy of the Project in Year 2027.

Intersection LOS. Table 14A summarizes the results of the Future without Project (Year 2027) and Future with Project Conditions during the weekday morning and afternoon peak hours for the Study Intersections without signalization of the driveways. As shown in Table 14A, three of the five Study Intersections would operate at LOS D or better during both the morning and afternoon peak hours under Future without Project and Future with Project Conditions. The remaining two intersections would operate at LOS E or F during at least one of the peak periods under Future without Project or Future with Project Conditions.

Table 14B summarizes the results of the Future without Project (Year 2027) and Future with Project Conditions during the weekday morning and afternoon peak hours for the Study Intersections with signalization of the driveways. As shown in Table 14B, all five Study Intersections would operate at LOS D or better during both the morning and afternoon peak hours under Future without Project and Future with Project Conditions.

INTERSECTION QUEUING ANALYSIS

The Study Intersections were also analyzed to determine whether the lengths of intersection turning lanes could accommodate vehicle queue lengths.

The queue lengths were estimated using Synchro software, which reports the 95th percentile queue length, in vehicle lengths, for each approach lane, which can be converted to linear feet by multiplying vehicle lengths by 25 feet. The reported queues are calculated using the HCM signalized intersection methodology.

Detailed queuing analysis worksheets are provided in Appendix E.

SIGNAL WARRANT ANALYSIS

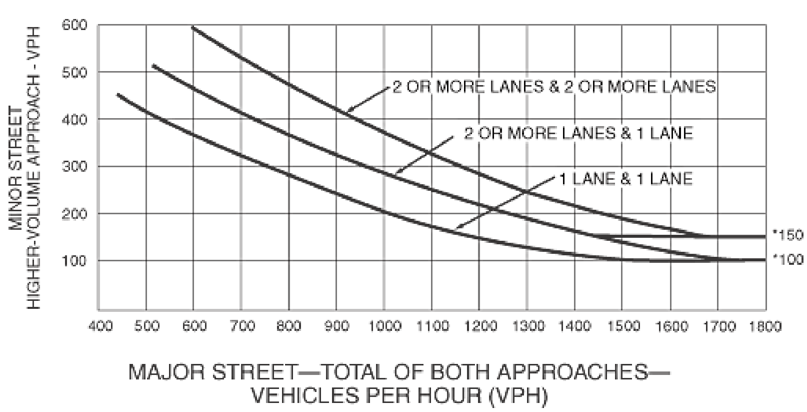
Since the Project is proposing two new traffic signals at Coldwater Canyon Avenue & Valleyheart Drive / Driveway and Goodland Avenue / Driveway & Ventura Boulevard, signal warrant analyses were conducted per the guidelines set forth in *California Manual on Uniform Traffic Control Devices* (Caltrans, Revised March 2021) (CA MUTCD).

The intersections were analyzed according to Warrant 3 (peak hour). The following methodologies, as quoted from the California MUTCD, were used to evaluate signal warrants at the intersections:

Warrant 3, Peak-Hour Vehicular Volume Warrant

Signal Warrant 3 is intended for use at a location where traffic conditions are such that for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. Combined volumes for both approaches of the major street are included while only the volume from the higher minor street approach is included. At an intersection with a high volume of left-turn traffic from the major street, the analysis may include the major street left-turn volumes plus the minor street approach volume as the total "minor street" volume. The warrant is satisfied if traffic volumes for any one hour of an average day exceed the plotted lines shown in the following figure.

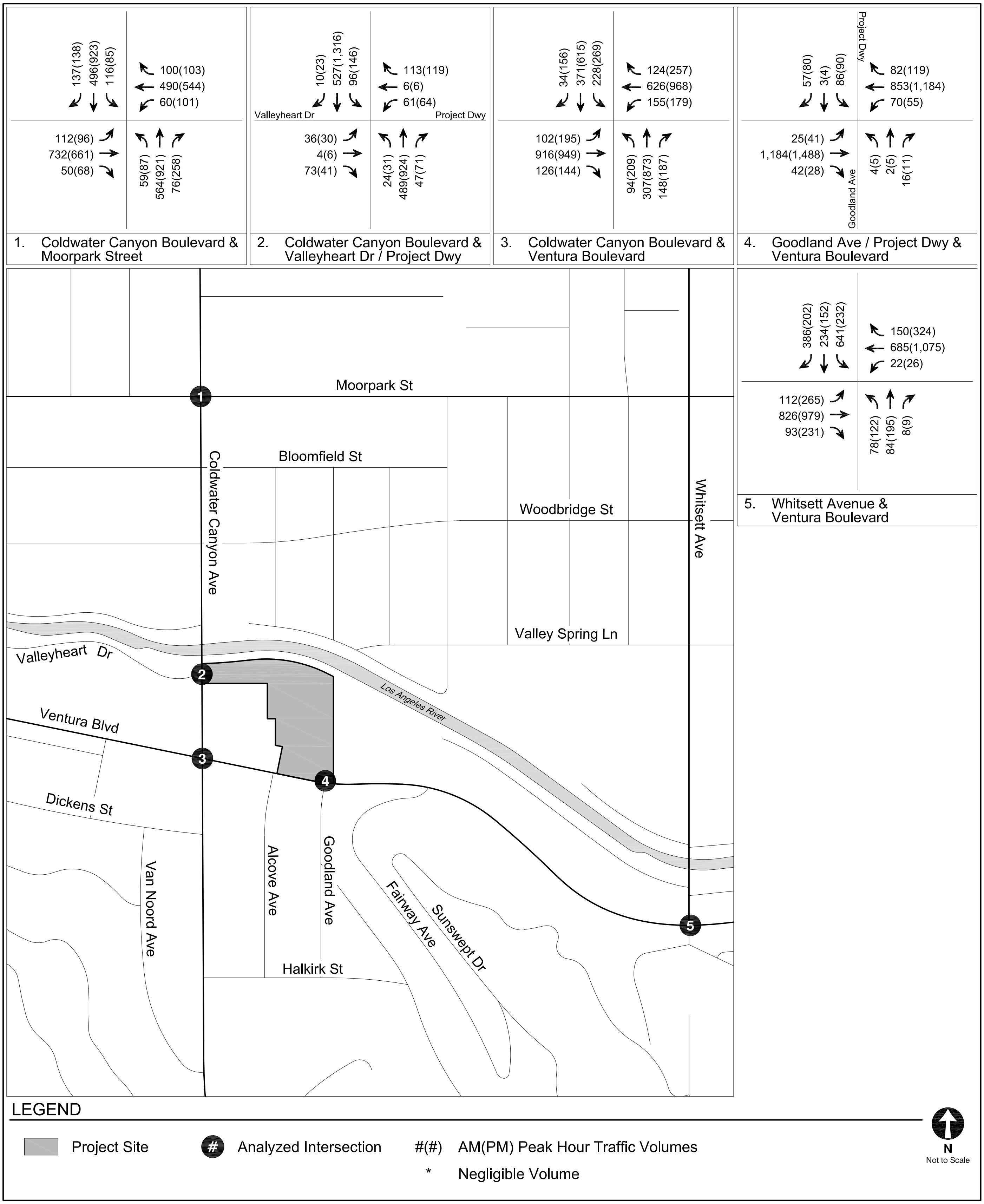
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

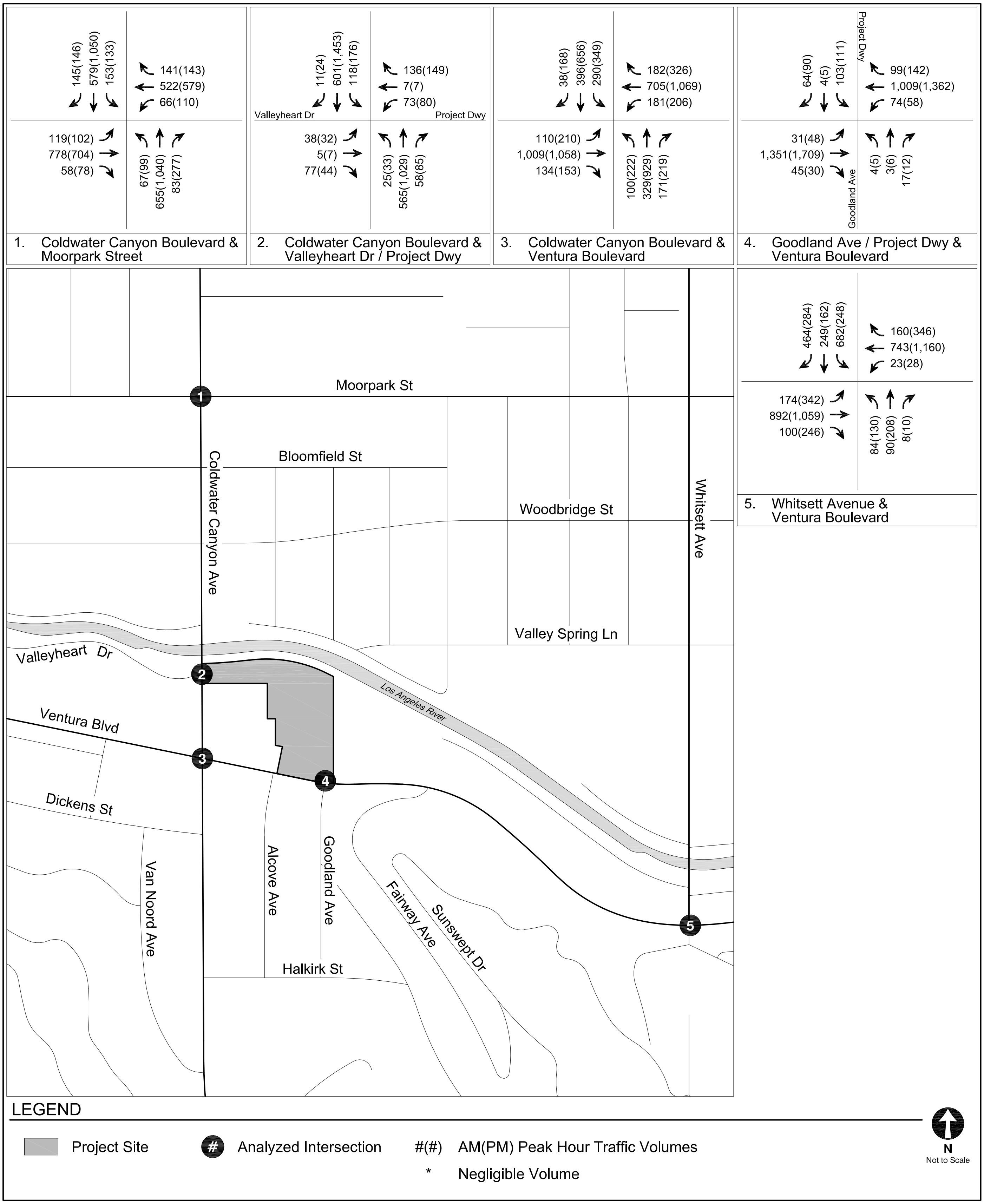
The traffic signal warrant analyses indicated that both intersections would meet the minimum traffic demands for peak hour signal warrants under Future with Project Conditions. The traffic signal warrant analyses are provided in Appendix F.

Therefore, the Project proposes to signalize both intersections. The City, at its discretion, may require further analyses separate from Warrant #3 to make an ultimate determination on whether to approve signals at these locations.



EXISTING WITH PROJECT CONDITIONS (YEAR 2021)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 15



FUTURE WITH PROJECT CONDITIONS (YEAR 2027)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 16

TABLE 13
EXISTING WITH PROJECT CONDITIONS (YEAR 2021)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Exisiting		Existing with Project	
			Delay	LOS	Delay	LOS
1.	Coldwater Canyon Avenue & Moorpark Street	AM PM	23.3 29.5	C C	23.8 30.7	C C
2. [a]	Coldwater Canyon Avenue & Valleyheart Drive/Driveway	AM PM	19.6 Overflow	C N/A	37.2 Overflow	E N/A
3.	Coldwater Canyon Avenue & Ventura Boulevard	AM PM	22.8 39.4	C D	23.3 40.3	C D
4. [a]	Goodland Avenue/Driveway & Ventura Boulevard	AM PM	132.4 Overflow	F N/A	Overflow Overflow	N/A N/A
5.	Whitsett Avenue & Ventura Boulevard	AM PM	29.4 12.3	C B	30.1 10.6	C B

Notes
Delay is measured in seconds per vehicle
LOS = Level of service
Results per Synchro 10 (HCM 6th Edition Methodology)
[a] Unsignalized intersection, shows worst case approach delay

TABLE 14A
FUTURE WITH PROJECT CONDITIONS (YEAR 2027)
INTERSECTION LEVELS OF SERVICE - UNSIGNALIZED DRIVEWAYS

No	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
1.	Coldwater Canyon Avenue & Moorpark Street	AM PM	26.7 52.2	C D	27.1 53.9	C D
2. [a]	Coldwater Canyon Avenue & Valleyheart Drive/Driveway	AM PM	27.7 Overflow	D N/A	113.3 Overflow	F N/A
3.	Coldwater Canyon Avenue & Ventura Boulevard	AM PM	24.7 41.8	C D	25.9 44.0	C D
4. [a]	Goodland Avenue/Driveway & Ventura Boulevard	AM PM	Overflow Overflow	N/A N/A	Overflow Overflow	N/A N/A
5.	Whitsett Avenue & Ventura Boulevard	AM PM	17.4 10.8	B B	19.7 12.1	B B

Notes
Delay is measured in seconds per vehicle
LOS = Level of service
Results per Synchro 10 (HCM 6th Edition Methodology)
[a] Unsignalized intersection, shows worst case approach delay

TABLE 14B
FUTURE WITH PROJECT CONDITIONS (YEAR 2027)
INTERSECTION LEVELS OF SERVICE - SIGNALIZED DRIVEWAYS

No	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
1.	Coldwater Canyon Avenue & Moorpark Street	AM PM	26.7 44.8	C D	28.7 46.1	C D
2.	Coldwater Canyon Avenue & Valleyheart Drive/Driveway	AM PM	6.7 4.1	A A	9.1 6.5	A A
3.	Coldwater Canyon Avenue & Ventura Boulevard	AM PM	28.5 36.8	C D	29.9 38.7	C D
4.	Goodland Avenue/Driveway & Ventura Boulevard	AM PM	12.2 16.1	B B	12.9 17.0	B B
5.	Whitsett Avenue & Ventura Boulevard	AM PM	17.4 10.6	B B	17.1 11.9	B B

Notes
Delay is measured in seconds per vehicle
LOS = Level of service
Results per Synchro 10 (HCM 6th Edition Methodology)

Section 5C
Residential Street Cut-Through Analysis

This section summarizes the residential street cut-through analysis conducted to determine potential increases in average daily traffic volumes on designated Local Streets, as classified in the Mobility Plan, that can be identified as cut-through trips generated by the Project and that can adversely affect the character and function of those streets.

Section 3.5.2 of the TAG provides a list of questions to assess whether the Project would negatively affect residential streets. The Project driveways are located along Coldwater Canyon Avenue and Ventura Boulevard. Both driveways intersect with local residential streets, Valleyheart Drive and Goodland Place. Project traffic assigned to these streets, as shown in Figure 15, would access the local serving retail and restaurant spaces and, thus, would not be considered “cut-through” traffic. Regardless, the anticipated number of trips would not be considered significant additional traffic. The Local Streets in the area are not parallel routes that would make traveling to the Project Site more advantageous, so it is not anticipated that neighborhood intrusion would occur.

Therefore, a residential street cut-through analysis would not be required.

Section 5D
Construction Impact Analysis

This section summarizes the construction schedule and construction activities associated with the Project. The construction analysis relates to the temporary issues that may result from the construction activities associated with the Project and was performed in accordance with Section 3.4 of the TAG.

CONSTRUCTION EVALUATION CRITERIA

Section 3.4.3 of the TAG identifies three types of in-street construction issues that require further analysis to assess the effects of a project's construction on the existing pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas. The three types of issues and related populations are:

1. Temporary transportation constraints – potential issues on the transportation system
2. Temporary loss of access – potential issues on visitors entering and leaving sites
3. Temporary loss of bus stops or rerouting of bus lines – potential impacts on bus travelers

The factors involve the likelihood and extent to which an issue might occur, the potential inconvenience caused to users of the transportation system, and consideration for public safety. Construction activities could potentially interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas. As detailed in Section 3.4.4 of the TAG, the proposed construction plans should be reviewed to determine whether construction activities would require any of the following actions:

- Street, sidewalk, or lane closures
- Blocking of existing vehicle, bicycle, or pedestrian access along a street or to parcels fronting the street
- Modification of access to transit stations, stops, or facilities during revenue hours

- Closure or movement of an existing bus stop or rerouting of an existing bus line
- Creation of transportation hazards

PROPOSED CONSTRUCTION SCHEDULE

Construction of the Project is anticipated to occur over a period of approximately 44 months, with completion in Year 2027. The construction period would include three overall phases, each with multiple sub-phases, including site demolition, excavation and grading, foundations, and building construction. Phase 1 of the construction would consist of demolishing the existing structure and completing the parking garage. Phase 2 would construct the first of the two buildings on top of the parking garage, and Phase 3 would remove the existing stacked parking spaces on the north side of the parcel to construct the second residential building. Of the three phases, peak haul truck activity occurs during the grading and export sub-phase of Phase 1, and peak worker activity occurs during building construction of Phases 2 and 3. These two sub-phases of the total Project construction were studied in greater detail.

GRADING/EXPORT SUB-PHASE

The peak period of truck activity during construction of the Project would occur during the grading and export for the parking garage construction.

With the implementation of the Construction Management Plan, which is described in more detail below, it is anticipated that nearly all haul truck activity as well as worker activity will occur outside of the morning and afternoon peak hours.

Haul trucks would travel on approved truck routes designated within the City. Given the Project Site's proximity to US 101, haul truck traffic would take the most direct route, Coldwater Canyon Avenue, to the appropriate freeway ramps. The haul route will be reviewed and approved by the City during evaluation and permitting of the Construction Management Plan.

Based on projections compiled for the Project, 410,230 cubic yards of material would be excavated and removed from the Project Site during the five-month period. Based on construction projections, this period would require up to 290 haul trucks per day. Thus, up to 580 daily haul truck trips (290 inbound, 290 outbound) are forecast to occur during the grading/export period.

Transportation Research Circular No. 212, Interim Materials on Highway Capacity (Transportation Research Board, 1980) defines passenger car equivalency (PCE) for a vehicle as the number of through moving passenger cars to which it is equivalent based on the vehicle's headway and delay-creating effects. Table 8 of *Transportation Research Circular No. 212* and Exhibit 12-25 of the HCM suggest a PCE of 2.0 for trucks on level terrain. Assuming a PCE factor of 2.0, the 580 truck trips would be equivalent to 1,160 daily PCE trips, (580 inbound, 580 outbound). With truck trips primarily occurring between the hours of 9:00 AM – 4:00 PM, the truck trips would generate approximately 83 PCE trips in and 83 PCE trips outbound per hour. During the off-peak hours of the day, these PCE trip levels would not be expected to cause congestion issues.

In addition, a maximum of 55 construction workers would work at the Project Site during this phase. Assuming minimal carpooling amongst those workers, an average vehicle occupancy (AVO) of 1.135 persons per vehicle was applied, as provided in *CEQA Air Quality Handbook* (South Coast Air Quality Management District, 1993). Therefore, 55 workers would result in a total of 49 vehicle trips to and 49 vehicle trips from the Project Site on a daily basis.

With implementation of the Construction Management Plan, these trips are anticipated to primarily occur outside the peak hours. Therefore, no peak hour construction traffic impacts at intersections are expected during the excavation and grading phase of construction.

BUILDING CONSTRUCTION PHASE

The traffic issues associated with construction workers depends on the magnitude of workers employed during various phases of construction, as well as the travel mode and travel time of the workers. In general, the hours of construction typically require workers to be on-site before the weekday morning commuter peak period and allow them to leave before or after the afternoon commuter peak period (i.e., arrive at the site prior to 7:00 AM and depart before 4:00 PM or after 6:00 PM). Therefore, most, if not all, construction worker trips would occur outside of the typical weekday commuter peak periods.

According to construction projections prepared for the Project, the subphase of building construction would employ the most construction workers, with a maximum of 285 workers per day. Assuming minimal carpooling amongst those workers, an AVO of 1.135 persons per vehicle was applied, as provided in *CEQA Air Quality Handbook*. Therefore, 285 workers would result in 252 inbound and 252 outbound vehicle trips to and from the Project Site during this phase. However, this traffic would occur outside the typical peak hour traffic periods and thus minimize the impact to nearby intersections.

During construction, adequate parking for construction workers would be secured in a nearby off-site parking facility. The Project currently anticipates renting nearby parking lots located at 12711 Ventura Boulevard and 12741 Ventura Boulevard. Restrictions against workers parking in the public ROW in the vicinity of (or adjacent to) the Project Site would be identified as part of the Construction Management Plan, described in further detail below. Depending on the location of the off-site parking, a shuttle may be provided to connect to the Project Site.

Deliveries are also anticipated throughout the day during the building construction phase, which would occur outside of the morning and afternoon peak hours with implementation of the Construction Management Plan.

POTENTIAL IMPACTS WITH ACCESS, TRANSIT, AND CIRCULATION

Project construction is not expected to create hazards for roadway travelers, bus riders, or parkers, so long as commonly practiced safety procedures for construction are followed. Such procedures and other measures (e.g., to address temporary traffic control, lane closures, sidewalk closures, etc.) would be incorporated into the Construction Management Plan. The construction-related issues associated with access and transit are anticipated to be minimal, and the implementation of the Construction Management Plan described below would further reduce those issues.

Access

Construction activities are expected to be primarily contained within the Project Site boundaries. However, it is expected that construction fences may encroach into the public ROW (e.g., sidewalks and roadways) adjacent to the Project Site on Ventura Boulevard. Temporary traffic controls would be provided to direct traffic around any closures, as required in the Construction Management Plan. The construction would likely close the sidewalk and parking lane throughout the construction process adjacent to the Project frontage. Access to neighboring parcels would be maintained. No other streets would be directly affected by construction activities.

The use of the public ROW along Ventura Boulevard may require temporary re-routing of pedestrian and bicycle traffic, as the sidewalk dedication fronting the Project Site would be closed during construction activities. The transit stop would also require relocation during the construction period. The Construction Management Plan would include measures to ensure pedestrian and bicycle safety along the affected sidewalks and temporary walkways (e.g., use of directional signage, maintaining continuous and unobstructed pedestrian paths, and/or providing overhead covering).

Transit

The Project would require a temporary transit stop relocation during construction. One bus stop serving Metro Line 167 would be relocated farther east or west from the Project frontage along Ventura Boulevard. Once completed, the Project proposes to reinstall the bus stop serving Line 167. The Project would coordinate any closures or relocations that would impact Metro property or equipment.

Parking

Construction activities for both phases will likely encroach onto the roadway along Ventura Boulevard. Ventura Boulevard provides approximately six metered parking spaces adjacent to the Project Site. Therefore, the Project would be subject to any LADOT fees related to the temporary removal of parking meters.

CONSTRUCTION MANAGEMENT PLAN

A detailed Construction Management Plan, including street closure information, a detour plan, haul routes, and a staging plan, would be prepared and submitted to the City for review and approval, prior to commencing construction. The Construction Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements, as appropriate:

- Advance, bilingual notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation
- Prohibition of construction worker or equipment parking on adjacent streets
- Temporary pedestrian, bicycle, and vehicular traffic controls during all construction activities adjacent to the Project Site, to ensure traffic safety on the public ROW
- Temporary traffic control during all construction activities adjacent to public ROW to improve traffic flow on public roadways (e.g., flag persons)
- Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets
- Scheduling of construction-related deliveries, haul trips, etc., to occur outside the commuter peak hours to the extent feasible
- Potential sequencing of construction activity for the Project to reduce the amount of construction-related traffic on arterial streets
- Containment of construction activity within the Project Site boundaries
- Implementation of safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers, as appropriate

Section 5E
Parking

This section provides an analysis of the proposed parking and the potential parking impacts of the Project.

PARKING SUPPLY

All Project parking would be provided on-site. The Project would provide a total of 939 automobile spaces and 313 bicycle spaces in one three-level subterranean parking facility and limited surface parking. Primary access would be provided via two existing driveways on Coldwater Canyon Avenue and Ventura Boulevard.

VEHICLE PARKING

The parking requirement of the different land use components of the Project were calculated by applying the LAMC parking rates, as shown in Table 15.

Utilizing the parking ratios detailed in Table 15, the Project would require a total of 1,029 spaces for the new mixed-use development.

However, the Project proposes to utilize the parking rates in California Assembly Bill 2345 (AB2345), which requires one space per dwelling unit, and thus would require 855 parking spaces. As shown in Table 15, the LAMC and AB 2345 vehicle parking requirements would be satisfied by the Project's proposed 939-space parking supply.

BICYCLE PARKING

LAMC Section 12.21.A.16 details the parking requirements for new developments. However, new bicycle parking requirements have been developed by the City and the Project would follow Ordinance No. 185480. The updated LAMC bicycle parking requirement of the Project is based on the rates provided in Table 16.

Per the updated LAMC, the proposed Project would require a total of 40 short-term and 224 long-term bicycle parking spaces. The Project would also be required to relocate 49 existing bicycle parking spaces on site in addition to the LAMC requirement. The Project's proposed 40 short-term and 273 long-term bicycle spaces meet the LAMC requirements for on-site bicycle parking supply.

TABLE 15
VEHICLE PARKING CODE REQUIREMENTS

Land Use	Size [a]	Parking Rate [b]	Total Spaces
Los Angeles Municipal Code Parking Requirement			
Residential			
< 3 habitable rooms (studio)	171 du	1.00 sp / 1 du	171
= 3 habitable rooms (1 bedroom)	140 du	1.50 sp / 1 du	210
> 3 habitable rooms (2+ bedrooms)	209 du	2.00 sp / 1 du	418
Retail	23,475 sf	1.00 sp / 250 sf	94
Restaurant	13,568 sf	1.00 sp / 100 sf	136
Total Los Angeles Municipal Code Parking Requirement			**1,029**
AB 2345 Parking Requirement			
Residential			
Studio and 1 bedroom	311 du	1.00 sp / 1 du	311
2 bedroom	209 du	1.50 sp / 1 du	314
3 bedroom	0 du	2.00 sp / 1 du	0
Retail	23,475 sf	1.00 sp / 250 sf	94
Restaurant	13,568 sf	1.00 sp / 100 sf	136
Total AB 2345 Code Parking Requirement			**855**
Total Parking Provided			**939**

Notes:

[a] Per LAMC Section 12.21.A4, LAMC Floor Area was used to determine the Project's parking requirement rather than the gross commercial floor area of 45,945 sf.

[b] Parking rates per Section 12.21.A4(a-c) of the Los Angeles Municipal Code.

TABLE 16
BICYCLE PARKING CODE REQUIREMENTS

Land Use	Size	Short-Term Bicycle Parking Requirement [a]	Total Short-Term Bicycle Spaces	Long-Term Bicycle Parking Requirement [a]	Total Long-Term Bicycle Spaces
Residential					
Units 1-25	25 du	1.00 sp / 10 du	3	1.00 sp / 1 du	25
Units 26-100	75 du	1.00 sp / 15 du	5	1.00 sp / 1.5 du	50
Units 101-200	100 du	1.00 sp / 20 du	5	1.00 sp / 2 du	50
Units 201+	320 du	1.00 sp / 40 du	8	1.00 sp / 4 du	80
Retail / Restaurant	37,043 sf	1.00 sp / 2,000 sf	19	1.00 sp / 2,000 sf	19
Total Code Bicycle Parking Required			**40**		**224**
Total Bicycle Parking Provided [b]			**40**		**273**

Notes:
[a] Bicycle parking rates per Los Angeles Municipal Code Section 12.21.A16(a).
[b] Project would be required to relocate 49 existing bicycle parking spaces on site in addition to the code parking requirement.

Chapter 6

Summary and Conclusions

This study was undertaken to analyze the potential transportation impacts of the mixed-use development Project on regional VMT as well as the local street system. The following summarizes the results of this analysis:

- The Project is located at 12825 Ventura Boulevard in Studio City, California.
- The Project proposes the construction of 442 market rate apartment units, 78 affordable apartment units, 27,926 sf of retail space, and 18,019 sf of restaurant space in one seven-story building and one three-story building with three levels of subterranean parking provided on-site. The Project replaces 200 hotel rooms.
- After application of appropriate trip reduction credits, the Project is estimated to generate 230 net new morning peak hour trips and 261 net new afternoon peak hour trips.
- The Project is anticipated to be complete in Year 2027.
- The Project is consistent with the City plans, programs, ordinances, and policies, and does not create geometric design hazards.
- The Project would generate significant VMT impacts that can be mitigated. The Project will include a TDM program to help reduce overall VMT including, but not limited to, unbundled parking, reduced parking supply, and bike parking.
- The Project provides adequate internal circulation to accommodate vehicular, pedestrian, and bicycle traffic without impeding through traffic movements on City streets.
- The design of the two Project driveways does not introduce safety hazards for pedestrians, bicyclists, or motorists.
- The Project will incorporate pedestrian and bicycle-friendly designs, such as a bicycle parking, sidewalk and crossing improvements adjacent to the Project Site, and street landscaping.
- All construction activities would occur outside of the commuter morning and afternoon peak hours to the extent feasible and will not result in significant traffic impacts. A Construction Management Plan will ensure that construction impacts are less than significant.
- The Project is in compliance with LAMC and AB 2345 vehicle and bicycle parking requirements.

References

2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element, Los Angeles Department of City Planning, 2010.

2012 Developer Fee Justification Study, Los Angeles Unified School District, 2012.

2020 Long Range Transportation Plan, Los Angeles County Metropolitan Transportation Authority, Adopted 2020.

California Manual on Uniform Traffic Control Devices, California Department of Transportation, Revised March 2021.

CEQA Air Quality Handbook, South Coast Air Quality Management District, 1993.

CEQA Guidelines, California Code of Regulations, Title 14, Section 15000 and following.

City of Los Angeles VMT Calculator Version 1.3, Los Angeles Department of Transportation, July 2020.

City of Los Angeles VMT Calculator Documentation, Los Angeles Department of Transportation and Los Angeles Department of City Planning, May 2020.

Citywide Design Guidelines, Los Angeles City Planning Urban Design Studio, October 2019.

Connect SoCal – 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy, Southern California Association of Governments, Adopted September 3, 2020.

Highway Capacity Manual, 6th Edition, Transportation Research Board, 2016.

Interim Guidance for Freeway Safety Analysis, Los Angeles Department of Transportation, May 1, 2020.

Los Angeles Municipal Code, City of Los Angeles.

Mobility Plan 2035, An Element of the General Plan, Los Angeles Department of City Planning, September 2016.

Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan, Los Angeles Department of City Planning, March 2015.

Quantifying Greenhouse Gas Mitigation Measures, California Air Pollution Control Officers Association, 2010.

SCAG Regional Travel Demand Model and 2012 Model Validation (Southern California Association of Governments, March 2016.

Sherman Oaks - Studio City -Toluca Lake - Cahuenga Pass Community Plan, Los Angeles Department of City Planning, 1998.

State of California Senate Bill 743, Steinberg, 2013.

Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, December 2018.

Transportation Assessment Guidelines, Los Angeles Department of Transportation, July 2020.

Transportation Research Circular No. 212, Interim Materials on Highway Capacity, Transportation Research Board, 1980.

Trip Generation Manual, 9th Edition, Institute of Transportation Engineers, 2012.

Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017.

Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025, City of Los Angeles, August 2015.

Appendix A

Memorandum of Understanding

LADOT

Attachment C

Transportation Assessment Memorandum of Understanding (MOU)

This MOU acknowledges that the Transportation Assessment for the following Project will be prepared in accordance with the latest version of LADOT's Transportation Assessment Guidelines:

I. Project Information

Project Name: The Residences at Sportsman's Lodge

Project Address: 12825 Ventura Boulevard

Project Description: The Project proposes to demolish the existing 200 room hotel and replace it with a mixed-use development which includes 442 market rate apartment units, 78 affordable apartment units, 27,626 sf of shopping center, and 11,841 sf of restaurant

LADOT Project Case Number: VEN 21- 110828 Project Site Plan attached? *(Required)* ☑ Yes ☐ No

II. Transportation Demand Management (TDM) Measures

Provide any transportation demand management measures that are being considered where the eligibility needs to be verified in advance (e.g. bike share kiosks, unbundled parking, microstransit service, etc.). Note that LADOT staff will make the final determination if TDM measures eligibility for a particular project. Please confirm eligibility with the LADOT Planning and Bureau staff assigned to your project.

1 Reduced parking supply
2 Unbundled parking
3 Bike parking per the LAMC
4 Pedestrian network improvements
5
6

Select any TDM measures that are currently being considered that may be eligible as a Project Design Feature[1]:

☑	Reduced Parking Supply[2]
☑	Bicycle Parking and Amenities
☐	Parking Cash Out

III. Trip Generation

Trip Generation Rate(s) Source: ITE 10th Edition / Other 10th Edition

Trip Generation Adjustment *(Exact amount of credit subject to approval by LADOT)*	**Yes**	**No**
Transit Usage	☑	☐
Existing Active or Previous Land Use	☑	☐
Internal Trip	☐	☑
Pass-By Trip	☑	☐
Transportation Demand Management (See above)	☐	☑

Trip generation table including a description of the existing and proposed land uses, rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? *(Required)* ☒ Yes ☐ No

	IN	OUT	TOTAL
AM Trips	56	133	189
PM Trips	137	83	220

NET Daily Vehicle Trips (DVT)
____ DVT (ITE ___ ed.)
5,038 DVT (VMT Calculator ver. 1.3)

[1] At this time Project Design Features are only those measures that are also shown to be needed to comply with a local ordinance, affordable housing incentive program, or state law.

[2] Select if reduced parking supply is pursued as a result of a parking incentive as permitted by the City's Bicycle Parking Ordinance, State Density Bonus Law, or a the City/s Transit Oriented ted Community Guidelines.

IV. Study Area and Assumptions

Project Buildout Year: 2027 Ambient Growth Rate: 1 % Per Yr.

Related Projects List, researched by the consultant and approved by LADOT, attached? *(Required)* ☑ Yes ☐ No

STUDY INTERSECTIONS and/or STREET SEGMENTS *(May be subject to LADOT revision after access, safety and circulation evaluation)*

1 See Table 1
4
2
5
3
6

Is this Project located on a street within the High Injury Network? ☑ Yes ☐ No

V. ACCESS ASSESSMENT

a. Does the project exceed 1,000 total DVT? ☑ Yes ☐ No
b. Is the project's frontage 250 linear feet or more along an Avenue or Boulevard as classified by the City's General Plan? ☑ Yes ☐ No
c. Is the project's building frontage encompassing an entire block along an Avenue or Boulevard as classified by the City's General Plan? ☐ Yes ☑ No

If questions a., b., or c. is Yes then complete **Attachment C.1: Access Assessment Criteria**.

VI. SITE PLAN and map of Study Area

Does the attached site plan or map of study area show	Yes	No	Not Applicable
Each study intersection and/or street segment	☑	☐	☐
Project Vehicle Peak Hour trips at each study intersection	☑	☐	☐
Project Vehicle Peak Hour trips at each project access point	☑	☐	☐
Project driveways (show widths and directions or lane assignment)	☑	☐	☐
Pedestrian access points and any pedestrian paths	☑	☐	☐
Pedestrian loading zones	☑	☐	☐
Delivery loading zone or area	☑	☐	☐
Bicycle parking onsite	☐	☑	☐
Bicycle parking offsite (in public right-of-way)	☐	☑	☐

VII. Contact Information

	CONSULTANT	DEVELOPER
Name:	Gibson Transportation Consulting	Sportsmen's Lodge Owner, LLC
Address:	555 W 5th Street #3375, Los Angeles, CA 90013	12825 Ventura Boulevard, Los Angeles, CA 91604
Phone Number:	213-683-0088	
E-Mail:	rgibson@gibsontrans.com	bbesley@midwoodid.com

Approved by: x Rick Gibson 3/18/2021 x Brandon Wilson 3/18-2021

Consultant's Representative | Date | LADOT Representative | *Date

*MOUs are generally valid for two years after signing. If after two years a transportation assessment has not been submitted to LADOT, the developer's representative shall check with the appropriate LADOT office to determine if the terms of this MOU are still valid or if a new MOU is needed.

Appendix B

Traffic Volume Data

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969 info@wilt

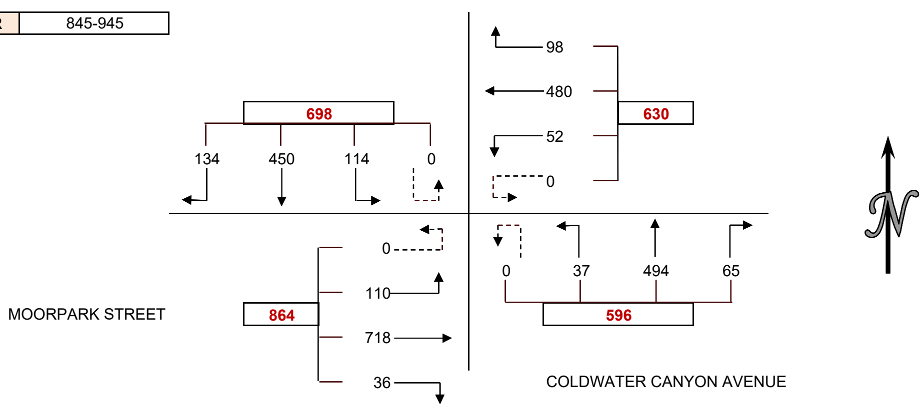
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		GIBSON TRANSPORTATION
PROJECT:		STUDIO CITY
DATE:		WEDNESDAY JANUARY 9, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	COLDWATER CANYON AVENUE
	E/W	MOORPARK STREET
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	28	74	29	0	17	91	8	0	12	52	6	0	4	87	27	0	435
715-730	45	62	32	0	16	132	6	0	7	58	9	0	2	103	31	0	503
730-745	35	70	34	0	33	173	6	0	11	91	7	0	8	153	28	0	649
745-800	34	85	23	0	25	175	7	0	17	84	9	0	7	206	32	0	704
800-815	38	89	17	0	29	147	6	0	13	106	8	0	4	220	28	0	705
815-830	36	85	36	0	24	143	9	0	17	82	9	0	18	184	39	0	682
830-845	44	78	20	0	14	115	7	0	25	100	6	0	6	191	42	0	648
845-900	45	94	35	0	30	118	15	0	17	109	11	0	7	203	31	0	715
900-915	39	108	22	0	23	120	12	0	15	127	9	0	8	173	30	0	686
915-930	27	124	33	0	23	114	11	0	14	134	7	0	10	156	36	0	689
930-945	23	124	24	0	22	128	14	0	19	124	10	0	11	186	13	0	698
945-1000	24	135	32	0	20	108	19	0	28	117	6	1	16	162	25	0	693
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	142	291	118	0	91	571	27	0	47	285	31	0	21	549	118	0	2291
715-815	152	306	106	0	103	627	25	0	48	339	33	0	21	682	119	0	2561
730-830	143	329	110	0	111	638	28	0	58	363	33	0	37	763	127	0	2740
745-845	152	337	96	0	92	580	29	0	72	372	32	0	35	801	141	0	2739
800-900	163	346	108	0	97	523	37	0	72	397	34	0	35	798	140	0	2750
815-915	164	365	113	0	91	496	43	0	74	418	35	0	39	751	142	0	2731
830-930	155	404	110	0	90	467	45	0	71	470	33	0	31	723	139	0	2738
845-945	134	450	114	0	98	480	52	0	65	494	37	0	36	718	110	0	2788
900-1000	113	491	111	0	88	470	56	0	76	502	32	1	45	677	104	0	2766

PEAK HOUR	845-945



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	2	2	1	2	7
715-730	0	0	0	2	2
730-745	2	2	3	1	8
745-800	1	1	1	1	4
800-815	0	0	1	1	2
815-830	1	1	1	3	6
830-845	1	1	1	5	8
845-900	6	6	6	3	21
900-915	5	5	2	3	15
915-930	1	1	0	4	6
930-945	1	1	2	0	4
945-1000	0	0	5	2	7
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	5	5	5	6	21
715-815	3	3	5	5	16
730-830	4	4	6	6	20
745-845	3	3	4	10	20
800-900	8	8	9	12	37
815-915	13	13	10	14	50
830-930	13	13	9	15	50
845-945	13	13	10	10	46
900-1000	7	7	9	9	32

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	0	0	0
715-730	0	0	0	0	0
730-745	0	0	0	1	1
745-800	0	0	0	0	0
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	1	0	1
900-915	0	0	2	3	5
915-930	0	0	1	0	1
930-945	0	0	0	0	0
945-1000	0	0	0	0	0
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	0	0	0	1	1
715-815	0	0	0	1	1
730-830	0	0	0	1	1
745-845	0	0	0	0	0
800-900	0	0	1	0	1
815-915	0	0	3	3	6
830-930	0	0	4	3	7
845-945	0	0	4	3	7
900-1000	0	0	3	3	6

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969 info@wilt

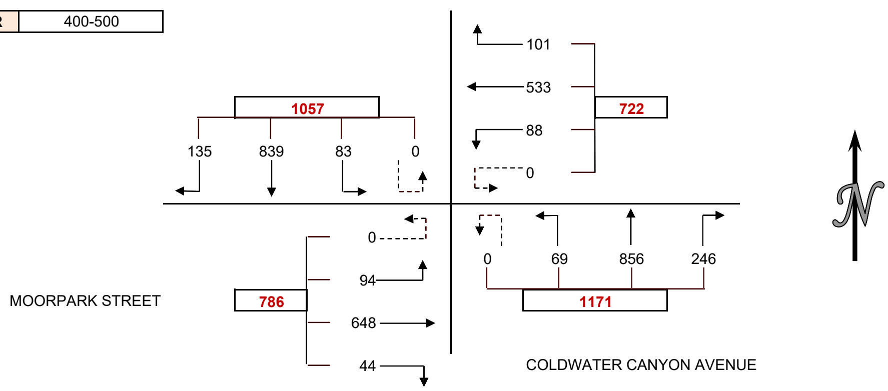
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		GIBSON TRANSPORTATION
PROJECT:		STUDIO CITY
DATE:		WEDNESDAY JANUARY 9, 2019
PERIOD:		4:00 PM TO 7:00 PM
INTERSECTION:	N/S	COLDWATER CANYON AVENUE
	E/W	MOORPARK STREET
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	24	177	19	0	23	150	22	0	57	249	25	0	12	167	27	1	953
315-330	15	185	19	0	25	127	23	0	51	235	19	0	13	168	28	0	908
330-345	18	177	22	0	30	121	14	0	52	245	22	0	5	163	22	0	891
345-400	38	185	20	0	18	121	20	0	56	237	17	0	7	160	27	0	906
400-415	24	211	18	0	24	136	22	0	59	246	16	0	12	167	24	0	959
415-430	39	216	20	0	32	133	22	0	68	208	14	0	10	161	30	0	953
430-445	32	203	21	0	23	129	23	0	63	205	19	0	15	149	19	0	901
445-500	40	209	24	0	22	135	21	0	56	197	20	0	7	171	21	0	923
500-515	28	203	16	0	32	150	21	0	56	201	19	0	10	130	24	0	890
515-530	31	237	18	0	19	137	24	0	49	224	13	0	14	143	20	0	929
530-545	45	233	20	0	12	153	33	0	53	223	20	0	7	132	19	0	950
545-600	34	207	23	0	26	132	24	0	65	198	21	0	10	135	20	0	895
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	95	724	80	0	96	519	79	0	216	966	83	0	37	658	104	1	3658
315-415	95	758	79	0	97	505	79	0	218	963	74	0	37	658	101	0	3664
330-430	119	789	80	0	104	511	78	0	235	936	69	0	34	651	103	0	3709
345-445	133	815	79	0	97	519	87	0	246	896	66	0	44	637	100	0	3719
400-500	135	839	83	0	101	533	88	0	246	856	69	0	44	648	94	0	3736
415-515	139	831	81	0	109	547	87	0	243	811	72	0	42	611	94	0	3667
430-530	131	852	79	0	96	551	89	0	224	827	71	0	46	593	84	0	3643
445-545	144	882	78	0	85	575	99	0	214	845	72	0	38	576	84	0	3692
500-600	138	880	77	0	89	572	102	0	223	846	73	0	41	540	83	0	3664

PEAK HOUR	400-500



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	8	8	5	3	24
315-330	3	3	4	4	14
330-345	2	2	2	2	8
345-400	3	3	4	0	10
400-415	3	3	3	1	10
415-430	4	4	0	2	10
430-445	0	0	2	1	3
445-500	8	8	3	3	22
500-515	4	4	4	1	13
515-530	3	3	3	3	12
530-545	3	3	6	2	14
545-600	6	6	8	2	22
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	16	16	15	9	56
315-415	11	11	13	7	42
330-430	12	12	9	5	38
345-445	10	10	9	4	33
400-500	15	15	8	7	45
415-515	16	16	9	7	48
430-530	15	15	12	8	50
445-545	18	18	16	9	61
500-600	16	16	21	8	61

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	0	0	0	0	0
315-330	0	0	0	0	0
330-345	0	0	0	0	0
345-400	0	0	0	0	0
400-415	0	0	2	0	2
415-430	0	0	1	0	1
430-445	0	0	0	0	0
445-500	0	0	1	1	2
500-515	0	0	0	0	0
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	0	0	0	0	0
315-415	0	0	2	0	2
330-430	0	0	3	0	3
345-445	0	0	3	0	3
400-500	0	0	4	1	5
415-515	0	0	2	1	3
430-530	0	0	1	1	2
445-545	0	0	1	1	2
500-600	0	0	0	0	0

Turning Movement Count Report AM

Location ID: 1
North/South: Coldwater Canyon Avenue
East/West: Valleyheart Drive

Date: 11/19/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	0	67	0	0	0	0	1	35	0	6	0	7	116
7:15	0	67	4	0	0	0	1	34	0	10	0	9	125
7:30	0	96	4	0	0	0	1	44	0	21	0	9	175
7:45	0	98	1	0	0	0	0	31	0	22	0	5	157
8:00	0	94	2	0	0	0	2	30	0	32	0	15	175
8:15	0	108	4	0	0	0	2	40	0	35	0	13	202
8:30	0	111	7	0	0	0	3	42	0	28	0	16	207
8:45	0	93	2	0	0	0	1	62	0	46	0	8	212
9:00	0	122	4	0	0	0	5	72	0	26	0	4	233
9:15	0	131	0	0	0	0	5	69	0	25	0	6	236
9:30	0	136	0	0	0	0	4	150	0	11	0	11	312
9:45	0	121	6	0	0	0	10	179	0	10	0	14	340

Total Volume:	0	1244	34	0	0	0	35	788	0	272	0	117	2490
Approach %	0%	97%	3%	0%	0%	0%	4%	96%	0%	70%	0%	30%	

Peak Hr Begin:	9:00												
PHV	0	510	10	0	0	0	24	470	0	72	0	35	1121
PHF	0.956			0.000			0.653			0.863			0.824

Turning Movement Count Report PM

Location ID: 1
North/South: Coldwater Canyon Avenue
East/West: Valleyheart Drive

Date: 11/19/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	0	274	5	0	0	0	4	200	0	8	0	3	494
15:15	0	327	4	0	0	0	8	227	0	8	0	6	580
15:30	0	317	5	0	0	0	10	218	0	9	0	5	564
15:45	0	321	7	0	0	0	6	241	0	9	0	7	591
16:00	0	314	7	0	0	0	6	213	0	14	0	11	565
16:15	0	297	6	0	0	0	3	214	0	10	0	5	535
16:30	0	273	11	0	0	0	10	195	0	7	0	5	501
16:45	0	220	12	0	0	0	10	217	0	9	0	5	473
17:00	0	178	25	0	0	0	11	210	0	10	0	3	437
17:15	0	185	28	0	0	0	9	216	0	11	0	3	452
17:30	0	241	13	0	0	0	13	240	0	6	0	7	520
17:45	0	276	10	0	0	0	11	249	0	10	0	11	567

Total Volume:	0	3223	133	0	0	0	101	2640	0	111	0	71	6279
Approach %	0%	96%	4%	0%	0%	0%	4%	96%	0%	61%	0%	39%	

Peak Hr Begin:	15:15												
PHV	0	1279	23	0	0	0	30	899	0	40	0	29	2300
PHF		0.983			0.000			0.940			0.690		0.973

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	0	0	0	0
7:15	1	0	0	0	0	0	1	0
7:30	1	0	0	0	0	0	3	0
7:45	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	3	0
8:15	1	0	0	0	0	0	5	1
8:30	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	4	0
9:00	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	3	0
9:30	0	0	0	0	0	0	1	0
9:45	0	0	0	0	0	0	2	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	1	0	0	0	0	0	5	0
15:15	0	0	0	0	0	0	18	0
15:30	0	0	0	0	0	0	5	0
15:45	0	0	0	0	0	0	10	0
16:00	0	1	0	0	0	0	11	1
16:15	0	0	0	0	0	0	5	0
16:30	0	0	0	0	0	0	24	0
16:45	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	6	0
17:15	0	0	0	0	0	0	3	0
17:30	0	0	0	0	0	0	2	1
17:45	0	0	0	0	0	0	2	0

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969 info@wilt

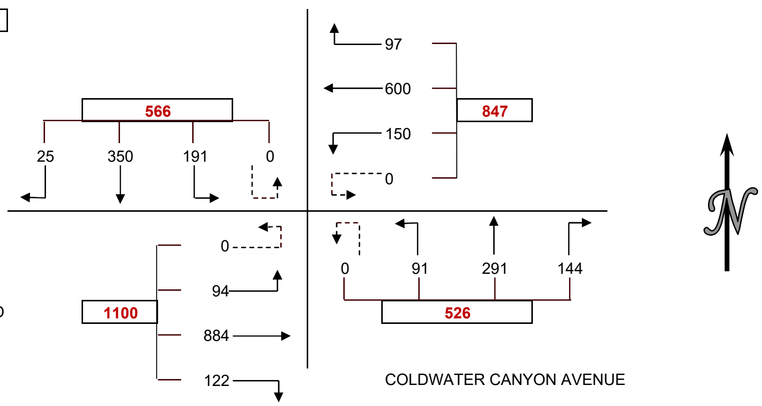
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		GIBSON TRANSPORTATION
PROJECT:		STUDIO CITY
DATE:		WEDNESDAY DECEMBER 12, 2018
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	COLDWATER CANYON AVENUE
	E/W	VENTURA BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	1	45	16	0	15	142	42	0	14	35	16	0	21	184	12	0	543
715-730	0	46	15	0	11	151	26	0	16	35	20	0	25	190	27	0	562
730-745	1	49	25	0	22	183	22	0	32	40	32	0	35	216	6	0	663
745-800	0	69	45	0	9	208	35	0	38	60	36	0	34	211	9	0	754
800-815	0	52	24	0	16	209	29	0	37	66	26	0	34	197	11	0	701
815-830	0	64	49	0	11	183	26	0	33	57	19	0	38	229	14	0	723
830-845	0	68	50	0	25	179	40	0	47	70	27	0	50	187	23	0	766
845-900	3	72	21	0	18	153	42	0	40	82	21	0	55	211	20	0	738
900-915	2	85	38	0	22	172	44	0	39	76	19	0	33	188	29	0	747
915-930	8	74	47	0	19	158	31	0	41	86	28	0	29	214	10	0	745
930-945	6	98	50	0	25	140	37	0	32	66	20	0	27	227	23	0	751
945-1000	9	93	56	0	31	130	38	0	32	63	24	0	33	255	32	0	796
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	2	209	101	0	57	684	125	0	100	170	104	0	115	801	54	0	2522
715-815	1	216	109	0	58	751	112	0	123	201	114	0	128	814	53	0	2680
730-830	1	234	143	0	58	783	112	0	140	223	113	0	141	853	40	0	2841
745-845	0	253	168	0	61	779	130	0	155	253	108	0	156	824	57	0	2944
800-900	3	256	144	0	70	724	137	0	157	275	93	0	177	824	68	0	2928
815-915	5	289	158	0	76	687	152	0	159	285	86	0	176	815	86	0	2974
830-930	13	299	156	0	84	662	157	0	167	314	95	0	167	800	82	0	2996
845-945	19	329	156	0	84	623	154	0	152	310	88	0	144	840	82	0	2981
900-1000	25	350	191	0	97	600	150	0	144	291	91	0	122	884	94	0	3039

PEAK HOUR	900-1000



VENTURA BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	3	3	4	2	12
715-730	2	2	2	5	11
730-745	4	4	7	2	17
745-800	2	2	7	4	15
800-815	2	2	10	2	16
815-830	1	1	9	2	13
830-845	3	3	5	6	17
845-900	4	4	9	7	24
900-915	2	2	7	5	16
915-930	2	2	7	5	16
930-945	2	2	3	1	8
945-1000	4	4	5	2	15
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	11	11	20	13	55
715-815	10	10	26	13	59
730-830	9	9	33	10	61
745-845	8	8	31	14	61
800-900	10	10	33	17	70
815-915	10	10	30	20	70
830-930	11	11	28	23	73
845-945	10	10	26	18	64
900-1000	10	10	22	13	55

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	11	0	0	0	11
715-730	-10	0	0	0	-10
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	0	0	0
900-915	0	0	0	0	0
915-930	0	1	0	0	1
930-945	0	1	0	0	1
945-1000	0	0	1	0	1
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	1	0	0	0	1
715-815	-10	0	0	0	-10
730-830	0	0	0	0	0
745-845	0	0	0	0	0
800-900	0	0	0	0	0
815-915	0	0	0	0	0
830-930	0	1	0	0	1
845-945	0	2	0	0	2
900-1000	0	2	1	0	3

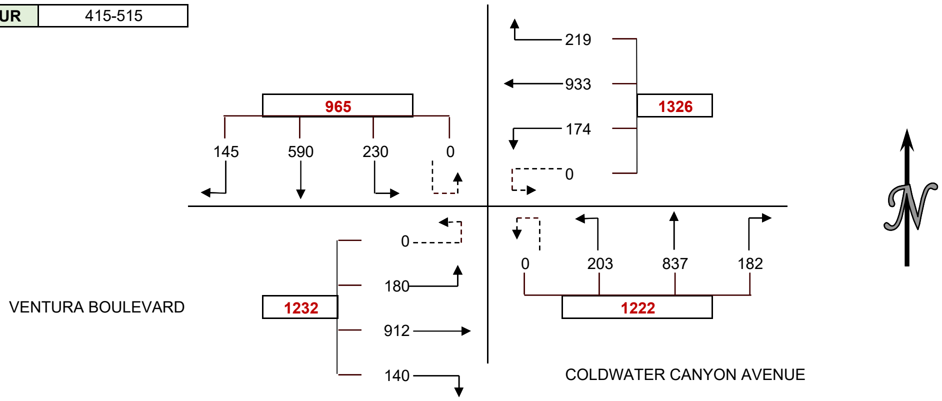
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		GIBSON TRANSPORTATION
PROJECT:		STUDIO CITY
DATE:		WEDNESDAY DECEMBER 12, 2018
PERIOD:		4:00 PM TO 7:00 PM
INTERSECTION:	N/S	COLDWATER CANYON AVENUE
	E/W	VENTURA BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	37	118	61	0	45	201	34	0	44	211	61	0	24	249	52	0	1137
315-330	36	95	73	0	46	236	41	0	27	160	67	0	29	243	50	0	1103
330-345	29	108	63	0	52	240	31	0	47	180	46	0	34	274	33	0	1137
345-400	52	111	57	0	51	225	28	0	44	210	66	0	18	233	46	0	1141
400-415	39	139	59	0	46	212	29	0	48	197	66	0	34	262	65	0	1196
415-430	36	143	69	0	64	232	33	0	45	211	43	0	39	246	42	0	1203
430-445	34	141	58	0	58	233	44	0	49	211	59	0	34	220	37	0	1178
445-500	35	153	52	0	49	231	50	0	36	209	55	0	31	215	48	0	1164
500-515	40	153	51	0	48	237	47	0	52	206	46	0	36	231	53	0	1200
515-530	39	174	64	0	38	228	35	0	47	191	46	0	35	208	46	0	1151
530-545	39	177	51	0	48	232	45	0	45	178	47	0	36	201	38	0	1137
545-600	48	160	46	0	46	226	29	0	61	187	74	0	22	187	36	0	1122
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	154	432	254	0	194	902	134	0	162	761	240	0	105	999	181	0	4518
315-415	156	453	252	0	195	913	129	0	166	747	245	0	115	1012	194	0	4577
330-430	156	501	248	0	213	909	121	0	184	798	221	0	125	1015	186	0	4677
345-445	161	534	243	0	219	902	134	0	186	829	234	0	125	961	190	0	4718
400-500	144	576	238	0	217	908	156	0	178	828	223	0	138	943	192	0	4741
415-515	145	590	230	0	219	933	174	0	182	837	203	0	140	912	180	0	4745
430-530	148	621	225	0	193	929	176	0	184	817	206	0	136	874	184	0	4693
445-545	153	657	218	0	183	928	177	0	180	784	194	0	138	855	185	0	4652
500-600	166	664	212	0	180	923	156	0	205	762	213	0	129	827	173	0	4610

PEAK HOUR	415-515



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	2	2	6	12	22
315-330	1	1	14	4	20
330-345	8	8	13	1	30
345-400	10	10	8	10	38
400-415	3	3	10	10	26
415-430	6	6	11	8	31
430-445	0	0	5	5	10
445-500	1	1	4	3	9
500-515	2	2	4	0	8
515-530	0	0	4	4	8
530-545	3	3	5	1	12
545-600	0	0	3	9	12
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	21	21	41	27	110
315-415	22	22	45	25	114
330-430	27	27	42	29	125
345-445	19	19	34	33	105
400-500	10	10	30	26	76
415-515	9	9	24	16	58
430-530	3	3	17	12	35
445-545	6	6	17	8	37
500-600	5	5	16	14	40

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	0	0	0	0	0
315-330	0	0	1	0	1
330-345	0	0	1	1	2
345-400	1	0	0	0	1
400-415	0	1	0	0	1
415-430	0	1	0	0	1
430-445	0	1	0	0	1
445-500	0	0	0	0	0
500-515	1	0	0	0	1
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	1	0	2	1	4
315-415	1	1	2	1	5
330-430	1	2	1	1	5
345-445	1	3	0	0	4
400-500	0	3	0	0	3
415-515	1	2	0	0	3
430-530	1	1	0	0	2
445-545	1	0	0	0	1
500-600	1	0	0	0	1

Turning Movement Count Report AM

Location ID: 2
North/South: Goodland Avenue
East/West: Ventura Boulevard

Date: 11/19/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	3	0	0	7	217	35	3	0	0	1	234	0	500
7:15	4	0	0	4	241	19	2	0	0	3	159	1	433
7:30	7	0	1	7	255	18	3	0	0	4	188	2	485
7:45	8	0	0	2	281	25	5	0	0	7	227	0	555
8:00	9	0	0	2	329	17	4	0	0	6	174	0	541
8:15	14	0	0	2	290	11	4	0	0	12	189	2	524
8:30	13	0	0	2	237	19	4	0	1	6	197	1	480
8:45	9	0	1	3	213	15	2	0	0	8	247	1	499
9:00	6	0	0	4	200	24	3	0	1	15	249	0	502
9:15	12	0	2	2	201	22	3	0	0	10	234	1	487
9:30	3	0	1	1	199	13	6	0	2	7	273	0	505
9:45	9	0	2	1	224	10	4	0	1	9	381	2	643

Total Volume:	97	0	7	37	2887	228	43	0	5	88	2752	10	6154
Approach %	93%	0%	7%	1%	92%	7%	90%	0%	10%	3%	97%	0%	

Peak Hr Begin:	9:00												
PHV	30	0	5	8	824	69	16	0	4	41	1137	3	2137
PHF	0.625			0.959			0.625			0.753			0.831

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 2
North/South: Goodland Avenue
East/West: Ventura Boulevard

Date: 11/19/19
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	5	0	3	2	300	12	2	0	1	13	311	1	650
15:15	14	0	0	2	277	8	4	0	1	9	298	8	621
15:30	17	0	3	3	265	7	2	0	0	10	348	1	656
15:45	10	0	3	1	292	6	5	0	1	4	335	2	659
16:00	26	0	6	1	282	12	7	0	2	10	301	0	647
16:15	15	0	2	3	271	10	3	0	1	15	292	2	614
16:30	11	0	2	3	319	13	4	0	1	5	302	0	660
16:45	9	0	1	1	276	14	4	0	2	8	367	4	686
17:00	16	0	1	1	263	10	3	0	0	5	404	1	704
17:15	14	0	2	2	276	15	3	0	1	5	358	0	676
17:30	12	0	1	2	323	15	1	0	2	9	310	2	677
17:45	10	0	0	1	287	11	3	0	1	4	327	2	646
Total Volume:	159	0	24	22	3431	133	41	0	13	97	3953	23	7896
Approach %	87%	0%	13%	1%	96%	4%	76%	0%	24%	2%	97%	1%	
Peak Hr Begin:	16:45												
PHV	51	0	5	6	1138	54	11	0	5	27	1439	7	2743
PHF	0.824			0.881			0.667			0.898			0.974

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	1	0	0	0	0	1	3	0
7:15	0	0	0	0	4	0	1	0
7:30	2	0	0	0	2	2	1	0
7:45	1	1	0	0	2	0	0	0
8:00	1	0	0	0	3	0	0	0
8:15	4	0	0	0	4	0	1	0
8:30	2	0	0	0	1	0	0	0
8:45	2	0	0	0	5	1	0	0
9:00	2	0	0	0	4	0	1	0
9:15	3	0	1	0	3	0	0	0
9:30	4	0	0	0	3	0	1	0
9:45	1	0	0	0	4	0	2	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	0	0	3	0	0	0
15:15	0	0	0	0	8	0	0	0
15:30	0	0	0	0	6	0	1	0
15:45	0	0	0	0	4	0	0	0
16:00	1	0	0	0	4	1	0	0
16:15	0	0	0	0	1	0	0	0
16:30	0	0	0	0	3	1	0	0
16:45	0	0	0	0	4	0	0	0
17:00	0	0	0	0	4	0	0	0
17:15	0	0	0	0	5	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969 info@wilt

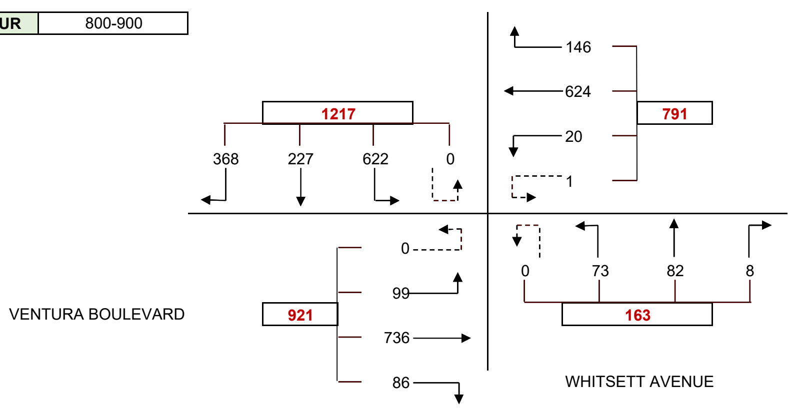
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

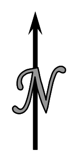
CLIENT:		GIBSON TRANSPORTATION
PROJECT:		STUDIO CITY
DATE:		TUESDAY DECEMBER 18, 2018
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	WHITSETT AVENUE
	E/W	VENTURA BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-715	81	36	144	0	12	108	1	0	0	8	7	0	15	153	8	0	573
715-730	89	45	156	0	17	124	2	0	2	11	10	0	17	151	10	1	635
730-745	93	59	145	0	25	180	3	0	2	11	13	0	17	173	8	0	729
745-800	99	46	125	0	27	156	4	0	1	23	15	0	12	157	2	0	667
800-815	110	49	142	0	47	184	5	0	3	28	17	0	26	182	30	0	823
815-830	91	63	173	0	34	140	4	0	4	19	15	0	15	184	31	0	773
830-845	85	61	149	0	31	155	5	1	0	14	18	0	23	182	19	0	743
845-900	82	54	158	0	34	145	6	0	1	21	23	0	22	188	19	0	753
900-915	84	56	135	0	26	161	8	0	3	13	9	0	17	198	14	0	724
915-930	64	41	113	0	27	144	10	0	4	12	12	0	20	216	25	0	688
930-945	72	40	105	0	34	167	4	0	2	12	18	0	22	227	22	0	725
945-1000	66	42	106	0	55	147	10	0	4	25	21	0	22	221	29	0	748
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
700-800	362	186	570	0	81	568	10	0	5	53	45	0	61	634	28	1	2604
715-815	391	199	568	0	116	644	14	0	8	73	55	0	72	663	50	1	2854
730-830	393	217	585	0	133	660	16	0	10	81	60	0	70	696	71	0	2992
745-845	385	219	589	0	139	635	18	1	8	84	65	0	76	705	82	0	3006
800-900	368	227	622	0	146	624	20	1	8	82	73	0	86	736	99	0	3092
815-915	342	234	615	0	125	601	23	1	8	67	65	0	77	752	83	0	2993
830-930	315	212	555	0	118	605	29	1	8	60	62	0	82	784	77	0	2908
845-945	302	191	511	0	121	617	28	0	10	58	62	0	81	829	80	0	2890
900-1000	286	179	459	0	142	619	32	0	13	62	60	0	81	862	90	0	2885

PEAK HOUR	800-900





PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	5	5	2	1	13
715-730	1	1	2	0	4
730-745	3	3	2	0	8
745-800	5	5	2	0	12
800-815	4	4	1	1	10
815-830	2	2	3	3	10
830-845	3	3	2	0	8
845-900	7	7	0	1	15
900-915	2	2	0	2	6
915-930	8	8	2	1	19
930-945	4	4	5	0	13
945-1000	11	11	7	1	30
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	14	14	8	1	37
715-815	13	13	7	1	34
730-830	14	14	8	4	40
745-845	14	14	8	4	40
800-900	16	16	6	5	43
815-915	14	14	5	6	39
830-930	20	20	4	4	48
845-945	21	21	7	4	53
900-1000	25	25	14	4	68

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	0	1	1
715-730	0	0	0	0	0
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	0	0	0
900-915	0	0	0	0	0
915-930	0	0	0	0	0
930-945	0	0	0	0	0
945-1000	1	0	0	0	1
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	0	0	0	1	1
715-815	0	0	0	0	0
730-830	0	0	0	0	0
745-845	0	0	0	0	0
800-900	0	0	0	0	0
815-915	0	0	0	0	0
830-930	0	0	0	0	0
845-945	0	0	0	0	0
900-1000	1	0	0	0	1

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969 info@wilt

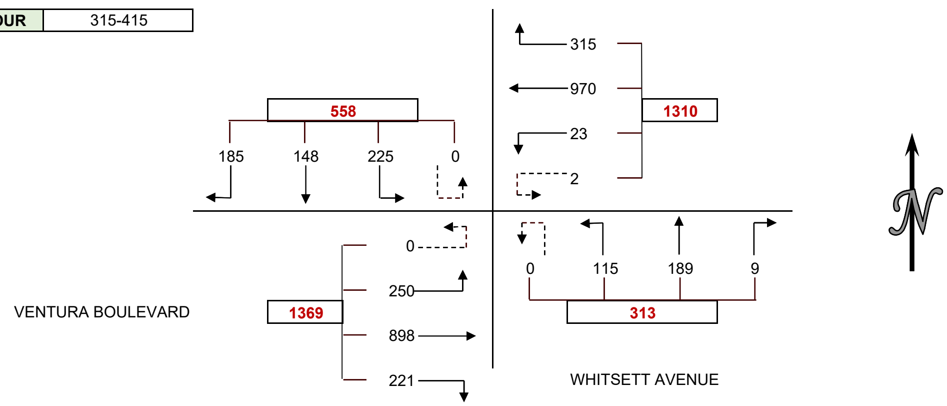
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		GIBSON TRANSPORTATION
PROJECT:		STUDIO CITY
DATE:		TUESDAY DECEMBER 18, 2018
PERIOD:		4:00 PM TO 7:00 PM
INTERSECTION:	N/S	WHITSETT AVENUE
	E/W	VENTURA BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-315	52	40	45	0	76	271	9	1	0	42	28	0	41	217	63	0	885
315-330	38	35	63	0	80	229	3	2	2	43	28	0	60	226	60	0	869
330-345	52	39	43	0	83	261	4	0	2	41	27	0	77	217	62	0	908
345-400	52	39	60	0	73	252	9	0	3	50	29	0	41	214	55	0	877
400-415	43	35	59	0	79	228	7	0	2	55	31	0	43	241	73	0	896
415-430	42	36	54	0	79	245	8	0	3	48	36	0	37	211	58	0	857
430-445	40	39	45	0	82	263	10	1	5	34	32	0	41	224	49	0	865
445-500	49	35	66	0	75	236	6	0	2	38	27	0	63	219	56	0	872
500-515	65	27	36	0	81	212	6	0	3	38	28	0	35	235	80	0	846
515-530	60	31	41	0	72	227	8	0	2	29	16	0	48	200	69	0	803
530-545	44	36	57	0	57	250	5	0	4	30	25	0	46	208	55	0	817
545-600	51	27	52	0	78	209	6	1	7	25	29	0	25	211	54	0	775
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
300-400	194	153	211	0	312	1013	25	3	7	176	112	0	219	874	240	0	3539
315-415	185	148	225	0	315	970	23	2	9	189	115	0	221	898	250	0	3550
330-430	189	149	216	0	314	986	28	0	10	194	123	0	198	883	248	0	3538
345-445	177	149	218	0	313	988	34	1	13	187	128	0	162	890	235	0	3495
400-500	174	145	224	0	315	972	31	1	12	175	126	0	184	895	236	0	3490
415-515	196	137	201	0	317	956	30	1	13	158	123	0	176	889	243	0	3440
430-530	214	132	188	0	310	938	30	1	12	139	103	0	187	878	254	0	3386
445-545	218	129	200	0	285	925	25	0	11	135	96	0	192	862	260	0	3338
500-600	220	121	186	0	288	898	25	1	16	122	98	0	154	854	258	0	3241

PEAK HOUR	315-415



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	7	7	4	8	26
315-330	4	4	6	3	17
330-345	5	5	5	3	18
345-400	6	6	6	5	23
400-415	8	8	3	1	20
415-430	4	4	3	0	11
430-445	5	5	5	0	15
445-500	5	5	10	1	21
500-515	9	9	6	7	31
515-530	11	11	5	4	31
530-545	3	3	3	1	10
545-600	1	1	6	2	10
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	22	22	21	19	84
315-415	23	23	20	12	78
330-430	23	23	17	9	72
345-445	23	23	17	6	69
400-500	22	22	21	2	67
415-515	23	23	24	8	78
430-530	30	30	26	12	98
445-545	28	28	24	13	93
500-600	24	24	20	14	82

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	0	0	0	0	0
315-330	0	0	0	0	0
330-345	0	0	0	0	0
345-400	0	0	0	0	0
400-415	0	0	0	2	2
415-430	0	0	0	0	0
430-445	0	0	0	0	0
445-500	0	0	0	0	0
500-515	0	0	0	0	0
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	0	0	0	0	0
315-415	0	0	0	2	2
330-430	0	0	0	2	2
345-445	0	0	0	2	2
400-500	0	0	0	2	2
415-515	0	0	0	0	0
430-530	0	0	0	0	0
445-545	0	0	0	0	0
500-600	0	0	0	0	0

Appendix C

Plans, Policies, and Programs Consistency Worksheets Easement Dedication Approval

Plans, Policies and Programs Consistency Worksheet

The worksheet provides a structured approach to evaluate the threshold T-1 question below, that asks whether a project conflicts with a program, plan, ordinance or policy addressing the circulation system. The intention of the worksheet is to streamline the project review by highlighting the most relevant plans, policies and programs when assessing potential impacts to the City's circulation system.

Threshold T-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities?

This worksheet does not include an exhaustive list of City policies, and does not include community plans, specific plans, or any area-specific regulatory overlays. The Department of City Planning project planner will need to be consulted to determine if the project would obstruct the City from carrying out a policy or program in a community plan, specific plan, streetscape plan, or regulatory overlay that was adopted to support multimodal transportation options or public safety. LADOT staff should be consulted if a project would lead to a conflict with a mobility investment in the Public Right of Way (PROW) that is currently undergoing planning, design, or delivery. This worksheet must be completed for all projects that meet the Section I. Screening Criteria. For description of the relevant planning documents, **see Attachment D.1.**

For any response to the following questions that checks the box in bold text ((i.e. ☐ Yes or ☐ No), further analysis is needed to demonstrate that the project does not conflict with a plan, policy, or program.

I. SCREENING CRITERIA FOR POLICY ANALYSIS

If the answer is 'yes' to any of the following questions, further analysis will be required:

Does the project require a discretionary action that requires the decision maker to find that the project would substantially conform to the purpose, intent and provisions of the General Plan?

☑ Yes ☐ No

Is the project known to directly conflict with a transportation plan, policy, or program adopted to support multimodal transportation options or public safety?

☐ Yes ☑ No

Is the project required to or proposing to make any voluntary modifications to the public right-of-way (i.e., dedications and/or improvements in the right-of-way, reconfigurations of curb line, etc.)?

☑ Yes ☐ No

II. PLAN CONSISTENCY ANALYSIS

A. Mobility Plan 2035 PROW Classification Standards for Dedications and Improvements

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.1 *– Adaptive Reuse of Streets. Design, plan, and operate streets to serve multiple purposes and provide flexibility in design to adapt to future demands.*

Mobility Plan 2035 Policy 2.3 *– Pedestrian Infrastructure. Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.*

Mobility Plan 2035 Policy 3.2 – *People with Disabilities. Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.*

Mobility Plan 2035 Street Designations and Standard Roadway Dimensions

A.1 Does the project include additions or new construction along a street designated as a Boulevard I, and II, and/or Avenue I, II, or III on property zoned for R3 or less restrictive zone? ☑ Yes ☐ No

A.2 If **A.1 is yes**, is the project required to make additional dedications or improvements to the Public Right of Way as demonstrated by the street designation. ☐ Yes ☑ No ☐ N/A

A.3 If **A.2 is yes**, is the project making the dedications and improvements as necessary to meet the designated dimensions of the fronting street (Boulevard I, and II, or Avenue I, II, or III)?

☐ Yes ☐ No ☑ N/A

If the answer is to **A.1 or A.2 is NO, or to A.1, A.2 and A.3. is YES**, then the project does not conflict with the dedication and improvement requirements that are needed to comply with the Mobility Plan 2035 Street Designations and Standard Roadway Dimensions.

A.4 If the answer to **A.3. is NO**, is the project applicant asking to waive from the dedication standards?
☐ **Yes** ☐ **No** ☑ N/A

Lists any streets subject to dedications or voluntary dedications and include existing roadway and sidewalk widths, required roadway and sidewalk widths, and proposed roadway and sidewalk width or waivers.

Frontage 1 Existing PROW'/Curb' : Existing ____________Required______________Proposed_______________

Frontage 2 Existing PROW'/Curb' : Existing ____________Required______________Proposed_______________

Frontage 3 Existing PROW'/Curb' : Existing ____________Required______________Proposed_______________

Frontage 4 Existing PROW'/Curb' : Existing ____________Required______________Proposed_______________

If the answer to **A.4 is NO**, the project is inconsistent with Mobility Plan 2035 street designations and must file for a waiver of street dedication and improvement.

If the answer to **A.4 is YES**, additional analysis is necessary to determine if the dedication and/or improvements are necessary to meet the City's mobility needs for the next 20 years. The following factors may contribute to determine if the dedication or improvement is necessary:

Is the project site along any of the following networks identified in the City's Mobility Plan?

- Transit Enhanced Network
- Bicycle Enhanced Network
- Bicycle Lane Network
- Pedestrian Enhanced District
- Neighborhood Enhanced Network

To see the location of the above networks, see **Transportation Assessment Support Map**.[1]

Is the project within the service area of Metro Bike Share, or is there demonstrated demand for micro-mobility services?

If the project dedications and improvements asking to be waived are necessary to meet the City's mobility needs, the project may be found to conflict with a plan that is adopted to protect the environment.

B. Mobility Plan 2035 PROW Policy Alignment with Project-Initiated Changes

B.1 Project-Initiated Changes to the PROW Dimensions

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.1 *– Adaptive Reuse of Streets. Design, plan, and operate streets to serve multiple purposes and provide flexibility in design to adapt to future demands.*

Mobility Plan 2035 Policy 2.3 *– Pedestrian Infrastructure. Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.*

Mobility Plan 2035 Policy 3.2 – *People with Disabilities. Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.*

Mobility Plan 2035 Policy 2.10 *– Loading Areas. Facilitate the provision of adequate on and off-site street loading areas.*

Mobility Plan 2035 Street Designations and Standard Roadway Dimensions

[1] LADOT Transportation Assessment Support Map https://arcg.is/fubbD

B.1 Does the project physically modify the curb placement or turning radius and/or physically alter the sidewalk and parkways space that changes how people access a property?

Examples of physical changes to the public right-of-way include:

- widening the roadway,
- narrowing the sidewalk,
- adding space for vehicle turn outs or loading areas,
- removing bicycle lanes, bike share stations, or bicycle parking
- modifying existing bus stop, transit shelter, or other street furniture
- paving, narrowing, shifting or removing an existing parkway or tree well

☑ **Yes** ☐ No

B.2 Driveway Access

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.10 *– Loading Areas. Facilitate the provision of adequate on and off-site street loading areas.*

Mobility Plan 2035 Program PL.1. Driveway Access. *Require driveway access to buildings from non-arterial streets or alleys (where feasible) in order to minimize interference with pedestrian access and vehicular movement.*

Citywide Design Guidelines - Guideline 2*: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.*

Site Planning Best Practices:

- *Prioritize pedestrian access first and automobile access second. Orient parking and driveways toward the rear or side of buildings and away from the public right-of-way. On corner lots, parking should be oriented as far from the corner as possible.*
- *Minimize both the number of driveway entrances and overall driveway widths.*
- *Do not locate drop-off/pick-up areas between principal building entrances and the adjoining sidewalks.*
- *Orient vehicular access as far from street intersections as possible.*
- *Place drive-thru elements away from intersections and avoid placing them so that they create a barrier between the sidewalk and building entrance(s).*
- *Ensure that loading areas do not interfere with on-site pedestrian and vehicular circulation by separating loading areas and larger commercial vehicles from areas that are used for public parking and public entrances.*

B.2 Does the project add new driveways along a street designated as an Avenue or a Boulevard that conflict with LADOT's Driveway Design Guidelines (See Sec. 321 in the Manual of Policies and Procedures) by any of the following:

- locating new driveways for residential properties on an Avenue or Boulevard, and access is otherwise possible using an alley or a collector/local street, or
- locating new driveways for industrial or commercial properties on an Avenue or Boulevard and access is possible along a collector/local street, or

- the total number of new driveways exceeds 1 driveway per every 200 feet[2] along on the Avenue or Boulevard frontage, or
- locating new driveways on an Avenue or Boulevard within 150 feet from the intersecting street, or
- locating new driveways on a collector or local street within 75 feet from the intersecting street, or
- locating new driveways near mid-block crosswalks, requiring relocation of the mid-block crosswalk

☐ **Yes** ☑ No

If the answer to **B.1 and B.2 are both NO**, then the project would not conflict with a plan or policies that govern the PROW as a result of the project-initiated changes to the PROW.

Impact Analysis

If the answer to either **B.1 or B.2 are YES**, City plans and policies should be reviewed in light of the proposed physical changes to determine if the City would be obstructed from carrying out the plans and policies. The analysis should pay special consideration to substantial changes to the Public Right of Way that may either degrade existing facilities for people walking and bicycling (e.g., removing a bicycle lane), or preclude the City from completing complete street infrastructure as identified in the Mobility Plan 2035, especially if the physical changes are along streets that are on the High Injury Network (HIN). The analysis should also consider if the project is in a Transit Oriented Community (TOC) area, and would degrade or inhibit trips made by biking, walking and/ or transit ridership. The streets that need special consideration are those that are included on the following networks identified in the Mobility Plan 2035, or the HIN:

- Transit Enhanced Network
- Bicycle Enhanced Network
- Bicycle Lane Network
- Pedestrian Enhanced District
- Neighborhood Enhanced Network
- High Injury Network

To see the location of the above networks, see **Transportation Assessment Support Map**.[3]

Once the project is reviewed relevant to plans and policies, and existing facilities that may be impacted by the project, the analysis will need to answer the following two questions in concluding if there is an impact due to plan inconsistency.

B.2.1 Would the physical changes in the public right of way or new driveways that conflict with LADOT's Driveway Design Guidelines degrade the experience of vulnerable roadway users such as modify, remove, or otherwise negatively impact existing bicycle, transit, and/or pedestrian infrastructure?

☐ **Yes** ☑ No ☐ N/A

[2] for a project frontage that exceeds 400 feet along an Avenue or Boulevard, the incremental additional driveway above 2 is more than 1 driveway for every 400 additional feet.

[3] LADOT Transportation Assessment Support Map https://arcg.is/fubbD

B.2.2 Would the physical modifications or new driveways that conflict with LADOT's Driveway Design Guidelines preclude the City from advancing the safety of vulnerable roadway users?

☐ **Yes** ☑ No ☐ N/A

If either of the answers to either **B.2.1 or B.2.2 are YES**, the project may conflict with the Mobility Plan 2035, and therefore conflict with a plan that is adopted to protect the environment. If either of the answers to both **B.2.1. or B.2.2. are NO**, then the project would not be shown to conflict with plans or policies that govern the Public Right-of-Way.

C. Network Access

C. 1 Alley, Street and Stairway Access

These questions address potential conflict with:

Mobility Plan Policy 3.9 *Increased Network Access: Discourage the vacation of public rights-of-way.*

C.1.1 Does the project propose to vacate or otherwise restrict public access to a street, alley, or public stairway?

☐ Yes ☑ No

C.1.2 If the answer to C.1.1 is Yes, will the project provide or maintain public access to people walking and biking on the street, alley or stairway?

☐ Yes ☐ **No** ☑ N/A

C.2 New Cul-de-sacs

These questions address potential conflict with:

Mobility Plan 2035 Policy 3.10 *Cul-de-sacs: Discourage the use of cul-de-sacs that do not provide access for active transportation options.*

C.2.1 Does the project create a cul-de-sac or is the project located adjacent to an existing cul-de-sac?

☐ Yes ☑ No

C.2.2 If yes, will the cul-de-sac maintain convenient and direct public access to people walking and biking to the adjoining street network?

☐ Yes ☐ **No** ☑ N/A

If the answers to either C.1.2 or C.2.2 are YES, then the project would not conflict with a plan or policies that ensures access for all modes of travel. If the answer to either **C.1.2 or C.2.2 are NO**, the project may conflict with a plan or policies that governs multimodal access to a property. Further analysis must assess to the degree that pedestrians and bicyclists have sufficient public access to the transportation network.

D. Parking Supply and Transportation Demand Management

These questions address potential conflict with:

Mobility Plan 2035 Policy 3.8 *– Bicycle Parking, Provide bicyclists with convenient, secure and well maintained bicycle parking facilities.*

Mobility Plan 2035 Policy 4.8 – *Transportation Demand Management Strategies. Encourage greater utilization of Transportation Demand Management Strategies to reduce dependence on single-occupancy vehicles.*

Mobility Plan 2035 Policy 4.13 *– Parking and Land Use Management: Balance on-street and off-street parking supply with other transportation and land use objectives.*

D.1 Would the project propose a supply of onsite parking that exceeds the baseline amount[4] as required in the Los Angeles Municipal Code or a Specific plan, whichever requirement prevails?

☐ Yes ☑ No

D.2 If the answer to D.1. is YES, would the project propose to actively manage the demand of parking by independently pricing the supply to all users (e.g. parking cash-out), or for residential properties, unbundle the supply from the lease or sale of residential units?

☐ Yes ☐ **No** ☑ N/A

If the answer to **D.2. is NO** the project may conflict with parking management policies. Further analysis is needed to demonstrate how the supply of parking above city requirements will not result in additional (induced) drive-alone trips as compared to an alternative that provided no more parking than the baseline required by the LAMC or Specific Plan. If there is potential for the supply of parking to result in induced demand for drive-alone trips, the project should further explore transportation demand management (TDM) measures to further off-set the induced demands of driving and vehicle miles travelled (VMT) that may result from higher amounts of on-site parking. The TDM measures should specifically focus on strategies that encourage dynamic and context-sensitive pricing solutions and ensure the parking is efficiently allocated, such as providing real time information. Research has demonstrated that charging a user cost for parking or providing a 'cash-out' option in return for not using it is the most effective strategy to reduce the instances of drive-alone trips and increase non-auto mode share to further reduce VMT. To ensure the parking is efficiently managed and reduce the need to build parking for future uses, further strategies should include sharing parking with other properties and/or the general public.

D.3. Would the project provide the minimum on and off-site bicycle parking spaces as required by Section 12.21 A.16 of the LAMC?

☑ Yes ☐ **No**

[4] The baseline parking is defined here as the default parking requirements in section 12.21 A.4 of the Los Angeles Municipal Code or any applicable Specific Plan, whichever prevails, for each applicable use not taking into consideration other parking incentives to reduce the amount of required parking.

D.4. Does the Project include more than 25,000 square feet of gross floor area construction of new non-residential gross floor?

☑ Yes ☐ No

D.5 If the answer to D.4. is YES, does the project comply with the City's TDM Ordinance in Section 12.26 J of the LAMC?

☑ Yes ☐ **No** ☐ N/A

If the answer to **D.3. or D.5. is NO** the project conflicts with LAMC code requirements of bicycle parking and TDM measures. If the project includes uses that require bicycle parking (Section 12.21 A.16) or TDM (Section 12.26 J), and the project does not comply with those Sections of the LAMC, further analysis is required to ensure that the project supports the intent of the two LAMC sections. To meet the intent of bicycle parking requirements, the analysis should identify how the project commits to providing safe access to those traveling by bicycle and accommodates storing their bicycle in locations that demonstrates priority over vehicle access.

Similarly, to meet the intent of the TDM requirements of Section 12.26 J of the LAMC, the analysis should identify how the project commits to providing effective strategies in either physical facilities or programs that encourage non-drive alone trips to and from the project site and changes in work schedule that move trips out of the peak period or eliminate them altogether (as in the case in telecommuting or compressed work weeks).

E. Consistency with Regional Plans

This section addresses potential inconsistencies with greenhouse gas (GHG) reduction targets forecasted in the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS).

E.1 Does the Project or Plan apply one the City's efficiency-based impact thresholds (i.e. VMT per capita, VMT per employee, or VMT per service population) as discussed in Section 2.2.3 of the TAG?

☑ Yes ☐ No

E.2 If the Answer to E.1 is YES, does the Project or Plan result in a significant VMT impact?

☐ Yes ☑ No ☐ N/A

E.3 If the Answer to E.1 is NO, does the Project result in a net increase in VMT?

☐ Yes ☐ No ☑ N/A

If the Answer to E.2 or E.3 is NO, then the Project or Plan is shown to align with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS.

E.4 If the Answer to E.2 or E.3 is YES, then further evaluation would be necessary to determine whether such a project or land use plan would be shown to be consistent with VMT and GHG reduction goals of the SCAG RTP/SCS. For the purpose of making a finding that a project is consistent with the GHG reduction targets forecasted in the SCAG RTP/SCS, the project analyst should consult Section 2.2.4 of the Transportation Assessment Guidelines (TAG). Section 2.2.4 provides the methodology for evaluating a land use project's cumulative impacts to VMT, and the appropriate reliance on SCAG's most recently adopted RTP/SCS in reaching that conclusion.

The analysis methods therein can further support findings that the project is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy for which the State Air Resources Board, pursuant to Section 65080(b)(2)(H) of the Government Code, has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets.

References

BOE Street Standard Dimensions S-470-1 http://eng2.lacity.org/techdocs/stdplans/s-400/S-470-1_20151021_150849.pdf

LADCP Citywide Design Guidelines. https://planning.lacity.org/odocument/f6608be7-d5fe-4187-bea6-20618eec5049/Citywide_Design_Guidelines.pdf

LADOT Transportation Assessment Support Map https://arcg.is/fubbD

Mobility Plan 2035 https://planning.lacity.org/odocument/523f2a95-9d72-41d7-aba5-1972f84c1d36/Mobility_Plan_2035.pdf

SCAG. Connect SoCal, 2020-2045 RTP/SCS, https://www.connectsocal.org/Pages/default.aspx

ATTACHMENT D.1: CITY PLAN, POLICIES AND GUIDELINES

The Transportation Element of the City's General Plan, Mobility Plan 2035, established the "Complete Streets Design Guide" as the City's document to guide the operations and design of streets and other public rights-of-way. It lays out a vision for designing safer, more vibrant streets that are accessible to people, no matter what their mode choice. As a living document, it is intended to be frequently updated as City departments identify and implement street standards and experiment with different configurations to promote complete streets. The guide is meant to be a toolkit that provides numerous examples of what is possible in the public right-of-way and that provides guidance on context-sensitive design.

The Plan for A Healthy Los Angeles (March 2015) includes policies directing several City departments to develop plans that promote active transportation and safety.

The City of Los Angeles Community Plans, which make up the Land Use Element of the City's General Plan, guide the physical development of neighborhoods by establishing the goals and policies for land use. The 35 Community Plans provide specific, neighborhood-level detail for land uses and the transportation network, relevant policies, and implementation strategies necessary to achieve General Plan and community-specific objectives.

The stated goal of Vision Zero is to eliminate traffic-related deaths in Los Angeles by 2025 through a number of strategies, including modifying the design of streets to increase the safety of vulnerable road users. Extensive crash data analysis is conducted on an ongoing basis to prioritize intersections and corridors for implementation of projects that will have the greatest effect on overall fatality reduction. The City designs and deploys Vision Zero Corridor Plans as part of the implementation of Vision Zero. If a project is proposed whose site lies on the High Injury Network (HIN), the applicant should consult with LADOT to inform the project's site plan and to determine appropriate improvements, whether by funding their implementation in full or by making a contribution toward their implementation.

The Citywide Design Guidelines (October 24, 2019) includes sections relevant to development projects where improvements are proposed within the public realm. Specifically, Guidelines one through three provide building design strategies that support the pedestrian experience. The Guidelines provide best practices in designing that apply in three spatial categories of site planning, building design and public right of way. The Guidelines should be followed to ensure that the project design supports pedestrian safety, access and comfort as they access to and from the building and the immediate public right of way.

The City's Transportation Demand Management (TDM) Ordinance (LA Municipal Code 12.26.J) requires certain projects to incorporate strategies that reduce drive-alone vehicle trips and improve access to destinations and services. The ordinance is revised and updated periodically and should be reviewed for application to specific projects as they are reviewed.

The City's LAMC Section 12.37 (Waivers of Dedication and Improvement) requires certain projects to dedicate and/or implement improvements within the public right-of-way to meet the street designation standards of the Mobility Plan 2035.

The Bureau of Engineering (BOE) Street Standard Dimensions S-470-1 provides the specific street widths and public right of way dimensions associated with the City's street standards.

Appendix D

VMT Analysis Worksheets

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

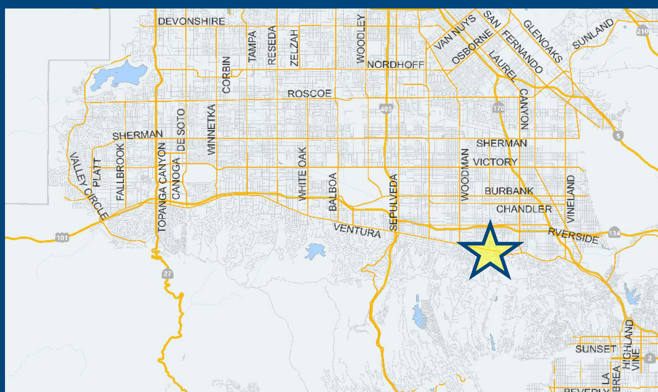
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: Sportsman's Lodge

Scenario: WWW

Address: 12825 W VENTURA BLVD, 91604



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

○ Yes ○ No

Existing Land Use

Land Use Type	Value	Unit
Housing | Hotel	200	Rooms
Housing | Hotel	200	Rooms

☐ Click here to add a single custom land use type (will be included in the above list)

Proposed Project Land Use

Land Use Type	Value	Unit
Retail | General Retail	0	ksf
Housing | Multi-Family	442	DU
Retail | General Retail	27.926	ksf
Retail | High-Turnover Sit-Down Restaurant	18.019	ksf
Housing | Affordable Housing - Family	78	DU

☐ Click here to add a single custom land use type (will be included in the above list)

Project Screening Summary

Existing Land Use	Proposed Project
1,416 Daily Vehicle Trips	**5,751** Daily Vehicle Trips
12,675 Daily VMT	**52,404** Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips	4,335 Net Daily Trips
The net increase in daily VMT ≤ 0	39,729 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	45.945 ksf

The proposed project is required to perform VMT analysis.

Measuring the Miles

3/22/2022

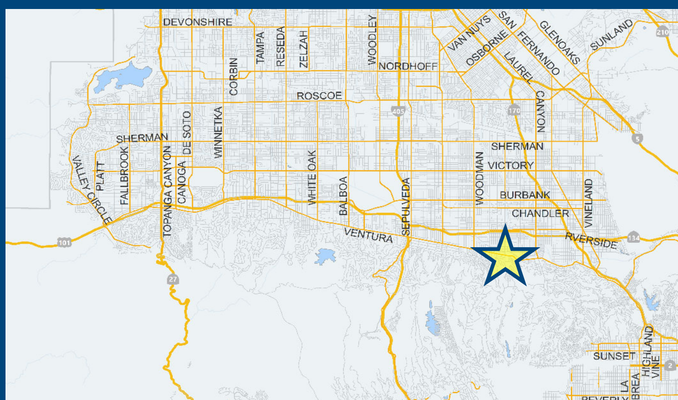
CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Information

Project: Sportsman's Lodge

Scenario:

Address: 12825 W VENTURA BLVD, 91604



Proposed Project Land Use Type	Value	Unit
Housing | Multi-Family	442	DU
Retail | General Retail	27.926	ksf
Retail | High-Turnover Sit-Down Restaurant	18.019	ksf
Housing | Affordable Housing - Family	78	DU

TDM Strategies

Select each section to show individual strategies

Use ☑ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	**No**	**Yes**
Max Work Based TDM Achieved?	**No**	**No**

A Parking

Reduce Parking Supply — ☐ Proposed Prj ☑ Mitigation
- 1029 city code parking provision for the project site
- 939 actual parking provision for the project site

Unbundle Parking — ☐ Proposed Prj ☑ Mitigation
- 100 monthly parking cost (dollar) for the project site

Parking Cash-Out — ☐ Proposed Prj ☐ Mitigation
- 50 percent of employees eligible

Price Workplace Parking — ☐ Proposed Prj ☐ Mitigation
- 6.00 daily parking charge (dollar)
- 50 percent of employees subject to priced parking

Residential Area Parking Permits — ☐ Proposed Prj ☐ Mitigation
- 200 cost (dollar) of annual permit

B Transit

C Education & Encouragement

D Commute Trip Reductions

E Shared Mobility

F Bicycle Infrastructure

G Neighborhood Enhancement

Analysis Results

	Proposed Project	With Mitigation
Daily Vehicle Trips	5,657	4,967
Daily VMT	51,556	45,260
Household VMT per Capita	10.2	8.3
Work VMT per Employee	N/A	N/A

Significant VMT Impact?

Proposed Project	With Mitigation
Household: Yes Threshold = 9.4 15% Below APC	**Household: No** Threshold = 9.4 15% Below APC
Work: N/A Threshold = 11.6 15% Below APC	**Work: N/A** Threshold = 11.6 15% Below APC

Measuring the Miles

3/22/2022

Project Information

Land Use Type		Value	Units
Housing	*Single Family*	*0*	*DU*
	Multi Family	442	DU
	Townhouse	*0*	*DU*
	Hotel	*0*	*Rooms*
	Motel	*0*	*Rooms*
Affordable Housing	Family	78	DU
	Senior	*0*	*DU*
	Special Needs	*0*	*DU*
	Permanent Supportive	*0*	*DU*
Retail	General Retail	27.926	ksf
	Furniture Store	*0.000*	*ksf*
	Pharmacy/Drugstore	*0.000*	*ksf*
	Supermarket	*0.000*	*ksf*
	Bank	*0.000*	*ksf*
	Health Club	*0.000*	*ksf*
	High-Turnover Sit-Down Restaurant	18.019	ksf
	Fast-Food Restaurant	*0.000*	*ksf*
	Quality Restaurant	*0.000*	*ksf*
	Auto Repair	*0.000*	*ksf*
	Home Improvement	*0.000*	*ksf*
	Free-Standing Discount	*0.000*	*ksf*
	Movie Theater	*0*	*Seats*
Office	*General Office*	*0.000*	*ksf*
	Medical Office	*0.000*	*ksf*
Industrial	*Light Industrial*	*0.000*	*ksf*
	Manufacturing	*0.000*	*ksf*
	Warehousing/Self-Storage	*0.000*	*ksf*
School	*University*	*0*	*Students*
	High School	*0*	*Students*
	Middle School	*0*	*Students*
	Elementary	*0*	*Students*
	Private School (K-12)	*0*	*Students*
Other		*0*	*Trips*

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: March 22, 2022
Project Name: Sportsman's Lodge
Project Scenario:
Project Address: 12825 W VENTURA BLVD, 91604

Version 1.3

Analysis Results

Total Employees: 128
Total Population: 1,241

Proposed Project		With Mitigation	
5,657	**Daily Vehicle Trips**	**4,967**	**Daily Vehicle Trips**
51,556	**Daily VMT**	**45,260**	**Daily VMT**
10.2	**Household VMT per Capita**	**8.3**	**Household VMT per Capita**
N/A	**Work VMT per Employee**	**N/A**	**Work VMT per Employee**

Significant VMT Impact?

APC: South Valley

Impact Threshold: 15% Below APC Average
Household = 9.4
Work = 11.6

Proposed Project		*With Mitigation*	
VMT Threshold	**Impact**	**VMT Threshold**	**Impact**
Household > 9.4	Yes	Household > 9.4	No
Work > 11.6	N/A	Work > 11.6	N/A

TDM Strategy Inputs

Strategy Type		Description	Proposed Project	Mitigations
Parking	Reduce parking supply	City code parking provision (spaces)	*0*	1029
		Actual parking provision (spaces)	*0*	939
	Unbundle parking	Monthly cost for parking ($)	*$0*	$100
	Parking cash-out	*Employees eligible (%)*	*0%*	*0%*
	Price workplace parking	*Daily parking charge ($)*	*$0.00*	*$0.00*
		Employees subject to priced parking (%)	*0%*	*0%*
	Residential area parking permits	*Cost of annual permit ($)*	*$0*	*$0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Transit	*Reduce transit headways*	*Reduction in headways (increase in frequency) (%)*	*0%*	*0%*
		Existing transit mode share (as a percent of total daily trips) (%)	*0%*	*0%*
		Lines within project site improved (<50%, >=50%)	*0*	*0*
	Implement neighborhood shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees and residents eligible (%)	*0%*	*0%*
	Transit subsidies	*Employees and residents eligible (%)*	*0%*	*0%*
		Amount of transit subsidy per passenger (daily equivalent) ($)	*$0.00*	*$0.00*
Education & Encouragement	Voluntary travel behavior change program	Employees and residents participating (%)	*0%*	100%
	Promotions and marketing	*Employees and residents participating (%)*	*0%*	*0%*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	*Required commute trip reduction program*	*Employees participating (%)*	*0%*	*0%*
	Alternative Work Schedules and Telecommute	*Employees participating (%)*	*0%*	*0%*
		Type of program	*0*	*0*
	Employer sponsored vanpool or shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees eligible (%)	*0%*	*0%*
		Employer size (small, medium, large)	*0*	*0*
	Ride-share program	*Employees eligible (%)*	*0%*	*0%*
Shared Mobility	*Car share*	*Car share project setting (Urban, Suburban, All Other)*	*0*	*0*
	Bike share	*Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)*	*0*	*0*
	School carpool program	*Level of implementation (Low, Medium, High)*	*0*	*0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Bicycle Infrastructure	*Implement/Improve on-street bicycle facility*	*Provide bicycle facility along site (Yes/No)*	*0*	*0*
	Include Bike parking per LAMC	Meets City Bike Parking Code (Yes/No)	Yes	Yes
	Include secure bike parking and showers	*Includes indoor bike parking/lockers, showers, & repair station (Yes/No)*	*0*	*0*
Neighborhood Enhancement	*Traffic calming improvements*	*Streets with traffic calming improvements (%)*	*0%*	*0%*
		Intersections with traffic calming improvements (%)	*0%*	*0%*
	Pedestrian network improvements	Included (within project and connecting off-site/within project only)	within project only	within project only

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: March 22, 2022
Project Name: Sportsman's Lodge
Project Scenario:
Project Address: 12825 W VENTURA BLVD, 91604

Version 1.3

TDM Adjustments by Trip Purpose & Strategy

Place type: Suburban Center

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	0%	4%	0%	4%	0%	4%	0%	4%	0%	4%	0%	4%	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	0%	12%	0%	0%	0%	12%	0%	0%	0%	0%	0%	0%	
	Parking cash-out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Price workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Residential area parking permits	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Transit	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Transit sections 1 - 3
	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Education & Encouragement	Voluntary travel behavior change program	0%	6%	0%	6%	0%	6%	0%	6%	0%	6%	0%	6%	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Commute Trip Reductions	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Alternative Work Schedules and Telecommute Program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Ride-share program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Shared Mobility	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Shared Mobility sections 1 - 3
	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Suburban Center

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
	Include secure bike parking and showers	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	
Neighborhood Enhancement	Traffic calming improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Neighborhood Enhancement sections 1 - 2
	Pedestrian network improvements	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	

Final Combined & Maximum TDM Effect

	Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL	*2%*	*22%*	*2%*	*12%*	*2%*	*22%*	*2%*	*12%*	*2%*	*12%*	*2%*	*12%*
MAX. TDM EFFECT	*2%*	*20%*	*2%*	*12%*	*2%*	*20%*	*2%*	*12%*	*2%*	*12%*	*2%*	*12%*

= Minimum (X%, 1-[(1-A)*(1-B)...])

where X%=

PLACE TYPE MAX:	*urban*	*75%*
	compact infill	*40%*
	suburban center	*20%*
	suburban	*15%*

Note: (1-[(1-A)*(1-B)...]) reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,...). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G)* for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: March 22, 2022
Project Name: Sportsman's Lodge
Project Scenario:
Project Address: 12825 W VENTURA BLVD, 91604

Version 1.3

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	462	-12.6%	404	10.9	5,036	4,404
Home Based Other Production	1,280	-21.5%	1,005	8.4	10,752	8,442
Non-Home Based Other Production	1,365	-1.2%	1,348	10.1	13,787	13,615
Home-Based Work Attraction	185	-14.6%	158	9.0	1,665	1,422
Home-Based Other Attraction	2,372	-18.3%	1,937	8.9	21,111	17,239
Non-Home Based Other Attraction	912	-1.4%	899	8.1	7,387	7,282

MXD Methodology with TDM Measures

	Proposed Project			*Project with Mitigation Measures*		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-1.6%	397	4,333	-20.0%	323	3,523
Home Based Other Production	-1.6%	989	8,305	-20.0%	804	6,754
Non-Home Based Other Production	-1.6%	1,326	13,395	-11.6%	1,192	12,040
Home-Based Work Attraction	-1.6%	155	1,399	-11.6%	140	1,258
Home-Based Other Attraction	-1.6%	1,906	16,960	-11.6%	1,713	15,245
Non-Home Based Other Attraction	-1.6%	884	7,164	-11.6%	795	6,440

MXD VMT Methodology Per Capita & Per Employee

Total Population: 1,241
Total Employees: 128
APC: South Valley

	Proposed Project	*Project with Mitigation Measures*
Total Home Based Production VMT	**12,638**	**10,277**
Total Home Based Work Attraction VMT	**1,399**	**1,258**
Total Home Based VMT Per Capita	**10.2**	**8.3**
Total Work Based VMT Per Employee	**N/A**	**N/A**

Appendix E

HCM Analysis Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	778	50	62	522	141	51	611	76	153	557	145
Future Volume (veh/h)	119	778	50	62	522	141	51	611	76	153	557	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	846	54	67	567	153	55	664	83	166	605	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	931	789	131	931	789	233	1233	154	241	1082	282
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	732	1870	1585	619	1870	1585	704	3179	397	714	2789	727
Grp Volume(v), veh/h	129	846	54	67	567	153	55	371	376	166	385	378
Grp Sat Flow(s),veh/h/ln	732	1870	1585	619	1870	1585	704	1777	1799	714	1777	1740
Q Serve(g_s), s	13.9	37.3	1.6	7.5	19.7	4.8	6.0	14.5	14.6	20.3	15.2	15.3
Cycle Q Clear(g_c), s	33.5	37.3	1.6	44.8	19.7	4.8	21.3	14.5	14.6	34.9	15.2	15.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		0.42
Lane Grp Cap(c), veh/h	285	931	789	131	931	789	233	689	698	241	689	675
V/C Ratio(X)	0.45	0.91	0.07	0.51	0.61	0.19	0.24	0.54	0.54	0.69	0.56	0.56
Avail Cap(c_a), veh/h	285	931	789	131	931	789	233	689	698	241	689	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	20.7	11.8	42.1	16.3	12.6	29.9	21.3	21.3	35.1	21.5	21.6
Incr Delay (d2), s/veh	1.1	12.6	0.0	3.3	1.2	0.1	2.3	2.9	2.9	14.9	3.3	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	24.8	1.0	2.9	12.6	2.9	2.0	10.3	10.5	8.0	10.8	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	33.3	11.8	45.4	17.4	12.7	32.2	24.3	24.2	50.0	24.8	24.9
LnGrp LOS	C	C	B	D	B	B	C	C	C	D	C	C
Approach Vol, veh/h		1029			787			802			929	
Approach Delay, s/veh		31.7			18.9			24.8			29.3	
Approach LOS		C			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		50.0		40.0		50.0				
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2				
Max Green Setting (Gmax), s		34.9		* 45		34.9		* 45				
Max Q Clear Time (g_c+I1), s		36.9		46.8		23.3		39.3				
Green Ext Time (p_c), s		0.0		0.0		3.9		3.1				

Intersection Summary			
HCM 6th Ctrl Delay			26.7
HCM 6th LOS			C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	778	50	62	522	141	51	611	76	153	557	145
Future Volume (veh/h)	119	778	50	62	522	141	51	611	76	153	557	145
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	846	54	67	567	153	55	664	83	166	605	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	285	931	789	131	931	789	233	1233	154	241	1082	282
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.39	0.39	0.39	0.39	0.39	0.39
Unsig. Movement Delay												
Ln Grp Delay, s/veh	29.5	33.3	11.8	45.4	17.4	12.7	32.2	24.3	24.2	50.0	24.8	24.9
Ln Grp LOS	C	C	B	D	B	B	C	C	C	D	C	C
Approach Vol, veh/h		1029			787			802			929	
Approach Delay, s/veh		31.7			18.9			24.8			29.3	
Approach LOS		C			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		40.0		50.0		40.0		50.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		34.9		* 45		34.9		* 45
Max Allow Headway (MAH), s		5.4		5.1		5.2		5.2
Max Q Clear (g_c+I1), s		36.9		46.8		23.3		39.3
Green Ext Time (g_e), s		0.0		0.0		3.9		3.1
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		0.97
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		714		619		704		732
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2789		1870		3179		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		727		1585		397		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	166	0	67	0	55	0	129
Grp Sat Flow (s), veh/h/ln	0	714	0	619	0	704	0	732
Q Serve Time (g_s), s	0.0	20.3	0.0	7.5	0.0	6.0	0.0	13.9
Cycle Q Clear Time (g_c), s	0.0	34.9	0.0	44.8	0.0	21.3	0.0	33.5
Perm LT Sat Flow (s_l), veh/h/ln	0	714	0	619	0	704	0	732
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	34.9	0.0	44.8	0.0	34.9	0.0	44.8
Perm LT Serve Time (g_u), s	0.0	20.3	0.0	7.5	0.0	19.6	0.0	25.1
Perm LT Q Serve Time (g_ps), s	0.0	20.3	0.0	7.5	0.0	6.0	0.0	13.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	241	0	131	0	233	0	285
V/C Ratio (X)	0.00	0.69	0.00	0.51	0.00	0.24	0.00	0.45
Avail Cap (c_a), veh/h	0	241	0	131	0	233	0	285
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.98	0.00	1.00
Uniform Delay (d1), s/veh	0.0	35.1	0.0	42.1	0.0	29.9	0.0	28.4
Incr Delay (d2), s/veh	0.0	14.9	0.0	3.3	0.0	2.3	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	50.0	0.0	45.4	0.0	32.2	0.0	29.5
1st-Term Q (Q1), veh/ln	0.0	3.5	0.0	1.5	0.0	1.0	0.0	2.3
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	0.1	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.77	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	8.0	0.0	2.9	0.0	2.0	0.0	4.4
%ile Storage Ratio (RQ%)	0.00	3.12	0.00	0.52	0.00	0.74	0.00	1.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	385	0	567	0	371	0	846
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	15.2	0.0	19.7	0.0	14.5	0.0	37.3
Cycle Q Clear Time (g_c), s	0.0	15.2	0.0	19.7	0.0	14.5	0.0	37.3
Lane Grp Cap (c), veh/h	0	689	0	931	0	689	0	931
V/C Ratio (X)	0.00	0.56	0.00	0.61	0.00	0.54	0.00	0.91
Avail Cap (c_a), veh/h	0	689	0	931	0	689	0	931
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.98	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.5	0.0	16.3	0.0	21.3	0.0	20.7
Incr Delay (d2), s/veh	0.0	3.3	0.0	1.2	0.0	2.9	0.0	12.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.8	0.0	17.4	0.0	24.3	0.0	33.3
1st-Term Q (Q1), veh/ln	0.0	6.0	0.0	7.7	0.0	5.7	0.0	14.6
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.3	0.0	0.6	0.0	3.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.64	0.00	1.58	0.00	1.65	0.00	1.39
%ile Back of Q (95%), veh/ln	0.0	10.8	0.0	12.6	0.0	10.3	0.0	24.8
%ile Storage Ratio (RQ%)	0.00	0.38	0.00	0.35	0.00	0.19	0.00	0.67
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	378	0	153	0	376	0	54
Grp Sat Flow (s), veh/h/ln	0	1740	0	1585	0	1799	0	1585
Q Serve Time (g_s), s	0.0	15.3	0.0	4.8	0.0	14.6	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	15.3	0.0	4.8	0.0	14.6	0.0	1.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.42	0.00	1.00	0.00	0.22	0.00	1.00
Lane Grp Cap (c), veh/h	0	675	0	789	0	698	0	789
V/C Ratio (X)	0.00	0.56	0.00	0.19	0.00	0.54	0.00	0.07
Avail Cap (c_a), veh/h	0	675	0	789	0	698	0	789
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.98	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.6	0.0	12.6	0.0	21.3	0.0	11.8
Incr Delay (d2), s/veh	0.0	3.3	0.0	0.1	0.0	2.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.9	0.0	12.7	0.0	24.2	0.0	11.8
1st-Term Q (Q1), veh/ln	0.0	5.9	0.0	1.6	0.0	5.8	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.64	0.00	1.80	0.00	1.64	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	10.7	0.0	2.9	0.0	10.5	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.37	0.00	0.74	0.00	0.19	0.00	0.29
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.7
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	2	77	30	3	57	25	558	30	60	597	11
Future Volume (veh/h)	38	2	77	30	3	57	25	558	30	60	597	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	2	84	33	3	62	27	607	33	65	649	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	16	119	99	22	117	691	2705	147	667	4074	75
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.79	0.79	0.79	1.00	1.00	1.00
Sat Flow, veh/h	408	143	1075	413	202	1059	774	3428	186	789	5162	95
Grp Volume(v), veh/h	127	0	0	98	0	0	27	314	326	65	428	233
Grp Sat Flow(s),veh/h/ln	1625	0	0	1673	0	0	774	1777	1837	789	1702	1853
Q Serve(g_s), s	1.7	0.0	0.0	0.0	0.0	0.0	0.7	4.1	4.1	0.5	0.0	0.0
Cycle Q Clear(g_c), s	6.5	0.0	0.0	4.8	0.0	0.0	0.7	4.1	4.1	4.6	0.0	0.0
Prop In Lane	0.32		0.66	0.34		0.63	1.00		0.10	1.00		0.05
Lane Grp Cap(c), veh/h	233	0	0	239	0	0	691	1402	1450	667	2687	1463
V/C Ratio(X)	0.55	0.00	0.00	0.41	0.00	0.00	0.04	0.22	0.22	0.10	0.16	0.16
Avail Cap(c_a), veh/h	625	0	0	628	0	0	691	1402	1450	667	2687	1463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.86	0.86	0.86	0.78	0.78	0.78
Uniform Delay (d), s/veh	38.4	0.0	0.0	37.8	0.0	0.0	2.1	2.4	2.4	0.1	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0	1.1	0.0	0.0	0.1	0.3	0.3	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	0.0	0.0	3.8	0.0	0.0	0.1	1.7	1.8	0.1	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.4	0.0	0.0	38.9	0.0	0.0	2.2	2.7	2.7	0.4	0.1	0.2
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		127			98			667			726	
Approach Delay, s/veh		40.4			38.9			2.7			0.1	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.5		14.5		75.5		14.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		47.5		33.5		47.5		33.5				
Max Q Clear Time (g_c+I1), s		6.1		8.5		6.6		6.8				
Green Ext Time (p_c), s		4.5		0.7		5.2		0.5				

Intersection Summary			
HCM 6th Ctrl Delay			6.7
HCM 6th LOS			A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	2	77	30	3	57	25	558	30	60	597	11
Future Volume (veh/h)	38	2	77	30	3	57	25	558	30	60	597	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	2	84	33	3	62	27	607	33	65	649	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	98	16	119	99	22	117	691	2705	147	667	4074	75
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.79	0.79	0.79	1.00	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	40.4	0.0	0.0	38.9	0.0	0.0	2.2	2.7	2.7	0.4	0.1	0.2
Ln Grp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		127			98			667			726	
Approach Delay, s/veh		40.4			38.9			2.7			0.1	
Approach LOS		D			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		8.0		6.0		8.0
Phs Duration (G+Y+Rc), s		75.5		14.5		75.5		14.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		47.5		33.5		47.5		33.5
Max Allow Headway (MAH), s		5.2		5.5		5.2		5.5
Max Q Clear (g_c+I1), s		6.1		8.5		6.6		6.8
Green Ext Time (g_e), s		4.5		0.7		5.2		0.5
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		774		408		789		413
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3428		143		5162		202
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		186		1075		95		1059
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T+R		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	27	0	127	0	65	0	98
Grp Sat Flow (s), veh/h/ln	0	774	0	1625	0	789	0	1673
Q Serve Time (g_s), s	0.0	0.7	0.0	1.7	0.0	0.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.7	0.0	6.5	0.0	4.6	0.0	4.8
Perm LT Sat Flow (s_l), veh/h/ln	0	774	0	1358	0	789	0	1332
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1841	0	0	0	1837
Perm LT Eff Green (g_p), s	0.0	71.0	0.0	10.0	0.0	71.0	0.0	10.0
Perm LT Serve Time (g_u), s	0.0	71.0	0.0	5.2	0.0	66.9	0.0	3.5
Perm LT Q Serve Time (g_ps), s	0.0	0.7	0.0	1.7	0.0	0.5	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.7
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.7
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.32	0.00	1.00	0.00	0.34
Lane Grp Cap (c), veh/h	0	691	0	233	0	667	0	239
V/C Ratio (X)	0.00	0.04	0.00	0.55	0.00	0.10	0.00	0.41
Avail Cap (c_a), veh/h	0	691	0	625	0	667	0	628
Upstream Filter (I)	0.00	0.86	0.00	1.00	0.00	0.78	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.1	0.0	38.4	0.0	0.1	0.0	37.8
Incr Delay (d2), s/veh	0.0	0.1	0.0	2.0	0.0	0.2	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.2	0.0	40.4	0.0	0.4	0.0	38.9
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	2.7	0.0	0.0	0.0	2.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.1	0.0	5.0	0.0	0.1	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.40	0.00	0.03	0.00	0.20
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	314	0	0	0	428	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1402	0	0	0	2687	0	0
V/C Ratio (X)	0.00	0.22	0.00	0.00	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1402	0	0	0	2687	0	0
Upstream Filter (I)	0.00	0.86	0.00	0.00	0.00	0.78	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.7	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	1.7	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				T+R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	326	0	0	0	233	0	0
Grp Sat Flow (s), veh/h/ln	0	1837	0	0	0	1853	0	0
Q Serve Time (g_s), s	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.10	0.00	0.66	0.00	0.05	0.00	0.63
Lane Grp Cap (c), veh/h	0	1450	0	0	0	1463	0	0
V/C Ratio (X)	0.00	0.22	0.00	0.00	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1450	0	0	0	1463	0	0
Upstream Filter (I)	0.00	0.86	0.00	0.00	0.00	0.78	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.7	0.0	0.0	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	1.8	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		6.7						
HCM 6th LOS		A						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	1006	134	181	699	166	100	325	171	268	389	32
Future Volume (veh/h)	107	1006	134	181	699	166	100	325	171	268	389	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	116	1093	146	197	760	180	109	353	186	291	423	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	363	1748	780	322	1469	348	142	572	371	346	569	47
Arrive On Green	0.05	0.49	0.49	0.07	0.52	0.52	0.08	0.16	0.16	0.10	0.17	0.17
Sat Flow, veh/h	1781	3554	1585	1781	2851	675	1781	3554	1585	3456	3324	274
Grp Volume(v), veh/h	116	1093	146	197	474	466	109	353	186	291	225	233
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1749	1781	1777	1585	1728	1777	1821
Q Serve(g_s), s	3.2	22.6	3.3	5.2	17.6	17.6	6.0	9.3	10.2	8.3	12.0	12.1
Cycle Q Clear(g_c), s	3.2	22.6	3.3	5.2	17.6	17.6	6.0	9.3	10.2	8.3	12.0	12.1
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	363	1748	780	322	915	901	142	572	371	346	304	312
V/C Ratio(X)	0.32	0.63	0.19	0.61	0.52	0.52	0.77	0.62	0.50	0.84	0.74	0.75
Avail Cap(c_a), veh/h	363	1748	780	352	915	901	178	853	496	346	444	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	12.7	18.6	5.8	15.1	16.0	16.0	45.1	39.1	33.2	44.2	39.3	39.4
Incr Delay (d2), s/veh	0.5	1.7	0.5	2.2	1.7	1.7	14.3	2.3	2.2	16.7	6.1	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	14.1	3.3	3.8	11.1	10.9	5.7	7.5	7.3	7.7	9.5	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	20.3	6.3	17.3	17.7	17.8	59.4	41.4	35.5	61.0	45.4	45.5
LnGrp LOS	B	C	A	B	B	B	E	D	D	E	D	D
Approach Vol, veh/h		1355			1137			648			749	
Approach Delay, s/veh		18.2			17.7			42.7			51.5	
Approach LOS		B			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	56.9	14.0	21.1	10.3	54.6	13.0	22.1				
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5				
Max Green Setting (Gmax), s	5.0	43.6	10.0	* 24	9.0	39.6	* 10	* 25				
Max Q Clear Time (g_c+I1), s	5.2	19.6	10.3	12.2	7.2	24.6	8.0	14.1				
Green Ext Time (p_c), s	0.0	11.6	0.0	3.9	0.1	10.7	0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay			28.5									
HCM 6th LOS			C									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	1006	134	181	699	166	100	325	171	268	389	32
Future Volume (veh/h)	107	1006	134	181	699	166	100	325	171	268	389	32
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	116	1093	146	197	760	180	109	353	186	291	423	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	363	1748	780	322	1469	348	142	572	371	346	569	47
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.49	0.49	0.07	0.52	0.52	0.08	0.16	0.16	0.10	0.17	0.17
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.2	20.3	6.3	17.3	17.7	17.8	59.4	41.4	35.5	61.0	45.4	45.5
Ln Grp LOS	B	C	A	B	B	B	E	D	D	E	D	D
Approach Vol, veh/h		1355			1137			648			749	
Approach Delay, s/veh		18.2			17.7			42.7			51.5	
Approach LOS		B			B			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	8.0	56.9	14.0	21.1	10.3	54.6	22.1	13.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	5.0	43.6	10.0	* 24	9.0	39.6	* 25	* 10
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.7	3.8	7.0	6.6	3.8
Max Q Clear (g_c+I1), s	5.2	19.6	10.3	12.2	7.2	24.6	14.1	8.0
Green Ext Time (g_e), s	0.0	11.6	0.0	3.9	0.1	10.7	3.0	0.0
Prob of Phs Call (p_c)	0.96	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Prob of Max Out (p_x)	1.00	0.00	1.00	0.46	1.00	0.00	0.47	1.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2851		3554		3554	3324	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		675		1585		1585	274	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	116	0	291	0	197	0	0	109
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	3.2	0.0	8.3	0.0	5.2	0.0	0.0	6.0
Cycle Q Clear Time (g_c), s	3.2	0.0	8.3	0.0	5.2	0.0	0.0	6.0
Perm LT Sat Flow (s_l), veh/h/ln	596	0	0	0	449	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	49.2	0.0	0.0	0.0	50.5	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	33.9	0.0	0.0	0.0	26.6	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	3.7	0.0	0.0	0.0	18.7	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	363	0	346	0	322	0	0	142
V/C Ratio (X)	0.32	0.00	0.84	0.00	0.61	0.00	0.00	0.77
Avail Cap (c_a), veh/h	363	0	346	0	352	0	0	178
Upstream Filter (I)	1.00	0.00	0.99	0.00	0.82	0.00	0.00	1.00
Uniform Delay (d1), s/veh	12.7	0.0	44.2	0.0	15.1	0.0	0.0	45.1
Incr Delay (d2), s/veh	0.5	0.0	16.7	0.0	2.2	0.0	0.0	14.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.2	0.0	61.0	0.0	17.3	0.0	0.0	59.4
1st-Term Q (Q1), veh/ln	1.2	0.0	3.5	0.0	1.9	0.0	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.8	0.0	0.2	0.0	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.79	0.00	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	2.2	0.0	7.7	0.0	3.8	0.0	0.0	5.7
%ile Storage Ratio (RQ%)	0.39	0.00	0.97	0.00	0.49	0.00	0.00	1.61
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	474	0	353	0	1093	225	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	17.6	0.0	9.3	0.0	22.6	12.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.6	0.0	9.3	0.0	22.6	12.0	0.0
Lane Grp Cap (c), veh/h	0	915	0	572	0	1748	304	0
V/C Ratio (X)	0.00	0.52	0.00	0.62	0.00	0.63	0.74	0.00
Avail Cap (c_a), veh/h	0	915	0	853	0	1748	444	0
Upstream Filter (I)	0.00	0.82	0.00	1.00	0.00	1.00	0.99	0.00
Uniform Delay (d1), s/veh	0.0	16.0	0.0	39.1	0.0	18.6	39.3	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	2.3	0.0	1.7	6.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.7	0.0	41.4	0.0	20.3	45.4	0.0
1st-Term Q (Q1), veh/ln	0.0	6.7	0.0	4.0	0.0	8.7	5.1	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.4	0.5	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.56	0.00	1.80	0.00	1.54	1.69	0.00
%ile Back of Q (95%), veh/ln	0.0	11.1	0.0	7.5	0.0	14.1	9.5	0.0
%ile Storage Ratio (RQ%)	0.00	0.50	0.00	0.25	0.00	0.27	0.67	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	466	0	186	0	146	233	0
Grp Sat Flow (s), veh/h/ln	0	1749	0	1585	0	1585	1821	0
Q Serve Time (g_s), s	0.0	17.6	0.0	10.2	0.0	3.3	12.1	0.0
Cycle Q Clear Time (g_c), s	0.0	17.6	0.0	10.2	0.0	3.3	12.1	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.39	0.00	1.00	0.00	1.00	0.15	0.00
Lane Grp Cap (c), veh/h	0	901	0	371	0	780	312	0
V/C Ratio (X)	0.00	0.52	0.00	0.50	0.00	0.19	0.75	0.00
Avail Cap (c_a), veh/h	0	901	0	496	0	780	455	0
Upstream Filter (I)	0.00	0.82	0.00	1.00	0.00	1.00	0.99	0.00
Uniform Delay (d1), s/veh	0.0	16.0	0.0	33.2	0.0	5.8	39.4	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	2.2	0.0	0.5	6.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.8	0.0	35.5	0.0	6.3	45.5	0.0
1st-Term Q (Q1), veh/ln	0.0	6.6	0.0	3.8	0.0	1.7	5.3	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.1	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.56	0.00	1.80	0.00	1.80	1.67	0.00
%ile Back of Q (95%), veh/ln	0.0	10.9	0.0	7.3	0.0	3.3	9.8	0.0
%ile Storage Ratio (RQ%)	0.00	0.49	0.00	2.06	0.00	0.72	0.69	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	1333	45	74	1001	54	4	2	17	46	2	46
Future Volume (veh/h)	18	1333	45	74	1001	54	4	2	17	46	2	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	1449	49	80	1088	59	4	2	18	50	2	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	307	2221	75	211	2171	118	90	62	319	237	27	197
Arrive On Green	0.63	0.63	0.63	0.63	0.63	0.63	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	490	3507	118	351	3428	186	164	234	1194	666	103	739
Grp Volume(v), veh/h	20	733	765	80	564	583	24	0	0	102	0	0
Grp Sat Flow(s),veh/h/ln	490	1777	1849	351	1777	1837	1593	0	0	1508	0	0
Q Serve(g_s), s	2.1	23.2	23.3	16.6	15.3	15.4	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear(g_c), s	17.4	23.2	23.3	39.9	15.3	15.4	1.0	0.0	0.0	4.5	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.10	0.17		0.75	0.49		0.49
Lane Grp Cap(c), veh/h	307	1125	1171	211	1125	1163	471	0	0	462	0	0
V/C Ratio(X)	0.07	0.65	0.65	0.38	0.50	0.50	0.05	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	307	1125	1171	211	1125	1163	471	0	0	462	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	0.64	0.64	0.64	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.5	10.3	10.3	22.8	8.9	8.9	24.6	0.0	0.0	25.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	1.7	1.6	3.3	1.0	1.0	0.2	0.0	0.0	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	11.6	12.0	2.7	8.3	8.6	0.7	0.0	0.0	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	12.0	12.0	26.1	9.9	9.9	24.8	0.0	0.0	26.9	0.0	0.0
LnGrp LOS	B	B	B	C	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1518			1227			24			102	
Approach Delay, s/veh		12.0			10.9			24.8			26.9	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.5		61.5		28.5		61.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		24.0		57.0		24.0		57.0				
Max Q Clear Time (g_c+I1), s		3.0		25.3		6.5		41.9				
Green Ext Time (p_c), s		0.1		13.8		0.4		7.7				

Intersection Summary			
HCM 6th Ctrl Delay			12.2
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	1333	45	74	1001	54	4	2	17	46	2	46
Future Volume (veh/h)	18	1333	45	74	1001	54	4	2	17	46	2	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	1449	49	80	1088	59	4	2	18	50	2	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	307	2221	75	211	2171	118	90	62	319	237	27	197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.63	0.63	0.63	0.63	0.63	0.63	0.27	0.27	0.27	0.27	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.8	12.0	12.0	26.1	9.9	9.9	24.8	0.0	0.0	26.9	0.0	0.0
Ln Grp LOS	B	B	B	C	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1518			1227			24			102	
Approach Delay, s/veh		12.0			10.9			24.8			26.9	
Approach LOS		B			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		8.0		6.0		8.0		6.0
Phs Duration (G+Y+Rc), s		28.5		61.5		28.5		61.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		24.0		57.0		24.0		57.0
Max Allow Headway (MAH), s		5.5		5.2		5.4		5.5
Max Q Clear (g_c+I1), s		3.0		25.3		6.5		41.9
Green Ext Time (g_e), s		0.1		13.8		0.4		7.7
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		164		490		666		351
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		234		3507		103		3428
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1194		118		739		186
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L+T+R		L		L+T+R		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	24	0	20	0	102	0	80
Grp Sat Flow (s), veh/h/ln	0	1593	0	490	0	1508	0	351
Q Serve Time (g_s), s	0.0	0.0	0.0	2.1	0.0	2.4	0.0	16.6
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	17.4	0.0	4.5	0.0	39.9
Perm LT Sat Flow (s_l), veh/h/ln	0	1374	0	490	0	1414	0	351
Shared LT Sat Flow (s_sh), veh/h/ln	0	1855	0	0	0	1826	0	0
Perm LT Eff Green (g_p), s	0.0	24.0	0.0	57.0	0.0	24.0	0.0	57.0
Perm LT Serve Time (g_u), s	0.0	19.5	0.0	41.6	0.0	23.0	0.0	33.7
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	2.1	0.0	2.4	0.0	16.6
Time to First Blk (g_f), s	0.0	8.9	0.0	0.0	0.0	2.1	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	1.0	0.0	0.0	0.0	2.1	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.17	0.00	1.00	0.00	0.49	0.00	1.00
Lane Grp Cap (c), veh/h	0	471	0	307	0	462	0	211
V/C Ratio (X)	0.00	0.05	0.00	0.07	0.00	0.22	0.00	0.38
Avail Cap (c_a), veh/h	0	471	0	307	0	462	0	211
Upstream Filter (I)	0.00	1.00	0.00	0.57	0.00	1.00	0.00	0.64
Uniform Delay (d1), s/veh	0.0	24.6	0.0	13.5	0.0	25.8	0.0	22.8
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.2	0.0	1.1	0.0	3.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.8	0.0	13.8	0.0	26.9	0.0	26.1
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.2	0.0	1.7	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.7	0.0	0.4	0.0	3.3	0.0	2.7
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.18	0.00	0.20	0.00	1.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	733	0	0	0	564
Grp Sat Flow (s), veh/h/ln	0	0	0	1777	0	0	0	1777
Q Serve Time (g_s), s	0.0	0.0	0.0	23.2	0.0	0.0	0.0	15.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	23.2	0.0	0.0	0.0	15.3
Lane Grp Cap (c), veh/h	0	0	0	1125	0	0	0	1125
V/C Ratio (X)	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.50
Avail Cap (c_a), veh/h	0	0	0	1125	0	0	0	1125
Upstream Filter (I)	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.64
Uniform Delay (d1), s/veh	0.0	0.0	0.0	10.3	0.0	0.0	0.0	8.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7	0.0	0.0	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	12.0	0.0	0.0	0.0	9.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	7.6	0.0	0.0	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.44	0.00	1.00	0.00	1.57
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	11.6	0.0	0.0	0.0	8.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.11
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment				T+R				T+R
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	765	0	0	0	583
Grp Sat Flow (s), veh/h/ln	0	0	0	1849	0	0	0	1837
Q Serve Time (g_s), s	0.0	0.0	0.0	23.3	0.0	0.0	0.0	15.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	23.3	0.0	0.0	0.0	15.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.75	0.00	0.06	0.00	0.49	0.00	0.10
Lane Grp Cap (c), veh/h	0	0	0	1171	0	0	0	1163
V/C Ratio (X)	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.50
Avail Cap (c_a), veh/h	0	0	0	1171	0	0	0	1163
Upstream Filter (I)	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.64
Uniform Delay (d1), s/veh	0.0	0.0	0.0	10.3	0.0	0.0	0.0	8.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	12.0	0.0	0.0	0.0	9.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	7.9	0.0	0.0	0.0	5.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.43	0.00	1.00	0.00	1.56
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	12.0	0.0	0.0	0.0	8.6
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.11
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		12.2						
HCM 6th LOS		B						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	842	97	23	718	160	82	90	8	682	249	460
Future Volume (veh/h)	167	842	97	23	718	160	82	90	8	682	249	460
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	915	105	25	780	174	89	98	9	741	271	500
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	516	2827	1261	454	2505	1118	168	371	34	806	958	892
Arrive On Green	0.05	0.80	0.80	0.71	0.71	0.71	0.22	0.22	0.22	0.23	0.51	0.51
Sat Flow, veh/h	1781	3554	1585	553	3554	1585	698	1687	155	3456	1870	1585
Grp Volume(v), veh/h	182	915	105	25	780	174	89	0	107	741	271	500
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	553	1777	1585	698	0	1842	1728	1870	1585
Q Serve(g_s), s	2.6	7.1	1.5	1.5	8.3	4.6	12.6	0.0	4.8	20.9	8.3	20.2
Cycle Q Clear(g_c), s	2.6	7.1	1.5	2.8	8.3	4.6	20.9	0.0	4.8	20.9	8.3	20.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	516	2827	1261	454	2505	1118	168	0	405	806	958	892
V/C Ratio(X)	0.35	0.32	0.08	0.06	0.31	0.16	0.53	0.00	0.26	0.92	0.28	0.56
Avail Cap(c_a), veh/h	590	2827	1261	454	2505	1118	168	0	405	829	958	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.9	2.8	2.2	5.0	5.6	7.7	42.6	0.0	32.3	37.4	13.9	14.0
Incr Delay (d2), s/veh	0.3	0.2	0.1	0.2	0.3	0.3	3.1	0.0	0.3	15.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	3.0	0.6	0.3	4.8	2.2	4.2	0.0	4.0	15.4	5.9	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	3.0	2.3	5.2	5.9	8.0	45.8	0.0	32.6	52.5	14.1	14.8
LnGrp LOS	A	A	A	A	A	A	D	A	C	D	B	B
Approach Vol, veh/h		1202			979			196			1512	
Approach Delay, s/veh		3.1			6.2			38.6			33.1	
Approach LOS		A			A			D			C	

Timer - Assigned Phs	1	2		4		6	7	8
Phs Duration (G+Y+Rc), s	9.0	76.7		57.1		85.7	29.2	27.9
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9
Max Green Setting (Gmax), s	9.2	* 26		50.0		39.2	24.0	* 22
Max Q Clear Time (g_c+I1), s	4.6	10.3		22.2		9.1	22.9	22.9
Green Ext Time (p_c), s	0.2	5.5		3.5		7.7	0.4	0.0

Intersection Summary			
HCM 6th Ctrl Delay			17.4
HCM 6th LOS			B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	842	97	23	718	160	82	90	8	682	249	460
Future Volume (veh/h)	167	842	97	23	718	160	82	90	8	682	249	460
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	915	105	25	780	174	89	98	9	741	271	500
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	516	2827	1261	454	2505	1118	168	371	34	806	958	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.80	0.80	0.71	0.71	0.71	0.22	0.22	0.22	0.23	0.51	0.51
Unsig. Movement Delay												
Ln Grp Delay, s/veh	4.2	3.0	2.3	5.2	5.9	8.0	45.8	0.0	32.6	52.5	14.1	14.8
Ln Grp LOS	A	A	A	A	A	A	D	A	C	D	B	B
Approach Vol, veh/h		1202			979			196			1512	
Approach Delay, s/veh		3.1			6.2			38.6			33.1	
Approach LOS		A			A			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	9.0	76.7		57.1		85.7	27.9	29.2
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	9.2	* 26		50.0		39.2	* 22	24.0
Max Allow Headway (MAH), s	3.8	5.0		4.3		5.0	5.9	3.7
Max Q Clear (g_c+l1), s	4.6	10.3		22.2		9.1	22.9	22.9
Green Ext Time (g_e), s	0.2	5.5		3.5		7.7	0.0	0.4
Prob of Phs Call (p_c)	0.99	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	0.48	0.00		0.00		0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	553					698	3456
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1687	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	155	
Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	182	25	0	0	0	0	89	741
Grp Sat Flow (s), veh/h/ln	1781	553	0	0	0	0	698	1728
Q Serve Time (g_s), s	2.6	1.5	0.0	0.0	0.0	0.0	12.6	20.9
Cycle Q Clear Time (g_c), s	2.6	2.8	0.0	0.0	0.0	0.0	20.9	20.9
Perm LT Sat Flow (s_l), veh/h/ln	588	553	0	0	0	0	698	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	72.5	70.5	0.0	0.0	0.0	0.0	22.0	0.0
Perm LT Serve Time (g_u), s	60.2	69.2	0.0	0.0	0.0	0.0	13.7	0.0
Perm LT Q Serve Time (g_ps), s	5.5	1.5	0.0	0.0	0.0	0.0	12.6	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	516	454	0	0	0	0	168	806
V/C Ratio (X)	0.35	0.06	0.00	0.00	0.00	0.00	0.53	0.92
Avail Cap (c_a), veh/h	590	454	0	0	0	0	168	829
Upstream Filter (I)	0.62	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	3.9	5.0	0.0	0.0	0.0	0.0	42.6	37.4
Incr Delay (d2), s/veh	0.3	0.2	0.0	0.0	0.0	0.0	3.1	15.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	4.2	5.2	0.0	0.0	0.0	0.0	45.8	52.5
1st-Term Q (Q1), veh/ln	0.6	0.1	0.0	0.0	0.0	0.0	2.2	8.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.7
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.51
%ile Back of Q (95%), veh/ln	1.2	0.3	0.0	0.0	0.0	0.0	4.2	15.4
%ile Storage Ratio (RQ%)	0.30	0.05	0.00	0.00	0.00	0.00	1.06	1.74
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	780	0	271	0	915	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	8.3	0.0	8.3	0.0	7.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.3	0.0	8.3	0.0	7.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2505	0	958	0	2827	0	0
V/C Ratio (X)	0.00	0.31	0.00	0.28	0.00	0.32	0.00	0.00
Avail Cap (c_a), veh/h	0	2505	0	958	0	2827	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.62	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.6	0.0	13.9	0.0	2.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.2	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.9	0.0	14.1	0.0	3.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.5	0.0	3.2	0.0	1.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	4.8	0.0	5.9	0.0	3.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.18	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	174	0	500	0	105	107	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1842	0
Q Serve Time (g_s), s	0.0	4.6	0.0	20.2	0.0	1.5	4.8	0.0
Cycle Q Clear Time (g_c), s	0.0	4.6	0.0	20.2	0.0	1.5	4.8	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.08	0.00
Lane Grp Cap (c), veh/h	0	1118	0	892	0	1261	405	0
V/C Ratio (X)	0.00	0.16	0.00	0.56	0.00	0.08	0.26	0.00
Avail Cap (c_a), veh/h	0	1118	0	892	0	1261	405	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.62	1.00	0.00
Uniform Delay (d1), s/veh	0.0	7.7	0.0	14.0	0.0	2.2	32.3	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.8	0.0	0.1	0.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.0	0.0	14.8	0.0	2.3	32.6	0.0
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	6.9	0.0	0.3	2.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.61	0.00	1.80	1.80	0.00
%ile Back of Q (95%), veh/ln	0.0	2.2	0.0	11.5	0.0	0.6	4.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.55	0.00	1.30	0.00	0.14	0.35	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	704	62	102	579	143	89	1012	273	133	1003	146
Future Volume (veh/h)	102	704	62	102	579	143	89	1012	273	133	1003	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	765	67	111	629	155	97	1100	297	145	1090	159
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	661	560	80	661	560	204	1475	395	286	1657	241
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	1.00	1.00	1.00	0.53	0.53	0.53
Sat Flow, veh/h	690	1870	1585	660	1870	1585	445	2772	742	386	3113	453
Grp Volume(v), veh/h	111	765	67	111	629	155	97	702	695	145	621	628
Grp Sat Flow(s),veh/h/ln	690	1870	1585	660	1870	1585	445	1777	1737	386	1777	1789
Q Serve(g_s), s	2.3	31.8	2.6	0.0	29.5	6.3	15.8	0.0	0.0	25.3	22.6	22.8
Cycle Q Clear(g_c), s	31.8	31.8	2.6	31.8	29.5	6.3	38.5	0.0	0.0	25.3	22.6	22.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		0.25
Lane Grp Cap(c), veh/h	98	661	560	80	661	560	204	946	924	286	946	952
V/C Ratio(X)	1.14	1.16	0.12	1.39	0.95	0.28	0.47	0.74	0.75	0.51	0.66	0.66
Avail Cap(c_a), veh/h	98	661	560	80	661	560	204	946	924	286	946	952
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	29.1	19.6	45.0	28.4	20.9	9.2	0.0	0.0	15.8	15.1	15.2
Incr Delay (d2), s/veh	132.4	87.2	0.1	234.3	23.7	0.3	6.9	4.7	5.0	6.3	3.6	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.3	42.0	1.7	12.5	23.4	4.1	2.5	2.2	2.3	4.5	14.1	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	177.2	116.3	19.7	279.3	52.1	21.1	16.0	4.7	5.0	22.1	18.7	18.7
LnGrp LOS	F	F	B	F	D	C	B	A	A	C	B	B
Approach Vol, veh/h		943			895			1494			1394	
Approach Delay, s/veh		116.6			74.9			5.6			19.1	
Approach LOS		F			E			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0				
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2				
Max Green Setting (Gmax), s		47.9		* 32		47.9		* 32				
Max Q Clear Time (g_c+I1), s		27.3		33.8		40.5		33.8				
Green Ext Time (p_c), s		11.1		0.0		5.3		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		44.8
HCM 6th LOS		D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	102	704	62	102	579	143	89	1012	273	133	1003	146
Future Volume (veh/h)	102	704	62	102	579	143	89	1012	273	133	1003	146
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	765	67	111	629	155	97	1100	297	145	1090	159
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	98	661	560	80	661	560	204	1475	395	286	1657	241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	1.00	1.00	1.00	0.53	0.53	0.53
Unsig. Movement Delay												
Ln Grp Delay, s/veh	177.2	116.3	19.7	279.3	52.1	21.1	16.0	4.7	5.0	22.1	18.7	18.7
Ln Grp LOS	F	F	B	F	D	C	B	A	A	C	B	B
Approach Vol, veh/h		943			895			1494			1394	
Approach Delay, s/veh		116.6			74.9			5.6			19.1	
Approach LOS		F			E			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		47.9		* 32		47.9		* 32
Max Allow Headway (MAH), s		5.7		5.1		5.4		5.2
Max Q Clear (g_c+I1), s		27.3		33.8		40.5		33.8
Green Ext Time (g_e), s		11.1		0.0		5.3		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		1.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		386		660		445		690
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3113		1870		2772		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		453		1585		742		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	145	0	111	0	97	0	111
Grp Sat Flow (s), veh/h/ln	0	386	0	660	0	445	0	690
Q Serve Time (g_s), s	0.0	25.3	0.0	0.0	0.0	15.8	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	25.3	0.0	31.8	0.0	38.5	0.0	31.8
Perm LT Sat Flow (s_l), veh/h/ln	0	386	0	660	0	445	0	690
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	47.9	0.0	31.8	0.0	47.9	0.0	31.8
Perm LT Serve Time (g_u), s	0.0	47.9	0.0	0.0	0.0	25.1	0.0	2.3
Perm LT Q Serve Time (g_ps), s	0.0	25.3	0.0	0.0	0.0	15.8	0.0	2.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	286	0	80	0	204	0	98
V/C Ratio (X)	0.00	0.51	0.00	1.39	0.00	0.47	0.00	1.14
Avail Cap (c_a), veh/h	0	286	0	80	0	204	0	98
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.89	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.8	0.0	45.0	0.0	9.2	0.0	44.8
Incr Delay (d2), s/veh	0.0	6.3	0.0	234.3	0.0	6.9	0.0	132.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.1	0.0	279.3	0.0	16.0	0.0	177.2
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	1.7	0.0	1.0	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	5.2	0.0	0.4	0.0	3.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	4.5	0.0	12.5	0.0	2.5	0.0	10.3
%ile Storage Ratio (RQ%)	0.00	1.76	0.00	2.27	0.00	0.90	0.00	2.38
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	7.7	0.0	0.0	0.0	3.3
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	621	0	629	0	702	0	765
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	22.6	0.0	29.5	0.0	0.0	0.0	31.8
Cycle Q Clear Time (g_c), s	0.0	22.6	0.0	29.5	0.0	0.0	0.0	31.8
Lane Grp Cap (c), veh/h	0	946	0	661	0	946	0	661
V/C Ratio (X)	0.00	0.66	0.00	0.95	0.00	0.74	0.00	1.16
Avail Cap (c_a), veh/h	0	946	0	661	0	946	0	661
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.89	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.1	0.0	28.4	0.0	0.0	0.0	29.1
Incr Delay (d2), s/veh	0.0	3.6	0.0	23.7	0.0	4.7	0.0	87.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.7	0.0	52.1	0.0	4.7	0.0	116.3
1st-Term Q (Q1), veh/ln	0.0	8.2	0.0	12.4	0.0	0.0	0.0	13.3
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	4.4	0.0	1.2	0.0	16.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.54	0.00	1.40	0.00	1.80	0.00	1.43
%ile Back of Q (95%), veh/ln	0.0	14.1	0.0	23.4	0.0	2.2	0.0	42.0
%ile Storage Ratio (RQ%)	0.00	0.49	0.00	0.65	0.00	0.04	0.00	1.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	628	0	155	0	695	0	67
Grp Sat Flow (s), veh/h/ln	0	1789	0	1585	0	1737	0	1585
Q Serve Time (g_s), s	0.0	22.8	0.0	6.3	0.0	0.0	0.0	2.6
Cycle Q Clear Time (g_c), s	0.0	22.8	0.0	6.3	0.0	0.0	0.0	2.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.25	0.00	1.00	0.00	0.43	0.00	1.00
Lane Grp Cap (c), veh/h	0	952	0	560	0	924	0	560
V/C Ratio (X)	0.00	0.66	0.00	0.28	0.00	0.75	0.00	0.12
Avail Cap (c_a), veh/h	0	952	0	560	0	924	0	560
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.89	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.2	0.0	20.9	0.0	0.0	0.0	19.6
Incr Delay (d2), s/veh	0.0	3.6	0.0	0.3	0.0	5.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.7	0.0	21.1	0.0	5.0	0.0	19.7
1st-Term Q (Q1), veh/ln	0.0	8.3	0.0	2.2	0.0	0.0	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	1.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.54	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	14.2	0.0	4.1	0.0	2.3	0.0	1.7
%ile Storage Ratio (RQ%)	0.00	0.49	0.00	1.04	0.00	0.04	0.00	0.50
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.8
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	2	44	41	3	77	33	1025	37	77	1445	24
Future Volume (veh/h)	32	2	44	41	3	77	33	1025	37	77	1445	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	2	48	45	3	84	36	1114	40	84	1571	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	24	103	102	16	114	332	2762	99	416	4084	68
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.79	0.79	0.79	1.00	1.00	1.00
Sat Flow, veh/h	502	215	931	438	148	1026	319	3499	126	487	5173	86
Grp Volume(v), veh/h	85	0	0	132	0	0	36	566	588	84	1034	563
Grp Sat Flow(s),veh/h/ln	1648	0	0	1612	0	0	319	1777	1848	487	1702	1855
Q Serve(g_s), s	0.0	0.0	0.0	2.7	0.0	0.0	2.4	8.9	8.9	2.5	0.0	0.0
Cycle Q Clear(g_c), s	4.2	0.0	0.0	6.9	0.0	0.0	2.4	8.9	8.9	11.3	0.0	0.0
Prop In Lane	0.41		0.56	0.34		0.64	1.00		0.07	1.00		0.05
Lane Grp Cap(c), veh/h	239	0	0	232	0	0	332	1403	1459	416	2687	1464
V/C Ratio(X)	0.36	0.00	0.00	0.57	0.00	0.00	0.11	0.40	0.40	0.20	0.38	0.38
Avail Cap(c_a), veh/h	475	0	0	475	0	0	332	1403	1459	416	2687	1464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.09	0.09	0.09	0.58	0.58	0.58
Uniform Delay (d), s/veh	37.5	0.0	0.0	38.6	0.0	0.0	2.3	2.9	2.9	0.7	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	2.2	0.0	0.0	0.1	0.1	0.1	0.6	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	0.0	0.0	5.2	0.0	0.0	0.2	2.5	2.6	0.1	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	0.0	0.0	40.8	0.0	0.0	2.3	3.0	3.0	1.3	0.2	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		85			132			1190			1681	
Approach Delay, s/veh		38.4			40.8			3.0			0.4	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.5		14.5		75.5		14.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		56.5		24.5		56.5		24.5				
Max Q Clear Time (g_c+I1), s		10.9		6.2		13.3		8.9				
Green Ext Time (p_c), s		11.0		0.4		17.9		0.6				
Intersection Summary												
HCM 6th Ctrl Delay			4.1									
HCM 6th LOS			A									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	2	44	41	3	77	33	1025	37	77	1445	24
Future Volume (veh/h)	32	2	44	41	3	77	33	1025	37	77	1445	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	2	48	45	3	84	36	1114	40	84	1571	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	112	24	103	102	16	114	332	2762	99	416	4084	68
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.79	0.79	0.79	1.00	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	38.4	0.0	0.0	40.8	0.0	0.0	2.3	3.0	3.0	1.3	0.2	0.4
Ln Grp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		85			132			1190			1681	
Approach Delay, s/veh		38.4			40.8			3.0			0.4	
Approach LOS		D			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		8.0		6.0		8.0
Phs Duration (G+Y+Rc), s		75.5		14.5		75.5		14.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		56.5		24.5		56.5		24.5
Max Allow Headway (MAH), s		5.3		5.5		5.3		5.5
Max Q Clear (g_c+I1), s		10.9		6.2		13.3		8.9
Green Ext Time (g_e), s		11.0		0.4		17.9		0.6
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		319		502		487		438
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3499		215		5173		148
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		126		931		86		1026
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T+R		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	36	0	85	0	84	0	132
Grp Sat Flow (s), veh/h/ln	0	319	0	1648	0	487	0	1612
Q Serve Time (g_s), s	0.0	2.4	0.0	0.0	0.0	2.5	0.0	2.7
Cycle Q Clear Time (g_c), s	0.0	2.4	0.0	4.2	0.0	11.3	0.0	6.9
Perm LT Sat Flow (s_l), veh/h/ln	0	319	0	1331	0	487	0	1376
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1748	0	0	0	1839
Perm LT Eff Green (g_p), s	0.0	71.0	0.0	10.0	0.0	71.0	0.0	10.0
Perm LT Serve Time (g_u), s	0.0	71.0	0.0	3.0	0.0	62.2	0.0	5.8
Perm LT Q Serve Time (g_ps), s	0.0	2.4	0.0	0.0	0.0	2.5	0.0	2.7
Time to First Blk (g_f), s	0.0	0.0	0.0	2.5	0.0	0.0	0.0	1.9
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.5	0.0	0.0	0.0	1.9
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.41	0.00	1.00	0.00	0.34
Lane Grp Cap (c), veh/h	0	332	0	239	0	416	0	232
V/C Ratio (X)	0.00	0.11	0.00	0.36	0.00	0.20	0.00	0.57
Avail Cap (c_a), veh/h	0	332	0	475	0	416	0	475
Upstream Filter (I)	0.00	0.09	0.00	1.00	0.00	0.58	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.3	0.0	37.5	0.0	0.7	0.0	38.6
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.9	0.0	0.6	0.0	2.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.3	0.0	38.4	0.0	1.3	0.0	40.8
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	1.7	0.0	0.0	0.0	2.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.2	0.0	3.2	0.0	0.1	0.0	5.2
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.26	0.00	0.06	0.00	0.28
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	566	0	0	0	1034	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1403	0	0	0	2687	0	0
V/C Ratio (X)	0.00	0.40	0.00	0.00	0.00	0.38	0.00	0.00
Avail Cap (c_a), veh/h	0	1403	0	0	0	2687	0	0
Upstream Filter (I)	0.00	0.09	0.00	0.00	0.00	0.58	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.0	0.0	0.0	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.36	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	2.5	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				T+R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	588	0	0	0	563	0	0
Grp Sat Flow (s), veh/h/ln	0	1848	0	0	0	1855	0	0
Q Serve Time (g_s), s	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.07	0.00	0.56	0.00	0.05	0.00	0.64
Lane Grp Cap (c), veh/h	0	1459	0	0	0	1464	0	0
V/C Ratio (X)	0.00	0.40	0.00	0.00	0.00	0.38	0.00	0.00
Avail Cap (c_a), veh/h	0	1459	0	0	0	1464	0	0
Upstream Filter (I)	0.00	0.09	0.00	0.00	0.00	0.58	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.0	0.0	0.0	0.0	0.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.36	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	2.6	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.18	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		4.1
HCM 6th LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	1051	153	206	1065	305	222	921	219	329	652	164
Future Volume (veh/h)	203	1051	153	206	1065	305	222	921	219	329	652	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	221	1142	166	224	1158	332	241	1001	238	358	709	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	442	3191	1423	510	2456	694	196	995	523	346	732	184
Arrive On Green	0.05	0.90	0.90	0.05	0.90	0.90	0.11	0.28	0.28	0.10	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	1781	2735	773	1781	3554	1585	3456	2814	706
Grp Volume(v), veh/h	221	1142	166	224	747	743	241	1001	238	358	448	439
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1731	1781	1777	1585	1728	1777	1743
Q Serve(g_s), s	0.7	4.8	4.6	0.8	7.4	7.7	11.0	28.0	11.8	10.0	24.9	24.9
Cycle Q Clear(g_c), s	0.7	4.8	4.6	0.8	7.4	7.7	11.0	28.0	11.8	10.0	24.9	24.9
Prop In Lane	1.00		1.00	1.00		0.45	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	442	3191	1423	510	1595	1554	196	995	523	346	462	453
V/C Ratio(X)	0.50	0.36	0.12	0.44	0.47	0.48	1.23	1.01	0.46	1.04	0.97	0.97
Avail Cap(c_a), veh/h	460	3191	1423	564	1595	1554	196	995	523	346	462	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.55	0.55	0.55	1.00	1.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	1.5	0.8	8.5	0.6	0.9	0.9	44.5	36.0	26.4	45.0	36.6	36.6
Incr Delay (d2), s/veh	0.9	0.3	0.2	0.3	0.5	0.6	139.8	30.0	1.3	55.5	32.0	32.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.3	0.4	0.1	0.4	0.5	19.6	22.4	8.0	11.1	20.5	20.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.4	1.1	8.7	1.0	1.4	1.5	184.3	66.0	27.7	100.5	68.6	69.1
LnGrp LOS	A	A	A	A	A	A	F	F	C	F	E	E
Approach Vol, veh/h		1529			1714			1480			1245	
Approach Delay, s/veh		2.1			1.4			79.1			77.9	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	96.2	14.0	33.0	8.0	96.2	16.0	31.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green Setting (Gmax), s	6.0	40.6	10.0	* 26	8.0	38.6	* 11	* 26
Max Q Clear Time (g_c+I1), s	2.7	9.7	12.0	30.0	2.8	6.8	13.0	26.9
Green Ext Time (p_c), s	0.2	22.6	0.0	0.0	0.3	19.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.8
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	1051	153	206	1065	305	222	921	219	329	652	164
Future Volume (veh/h)	203	1051	153	206	1065	305	222	921	219	329	652	164
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	221	1142	166	224	1158	332	241	1001	238	358	709	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	442	3191	1423	510	2456	694	196	995	523	346	732	184
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.90	0.90	0.05	0.90	0.90	0.11	0.28	0.28	0.10	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	2.4	1.1	8.7	1.0	1.4	1.5	184.3	66.0	27.7	100.5	68.6	69.1
Ln Grp LOS	A	A	A	A	A	A	F	F	C	F	E	E
Approach Vol, veh/h		1529			1714			1480			1245	
Approach Delay, s/veh		2.1			1.4			79.1			77.9	
Approach LOS		A			A			E			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	8.0	96.2	14.0	33.0	8.0	96.2	31.0	16.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	6.0	40.6	10.0	* 26	8.0	38.6	* 26	* 11
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.9	3.8	7.0	6.7	3.8
Max Q Clear (g_c+l1), s	2.7	9.7	12.0	30.0	2.8	6.8	26.9	13.0
Green Ext Time (g_e), s	0.2	22.6	0.0	0.0	0.3	19.1	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.33	0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2735		3554		3554	2814	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		773		1585		1585	706	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	221	0	358	0	224	0	0	241
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	0.7	0.0	10.0	0.0	0.8	0.0	0.0	11.0
Cycle Q Clear Time (g_c), s	0.7	0.0	10.0	0.0	0.8	0.0	0.0	11.0
Perm LT Sat Flow (s_l), veh/h/ln	353	0	0	0	421	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	89.8	0.0	0.0	0.0	89.8	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	79.6	0.0	0.0	0.0	83.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	17.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	442	0	346	0	510	0	0	196
V/C Ratio (X)	0.50	0.00	1.04	0.00	0.44	0.00	0.00	1.23
Avail Cap (c_a), veh/h	460	0	346	0	564	0	0	196
Upstream Filter (I)	1.00	0.00	0.90	0.00	0.55	0.00	0.00	1.00
Uniform Delay (d1), s/veh	1.5	0.0	45.0	0.0	0.6	0.0	0.0	44.5
Incr Delay (d2), s/veh	0.9	0.0	55.5	0.0	0.3	0.0	0.0	139.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	2.4	0.0	100.5	0.0	1.0	0.0	0.0	184.3
1st-Term Q (Q1), veh/ln	0.0	0.0	4.2	0.0	0.0	0.0	0.0	4.8
2nd-Term Q (Q2), veh/ln	0.1	0.0	2.7	0.0	0.0	0.0	0.0	7.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.62	0.00	1.80	0.00	0.00	1.59
%ile Back of Q (95%), veh/ln	0.2	0.0	11.1	0.0	0.1	0.0	0.0	19.6
%ile Storage Ratio (RQ%)	0.03	0.00	1.41	0.00	0.01	0.00	0.00	5.54
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	3.1	0.0	0.0	0.0	0.0	11.3
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	747	0	1001	0	1142	448	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	7.4	0.0	28.0	0.0	4.8	24.9	0.0
Cycle Q Clear Time (g_c), s	0.0	7.4	0.0	28.0	0.0	4.8	24.9	0.0
Lane Grp Cap (c), veh/h	0	1595	0	995	0	3191	462	0
V/C Ratio (X)	0.00	0.47	0.00	1.01	0.00	0.36	0.97	0.00
Avail Cap (c_a), veh/h	0	1595	0	995	0	3191	462	0
Upstream Filter (I)	0.00	0.55	0.00	1.00	0.00	1.00	0.90	0.00
Uniform Delay (d1), s/veh	0.0	0.9	0.0	36.0	0.0	0.8	36.6	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	30.0	0.0	0.3	32.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.4	0.0	66.0	0.0	1.1	68.6	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	11.7	0.0	0.0	10.4	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	4.1	0.0	0.1	4.1	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.42	0.00	1.80	1.41	0.00
%ile Back of Q (95%), veh/ln	0.0	0.4	0.0	22.4	0.0	0.3	20.5	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.74	0.00	0.00	1.43	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	743	0	238	0	166	439	0
Grp Sat Flow (s), veh/h/ln	0	1731	0	1585	0	1585	1743	0
Q Serve Time (g_s), s	0.0	7.7	0.0	11.8	0.0	4.6	24.9	0.0
Cycle Q Clear Time (g_c), s	0.0	7.7	0.0	11.8	0.0	4.6	24.9	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.45	0.00	1.00	0.00	1.00	0.41	0.00
Lane Grp Cap (c), veh/h	0	1554	0	523	0	1423	453	0
V/C Ratio (X)	0.00	0.48	0.00	0.46	0.00	0.12	0.97	0.00
Avail Cap (c_a), veh/h	0	1554	0	523	0	1423	453	0
Upstream Filter (I)	0.00	0.55	0.00	1.00	0.00	1.00	0.90	0.00
Uniform Delay (d1), s/veh	0.0	0.9	0.0	26.4	0.0	8.5	36.6	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	1.3	0.0	0.2	32.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.5	0.0	27.7	0.0	8.7	69.1	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.3	0.0	0.1	10.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.2	0.0	0.1	4.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.77	0.00	1.80	1.41	0.00
%ile Back of Q (95%), veh/ln	0.0	0.5	0.0	8.0	0.0	0.4	20.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	2.26	0.00	0.08	1.41	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.8
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1697	30	58	1346	65	5	3	12	59	3	73
Future Volume (veh/h)	25	1697	30	58	1346	65	5	3	12	59	3	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	1845	33	63	1463	71	5	3	13	64	3	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	2163	39	124	2089	101	133	94	288	233	30	242
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	339	3572	64	243	3450	167	282	320	977	594	103	823
Grp Volume(v), veh/h	27	915	963	63	751	783	21	0	0	146	0	0
Grp Sat Flow(s),veh/h/ln	339	1777	1859	243	1777	1840	1579	0	0	1521	0	0
Q Serve(g_s), s	5.4	37.7	38.1	16.4	26.0	26.3	0.0	0.0	0.0	3.9	0.0	0.0
Cycle Q Clear(g_c), s	31.6	37.7	38.1	54.5	26.0	26.3	0.8	0.0	0.0	6.5	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.09	0.24		0.62	0.44		0.54
Lane Grp Cap(c), veh/h	186	1076	1126	124	1076	1114	514	0	0	505	0	0
V/C Ratio(X)	0.14	0.85	0.86	0.51	0.70	0.70	0.04	0.00	0.00	0.29	0.00	0.00
Avail Cap(c_a), veh/h	186	1076	1126	124	1076	1114	514	0	0	505	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.37	0.37	0.37	0.31	0.31	0.31	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.0	14.4	14.5	39.3	12.1	12.2	22.7	0.0	0.0	24.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	2.6	2.6	1.1	0.6	0.6	0.1	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	17.2	18.1	2.5	11.7	12.2	0.6	0.0	0.0	4.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.2	17.0	17.1	40.3	12.8	12.8	22.8	0.0	0.0	26.0	0.0	0.0
LnGrp LOS	C	B	B	D	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1905			1597			21			146	
Approach Delay, s/veh		17.2			13.9			22.8			26.0	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		59.0		31.0		59.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		54.5		26.5		54.5				
Max Q Clear Time (g_c+I1), s		2.8		40.1		8.5		56.5				
Green Ext Time (p_c), s		0.1		11.1		0.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			16.1
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1697	30	58	1346	65	5	3	12	59	3	73
Future Volume (veh/h)	25	1697	30	58	1346	65	5	3	12	59	3	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	1845	33	63	1463	71	5	3	13	64	3	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	186	2163	39	124	2089	101	133	94	288	233	30	242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.29	0.29	0.29	0.29	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.2	17.0	17.1	40.3	12.8	12.8	22.8	0.0	0.0	26.0	0.0	0.0
Ln Grp LOS	C	B	B	D	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1905			1597			21			146	
Approach Delay, s/veh		17.2			13.9			22.8			26.0	
Approach LOS		B			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		8.0		6.0		8.0		6.0
Phs Duration (G+Y+Rc), s		31.0		59.0		31.0		59.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		26.5		54.5		26.5		54.5
Max Allow Headway (MAH), s		5.5		5.2		5.4		5.5
Max Q Clear (g_c+I1), s		2.8		40.1		8.5		56.5
Green Ext Time (g_e), s		0.1		11.1		0.7		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.81		0.00		1.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		282		339		594		243
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		320		3572		103		3450
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		977		64		823		167
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L+T+R		L		L+T+R		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	21	0	27	0	146	0	63
Grp Sat Flow (s), veh/h/ln	0	1579	0	339	0	1521	0	243
Q Serve Time (g_s), s	0.0	0.0	0.0	5.4	0.0	3.9	0.0	16.4
Cycle Q Clear Time (g_c), s	0.0	0.8	0.0	31.6	0.0	6.5	0.0	54.5
Perm LT Sat Flow (s_l), veh/h/ln	0	1337	0	339	0	1419	0	243
Shared LT Sat Flow (s_sh), veh/h/ln	0	1848	0	0	0	1830	0	0
Perm LT Eff Green (g_p), s	0.0	26.5	0.0	54.5	0.0	26.5	0.0	54.5
Perm LT Serve Time (g_u), s	0.0	20.0	0.0	28.2	0.0	25.7	0.0	16.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	5.4	0.0	3.9	0.0	16.4
Time to First Blk (g_f), s	0.0	6.2	0.0	0.0	0.0	2.6	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.8	0.0	0.0	0.0	2.6	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.24	0.00	1.00	0.00	0.44	0.00	1.00
Lane Grp Cap (c), veh/h	0	514	0	186	0	505	0	124
V/C Ratio (X)	0.00	0.04	0.00	0.14	0.00	0.29	0.00	0.51
Avail Cap (c_a), veh/h	0	514	0	186	0	505	0	124
Upstream Filter (I)	0.00	1.00	0.00	0.37	0.00	1.00	0.00	0.31
Uniform Delay (d1), s/veh	0.0	22.7	0.0	23.0	0.0	24.6	0.0	39.3
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	1.4	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.8	0.0	23.2	0.0	26.0	0.0	40.3
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.4	0.0	2.4	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.77
%ile Back of Q (95%), veh/ln	0.0	0.6	0.0	0.8	0.0	4.6	0.0	2.5
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.32	0.00	0.28	0.00	1.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	915	0	0	0	751
Grp Sat Flow (s), veh/h/ln	0	0	0	1777	0	0	0	1777
Q Serve Time (g_s), s	0.0	0.0	0.0	37.7	0.0	0.0	0.0	26.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	37.7	0.0	0.0	0.0	26.0
Lane Grp Cap (c), veh/h	0	0	0	1076	0	0	0	1076
V/C Ratio (X)	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.70
Avail Cap (c_a), veh/h	0	0	0	1076	0	0	0	1076
Upstream Filter (I)	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.31
Uniform Delay (d1), s/veh	0.0	0.0	0.0	14.4	0.0	0.0	0.0	12.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	17.0	0.0	0.0	0.0	12.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	12.7	0.0	0.0	0.0	8.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.27	0.00	1.00	0.00	1.30
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	17.2	0.0	0.0	0.0	11.7
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment				T+R				T+R
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	963	0	0	0	783
Grp Sat Flow (s), veh/h/ln	0	0	0	1859	0	0	0	1840
Q Serve Time (g_s), s	0.0	0.0	0.0	38.1	0.0	0.0	0.0	26.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	38.1	0.0	0.0	0.0	26.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.62	0.00	0.03	0.00	0.54	0.00	0.09
Lane Grp Cap (c), veh/h	0	0	0	1126	0	0	0	1114
V/C Ratio (X)	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.70
Avail Cap (c_a), veh/h	0	0	0	1126	0	0	0	1114
Upstream Filter (I)	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.31
Uniform Delay (d1), s/veh	0.0	0.0	0.0	14.5	0.0	0.0	0.0	12.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	17.1	0.0	0.0	0.0	12.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	13.5	0.0	0.0	0.0	9.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.26	0.00	1.00	0.00	1.30
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	18.1	0.0	0.0	0.0	12.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		16.1
HCM 6th LOS		B

HCM 6th Signalized Intersection Summary
5: Whitsett Avenue & Ventura Boulevard

05/05/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	1027	244	28	1106	346	127	208	10	248	162	276
Future Volume (veh/h)	338	1027	244	28	1106	346	127	208	10	248	162	276
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	367	1116	265	30	1202	376	138	226	11	270	176	300
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	508	4186	1867	491	3866	1725	213	389	19	297	683	658
Arrive On Green	0.05	1.00	1.00	1.00	1.00	1.00	0.22	0.22	0.22	0.09	0.37	0.37
Sat Flow, veh/h	1781	3554	1585	392	3554	1585	918	1769	86	3456	1870	1585
Grp Volume(v), veh/h	367	1116	265	30	1202	376	138	0	237	270	176	300
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	392	1777	1585	918	0	1855	1728	1870	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	15.0	0.0	11.4	7.7	6.6	13.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.0	0.0	0.0	21.6	0.0	11.4	7.7	6.6	13.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	508	4186	1867	491	3866	1725	213	0	408	297	683	658
V/C Ratio(X)	0.72	0.27	0.14	0.06	0.31	0.22	0.65	0.00	0.58	0.91	0.26	0.46
Avail Cap(c_a), veh/h	709	4186	1867	491	3866	1725	213	0	408	297	683	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.22	0.22	0.22	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.2	0.0	0.0	0.0	0.0	0.0	42.1	0.0	34.9	45.3	22.3	21.1
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.2	0.2	0.3	6.6	0.0	2.1	29.9	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	0.1	0.2	0.3	6.8	0.0	9.2	7.9	5.1	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.7	0.0	0.0	0.3	0.2	0.3	48.7	0.0	36.9	75.2	22.5	21.6
LnGrp LOS	A	A	A	A	A	A	D	A	D	E	C	C
Approach Vol, veh/h		1748			1608			375			746	
Approach Delay, s/veh		0.6			0.2			41.3			41.2	
Approach LOS		A			A			D			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	9.0	115.6		42.4		124.6	14.5	27.9				
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9				
Max Green Setting (Gmax), s	16.3	* 34		34.6		54.6	8.6	* 22				
Max Q Clear Time (g_c+I1), s	2.0	4.0		15.7		2.0	9.7	23.6				
Green Ext Time (p_c), s	1.0	13.2		1.8		12.2	0.0	0.0				

Intersection Summary			
HCM 6th Ctrl Delay			10.6
HCM 6th LOS			B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	1027	244	28	1106	346	127	208	10	248	162	276
Future Volume (veh/h)	338	1027	244	28	1106	346	127	208	10	248	162	276
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	367	1116	265	30	1202	376	138	226	11	270	176	300
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	508	4186	1867	491	3866	1725	213	389	19	297	683	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	1.00	1.00	1.00	1.00	1.00	0.22	0.22	0.22	0.09	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh	2.7	0.0	0.0	0.3	0.2	0.3	48.7	0.0	36.9	75.2	22.5	21.6
Ln Grp LOS	A	A	A	A	A	A	D	A	D	E	C	C
Approach Vol, veh/h		1748			1608			375			746	
Approach Delay, s/veh		0.6			0.2			41.3			41.2	
Approach LOS		A			A			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	9.0	115.6		42.4		124.6	27.9	14.5
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	16.3	* 34		34.6		54.6	* 22	8.6
Max Allow Headway (MAH), s	3.8	5.0		4.4		4.9	5.3	3.7
Max Q Clear (g_c+l1), s	2.0	4.0		15.7		2.0	23.6	9.7
Green Ext Time (g_e), s	1.0	13.2		1.8		12.2	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00		0.00		0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	392					918	3456
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1769	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	86	
Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	367	30	0	0	0	0	138	270
Grp Sat Flow (s), veh/h/ln	1781	392	0	0	0	0	918	1728
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	0.0	15.0	7.7
Cycle Q Clear Time (g_c), s	0.0	2.0	0.0	0.0	0.0	0.0	21.6	7.7
Perm LT Sat Flow (s_l), veh/h/ln	325	392	0	0	0	0	918	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	110.8	108.8	0.0	0.0	0.0	0.0	22.0	0.0
Perm LT Serve Time (g_u), s	106.8	106.9	0.0	0.0	0.0	0.0	15.4	0.0
Perm LT Q Serve Time (g_ps), s	106.8	0.1	0.0	0.0	0.0	0.0	15.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	508	491	0	0	0	0	213	297
V/C Ratio (X)	0.72	0.06	0.00	0.00	0.00	0.00	0.65	0.91
Avail Cap (c_a), veh/h	709	491	0	0	0	0	213	297
Upstream Filter (I)	0.22	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	2.2	0.0	0.0	0.0	0.0	0.0	42.1	45.3
Incr Delay (d2), s/veh	0.5	0.2	0.0	0.0	0.0	0.0	6.6	29.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	2.7	0.3	0.0	0.0	0.0	0.0	48.7	75.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.2
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.4	1.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.78
%ile Back of Q (95%), veh/ln	0.1	0.1	0.0	0.0	0.0	0.0	6.8	7.9
%ile Storage Ratio (RQ%)	0.03	0.01	0.00	0.00	0.00	0.00	1.72	0.89
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	1202	0	176	0	1116	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	3866	0	683	0	4186	0	0
V/C Ratio (X)	0.00	0.31	0.00	0.26	0.00	0.27	0.00	0.00
Avail Cap (c_a), veh/h	0	3866	0	683	0	4186	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.22	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	22.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	22.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.2	0.0	5.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.16	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	376	0	300	0	265	237	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1855	0
Q Serve Time (g_s), s	0.0	0.0	0.0	13.7	0.0	0.0	11.4	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	13.7	0.0	0.0	11.4	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.05	0.00
Lane Grp Cap (c), veh/h	0	1725	0	658	0	1867	408	0
V/C Ratio (X)	0.00	0.22	0.00	0.46	0.00	0.14	0.58	0.00
Avail Cap (c_a), veh/h	0	1725	0	658	0	1867	408	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.22	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	21.1	0.0	0.0	34.9	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.5	0.0	0.0	2.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	21.6	0.0	0.0	36.9	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	5.0	0.0	0.0	5.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.73	0.00	1.80	1.71	0.00
%ile Back of Q (95%), veh/ln	0.0	0.3	0.0	8.8	0.0	0.0	9.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	1.00	0.00	0.01	0.83	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

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

HCM 6th Signalized Intersection Summary
1: Coldwater Canyon Avenue & Moorpark Street

05/18/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	778	58	66	522	141	67	655	83	153	579	145
Future Volume (veh/h)	119	778	58	66	522	141	67	655	83	153	579	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	846	63	72	567	153	73	712	90	166	629	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	889	754	106	889	754	245	1301	164	242	1154	289
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	732	1870	1585	614	1870	1585	688	3174	401	678	2814	706
Grp Volume(v), veh/h	129	846	63	72	567	153	73	398	404	166	397	390
Grp Sat Flow(s),veh/h/ln	732	1870	1585	614	1870	1585	688	1777	1798	678	1777	1743
Q Serve(g_s), s	14.5	39.0	2.0	3.8	20.5	5.0	8.1	15.3	15.4	21.5	15.3	15.3
Cycle Q Clear(g_c), s	35.0	39.0	2.0	42.8	20.5	5.0	23.4	15.3	15.4	36.9	15.3	15.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		0.40
Lane Grp Cap(c), veh/h	261	889	754	106	889	754	245	729	737	242	729	715
V/C Ratio(X)	0.49	0.95	0.08	0.68	0.64	0.20	0.30	0.55	0.55	0.69	0.54	0.55
Avail Cap(c_a), veh/h	261	889	754	106	889	754	245	729	737	242	729	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	22.6	12.9	44.3	17.8	13.7	29.1	20.2	20.2	34.5	20.2	20.2
Incr Delay (d2), s/veh	1.4	19.3	0.0	16.1	1.5	0.1	3.0	2.9	2.8	14.6	2.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	27.6	1.2	3.7	13.3	3.1	2.7	10.7	10.8	8.0	10.7	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	41.9	12.9	60.4	19.3	13.8	32.1	23.0	23.0	49.1	23.1	23.2
LnGrp LOS	C	D	B	E	B	B	C	C	C	D	C	C
Approach Vol, veh/h		1038			792			875			953	
Approach Delay, s/veh		39.0			22.0			23.8			27.7	
Approach LOS		D			C			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		42.0		48.0		42.0		48.0				
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2				
Max Green Setting (Gmax), s		36.9		* 43		36.9		* 43				
Max Q Clear Time (g_c+I1), s		38.9		44.8		25.4		41.0				
Green Ext Time (p_c), s		0.0		0.0		4.2		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			28.7									
HCM 6th LOS			C									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	778	58	66	522	141	67	655	83	153	579	145
Future Volume (veh/h)	119	778	58	66	522	141	67	655	83	153	579	145
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	846	63	72	567	153	73	712	90	166	629	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	261	889	754	106	889	754	245	1301	164	242	1154	289
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.41	0.41	0.41	0.41	0.41	0.41
Unsig. Movement Delay												
Ln Grp Delay, s/veh	32.4	41.9	12.9	60.4	19.3	13.8	32.1	23.0	23.0	49.1	23.1	23.2
Ln Grp LOS	C	D	B	E	B	B	C	C	C	D	C	C
Approach Vol, veh/h		1038			792			875			953	
Approach Delay, s/veh		39.0			22.0			23.8			27.7	
Approach LOS		D			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		42.0		48.0		42.0		48.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		36.9		* 43		36.9		* 43
Max Allow Headway (MAH), s		5.4		5.1		5.3		5.2
Max Q Clear (g_c+l1), s		38.9		44.8		25.4		41.0
Green Ext Time (g_e), s		0.0		0.0		4.2		1.2
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		1.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		678		614		688		732
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2814		1870		3174		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		706		1585		401		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	166	0	72	0	73	0	129
Grp Sat Flow (s), veh/h/ln	0	678	0	614	0	688	0	732
Q Serve Time (g_s), s	0.0	21.5	0.0	3.8	0.0	8.1	0.0	14.5
Cycle Q Clear Time (g_c), s	0.0	36.9	0.0	42.8	0.0	23.4	0.0	35.0
Perm LT Sat Flow (s_l), veh/h/ln	0	678	0	614	0	688	0	732
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	36.9	0.0	42.8	0.0	36.9	0.0	42.8
Perm LT Serve Time (g_u), s	0.0	21.5	0.0	3.8	0.0	21.6	0.0	22.3
Perm LT Q Serve Time (g_ps), s	0.0	21.5	0.0	3.8	0.0	8.1	0.0	14.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	242	0	106	0	245	0	261
V/C Ratio (X)	0.00	0.69	0.00	0.68	0.00	0.30	0.00	0.49
Avail Cap (c_a), veh/h	0	242	0	106	0	245	0	261
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.97	0.00	1.00
Uniform Delay (d1), s/veh	0.0	34.5	0.0	44.3	0.0	29.1	0.0	30.9
Incr Delay (d2), s/veh	0.0	14.6	0.0	16.1	0.0	3.0	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	49.1	0.0	60.4	0.0	32.1	0.0	32.4
1st-Term Q (Q1), veh/ln	0.0	3.5	0.0	1.6	0.0	1.3	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	0.5	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.77	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	8.0	0.0	3.7	0.0	2.7	0.0	4.6
%ile Storage Ratio (RQ%)	0.00	3.11	0.00	0.67	0.00	0.98	0.00	1.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	397	0	567	0	398	0	846
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	15.3	0.0	20.5	0.0	15.3	0.0	39.0
Cycle Q Clear Time (g_c), s	0.0	15.3	0.0	20.5	0.0	15.3	0.0	39.0
Lane Grp Cap (c), veh/h	0	729	0	889	0	729	0	889
V/C Ratio (X)	0.00	0.54	0.00	0.64	0.00	0.55	0.00	0.95
Avail Cap (c_a), veh/h	0	729	0	889	0	729	0	889
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.97	0.00	1.00
Uniform Delay (d1), s/veh	0.0	20.2	0.0	17.8	0.0	20.2	0.0	22.6
Incr Delay (d2), s/veh	0.0	2.9	0.0	1.5	0.0	2.9	0.0	19.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.1	0.0	19.3	0.0	23.0	0.0	41.9
1st-Term Q (Q1), veh/ln	0.0	5.9	0.0	8.1	0.0	6.0	0.0	15.4
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.4	0.0	0.6	0.0	4.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.64	0.00	1.56	0.00	1.63	0.00	1.36
%ile Back of Q (95%), veh/ln	0.0	10.7	0.0	13.3	0.0	10.7	0.0	27.6
%ile Storage Ratio (RQ%)	0.00	0.37	0.00	0.37	0.00	0.19	0.00	0.75
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	390	0	153	0	404	0	63
Grp Sat Flow (s), veh/h/ln	0	1743	0	1585	0	1798	0	1585
Q Serve Time (g_s), s	0.0	15.3	0.0	5.0	0.0	15.4	0.0	2.0
Cycle Q Clear Time (g_c), s	0.0	15.3	0.0	5.0	0.0	15.4	0.0	2.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.40	0.00	1.00	0.00	0.22	0.00	1.00
Lane Grp Cap (c), veh/h	0	715	0	754	0	737	0	754
V/C Ratio (X)	0.00	0.55	0.00	0.20	0.00	0.55	0.00	0.08
Avail Cap (c_a), veh/h	0	715	0	754	0	737	0	754
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.97	0.00	1.00
Uniform Delay (d1), s/veh	0.0	20.2	0.0	13.7	0.0	20.2	0.0	12.9
Incr Delay (d2), s/veh	0.0	3.0	0.0	0.1	0.0	2.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.2	0.0	13.8	0.0	23.0	0.0	12.9
1st-Term Q (Q1), veh/ln	0.0	5.8	0.0	1.7	0.0	6.1	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.65	0.00	1.80	0.00	1.63	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	10.6	0.0	3.1	0.0	10.8	0.0	1.2
%ile Storage Ratio (RQ%)	0.00	0.37	0.00	0.79	0.00	0.20	0.00	0.36
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		28.7
HCM 6th LOS		C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣		↰	↑↱		↰	↑↑↱	
Traffic Volume (veh/h)	38	5	77	73	7	136	25	565	58	118	601	11
Future Volume (veh/h)	38	5	77	73	7	136	25	565	58	118	601	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	5	84	79	8	148	27	614	63	128	653	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	113	35	174	134	24	177	638	2355	241	583	3737	69
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.72	0.72	0.72	1.00	1.00	1.00
Sat Flow, veh/h	344	196	987	456	134	1003	771	3254	333	762	5163	95
Grp Volume(v), veh/h	130	0	0	235	0	0	27	335	342	128	430	235
Grp Sat Flow(s),veh/h/ln	1527	0	0	1593	0	0	771	1777	1810	762	1702	1853
Q Serve(g_s), s	0.0	0.0	0.0	6.0	0.0	0.0	0.9	5.8	5.8	1.8	0.0	0.0
Cycle Q Clear(g_c), s	6.5	0.0	0.0	12.6	0.0	0.0	0.9	5.8	5.8	7.5	0.0	0.0
Prop In Lane	0.32		0.65	0.34		0.63	1.00		0.18	1.00		0.05
Lane Grp Cap(c), veh/h	322	0	0	334	0	0	638	1286	1310	583	2464	1341
V/C Ratio(X)	0.40	0.00	0.00	0.70	0.00	0.00	0.04	0.26	0.26	0.22	0.17	0.18
Avail Cap(c_a), veh/h	576	0	0	593	0	0	638	1286	1310	583	2464	1341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.85	0.85	0.85	0.79	0.79	0.79
Uniform Delay (d), s/veh	33.1	0.0	0.0	35.5	0.0	0.0	3.6	4.2	4.2	0.3	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	2.7	0.0	0.0	0.1	0.4	0.4	0.7	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	0.0	0.0	8.8	0.0	0.0	0.2	3.1	3.1	0.2	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	0.0	0.0	38.2	0.0	0.0	3.7	4.6	4.6	1.0	0.1	0.2
LnGrp LOS	C	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		130			235			704			793	
Approach Delay, s/veh		34.0			38.2			4.6			0.3	
Approach LOS		C			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.6		20.4		69.6		20.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		49.5		31.5		49.5		31.5				
Max Q Clear Time (g_c+I1), s		7.8		8.5		9.5		14.6				
Green Ext Time (p_c), s		4.8		0.7		5.9		1.3				

Intersection Summary		
HCM 6th Ctrl Delay		9.1
HCM 6th LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	5	77	73	7	136	25	565	58	118	601	11
Future Volume (veh/h)	38	5	77	73	7	136	25	565	58	118	601	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	5	84	79	8	148	27	614	63	128	653	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	113	35	174	134	24	177	638	2355	241	583	3737	69
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.72	0.72	0.72	1.00	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	34.0	0.0	0.0	38.2	0.0	0.0	3.7	4.6	4.6	1.0	0.1	0.2
Ln Grp LOS	C	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		130			235			704			793	
Approach Delay, s/veh		34.0			38.2			4.6			0.3	
Approach LOS		C			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		8.0		6.0		8.0
Phs Duration (G+Y+Rc), s		69.6		20.4		69.6		20.4
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		49.5		31.5		49.5		31.5
Max Allow Headway (MAH), s		5.2		5.6		5.2		5.5
Max Q Clear (g_c+I1), s		7.8		8.5		9.5		14.6
Green Ext Time (g_e), s		4.8		0.7		5.9		1.3
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.01
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		771		344		762		456
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3254		196		5163		134
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		333		987		95		1003
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T+R		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	27	0	130	0	128	0	235
Grp Sat Flow (s), veh/h/ln	0	771	0	1527	0	762	0	1593
Q Serve Time (g_s), s	0.0	0.9	0.0	0.0	0.0	1.8	0.0	6.0
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	6.5	0.0	7.5	0.0	12.6
Perm LT Sat Flow (s_l), veh/h/ln	0	771	0	1250	0	762	0	1329
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1480	0	0	0	1778
Perm LT Eff Green (g_p), s	0.0	65.1	0.0	15.9	0.0	65.1	0.0	15.9
Perm LT Serve Time (g_u), s	0.0	65.1	0.0	3.3	0.0	59.3	0.0	9.3
Perm LT Q Serve Time (g_ps), s	0.0	0.9	0.0	0.0	0.0	1.8	0.0	6.0
Time to First Blk (g_f), s	0.0	0.0	0.0	4.1	0.0	0.0	0.0	2.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	4.1	0.0	0.0	0.0	2.2
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.32	0.00	1.00	0.00	0.34
Lane Grp Cap (c), veh/h	0	638	0	322	0	583	0	334
V/C Ratio (X)	0.00	0.04	0.00	0.40	0.00	0.22	0.00	0.70
Avail Cap (c_a), veh/h	0	638	0	576	0	583	0	593
Upstream Filter (I)	0.00	0.85	0.00	1.00	0.00	0.79	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.6	0.0	33.1	0.0	0.3	0.0	35.5
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.8	0.0	0.7	0.0	2.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.7	0.0	34.0	0.0	1.0	0.0	38.2
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	2.5	0.0	0.0	0.0	4.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.73
%ile Back of Q (95%), veh/ln	0.0	0.2	0.0	4.6	0.0	0.2	0.0	8.8
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.37	0.00	0.08	0.00	0.47
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	335	0	0	0	430	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1286	0	0	0	2464	0	0
V/C Ratio (X)	0.00	0.26	0.00	0.00	0.00	0.17	0.00	0.00
Avail Cap (c_a), veh/h	0	1286	0	0	0	2464	0	0
Upstream Filter (I)	0.00	0.85	0.00	0.00	0.00	0.79	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.6	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	3.1	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				T+R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	342	0	0	0	235	0	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	0	0	1853	0	0
Q Serve Time (g_s), s	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.18	0.00	0.65	0.00	0.05	0.00	0.63
Lane Grp Cap (c), veh/h	0	1310	0	0	0	1341	0	0
V/C Ratio (X)	0.00	0.26	0.00	0.00	0.00	0.18	0.00	0.00
Avail Cap (c_a), veh/h	0	1310	0	0	0	1341	0	0
Upstream Filter (I)	0.00	0.85	0.00	0.00	0.00	0.79	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.6	0.0	0.0	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	3.1	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		9.1						
HCM 6th LOS		A						

HCM 6th Signalized Intersection Summary
3: Coldwater Canyon Avenue & Ventura Boulevard

05/18/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1009	134	181	705	182	100	329	171	290	396	38
Future Volume (veh/h)	110	1009	134	181	705	182	100	329	171	290	396	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	1097	146	197	766	198	109	358	186	315	430	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	353	1741	777	319	1433	371	136	580	374	346	579	55
Arrive On Green	0.05	0.49	0.49	0.07	0.51	0.51	0.08	0.16	0.16	0.10	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	2795	722	1781	3554	1585	3456	3280	311
Grp Volume(v), veh/h	120	1097	146	197	487	477	109	358	186	315	232	239
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1740	1781	1777	1585	1728	1777	1814
Q Serve(g_s), s	3.3	22.8	3.3	5.3	18.4	18.4	6.0	9.4	10.2	9.0	12.4	12.5
Cycle Q Clear(g_c), s	3.3	22.8	3.3	5.3	18.4	18.4	6.0	9.4	10.2	9.0	12.4	12.5
Prop In Lane	1.00		1.00	1.00		0.42	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	353	1741	777	319	911	893	136	580	374	346	314	320
V/C Ratio(X)	0.34	0.63	0.19	0.62	0.53	0.53	0.80	0.62	0.50	0.91	0.74	0.75
Avail Cap(c_a), veh/h	353	1741	777	332	911	893	160	853	496	346	462	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	13.0	18.8	6.0	15.3	16.3	16.3	45.4	38.9	33.1	44.6	39.0	39.0
Incr Delay (d2), s/veh	0.6	1.7	0.5	2.6	1.8	1.8	21.3	2.3	2.2	27.2	5.7	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	14.2	3.3	3.9	11.4	11.2	6.2	7.5	7.3	8.8	9.7	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	20.6	6.5	17.9	18.1	18.2	66.7	41.2	35.2	71.8	44.7	44.9
LnGrp LOS	B	C	A	B	B	B	E	D	D	E	D	D
Approach Vol, veh/h		1363			1161			653			786	
Approach Delay, s/veh		18.4			18.1			43.8			55.6	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	56.7	14.0	21.3	10.3	54.4	12.7	22.7
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green Setting (Gmax), s	5.0	43.6	10.0	* 24	8.0	40.6	* 9	* 26
Max Q Clear Time (g_c+I1), s	5.3	20.4	11.0	12.2	7.3	24.8	8.0	14.5
Green Ext Time (p_c), s	0.0	11.7	0.0	4.0	0.0	11.1	0.0	3.2

Intersection Summary	
HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1009	134	181	705	182	100	329	171	290	396	38
Future Volume (veh/h)	110	1009	134	181	705	182	100	329	171	290	396	38
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	1097	146	197	766	198	109	358	186	315	430	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	353	1741	777	319	1433	371	136	580	374	346	579	55
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.49	0.49	0.07	0.51	0.51	0.08	0.16	0.16	0.10	0.18	0.18
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.5	20.6	6.5	17.9	18.1	18.2	66.7	41.2	35.2	71.8	44.7	44.9
Ln Grp LOS	B	C	A	B	B	B	E	D	D	E	D	D
Approach Vol, veh/h		1363			1161			653			786	
Approach Delay, s/veh		18.4			18.1			43.8			55.6	
Approach LOS		B			B			D			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	8.0	56.7	14.0	21.3	10.3	54.4	22.7	12.7
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	5.0	43.6	10.0	* 24	8.0	40.6	* 26	* 9
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.7	3.8	7.0	6.6	3.8
Max Q Clear (g_c+l1), s	5.3	20.4	11.0	12.2	7.3	24.8	14.5	8.0
Green Ext Time (g_e), s	0.0	11.7	0.0	4.0	0.0	11.1	3.2	0.0
Prob of Phs Call (p_c)	0.96	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Prob of Max Out (p_x)	1.00	0.00	1.00	0.46	1.00	0.00	0.43	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781

Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2795		3554		3554	3280	

Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		722		1585		1585	311	

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	120	0	315	0	197	0	0	109
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	3.3	0.0	9.0	0.0	5.3	0.0	0.0	6.0
Cycle Q Clear Time (g_c), s	3.3	0.0	9.0	0.0	5.3	0.0	0.0	6.0
Perm LT Sat Flow (s_l), veh/h/ln	583	0	0	0	447	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	49.0	0.0	0.0	0.0	50.3	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	32.9	0.0	0.0	0.0	26.2	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	4.2	0.0	0.0	0.0	18.9	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	353	0	346	0	319	0	0	136
V/C Ratio (X)	0.34	0.00	0.91	0.00	0.62	0.00	0.00	0.80
Avail Cap (c_a), veh/h	353	0	346	0	332	0	0	160
Upstream Filter (I)	1.00	0.00	0.99	0.00	0.79	0.00	0.00	1.00
Uniform Delay (d1), s/veh	13.0	0.0	44.6	0.0	15.3	0.0	0.0	45.4
Incr Delay (d2), s/veh	0.6	0.0	27.2	0.0	2.6	0.0	0.0	21.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.5	0.0	71.8	0.0	17.9	0.0	0.0	66.7
1st-Term Q (Q1), veh/ln	1.2	0.0	3.8	0.0	1.9	0.0	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.1	0.0	1.3	0.0	0.2	0.0	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.72	0.00	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	2.3	0.0	8.8	0.0	3.9	0.0	0.0	6.2
%ile Storage Ratio (RQ%)	0.41	0.00	1.12	0.00	0.50	0.00	0.00	1.74
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	487	0	358	0	1097	232	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	18.4	0.0	9.4	0.0	22.8	12.4	0.0
Cycle Q Clear Time (g_c), s	0.0	18.4	0.0	9.4	0.0	22.8	12.4	0.0
Lane Grp Cap (c), veh/h	0	911	0	580	0	1741	314	0
V/C Ratio (X)	0.00	0.53	0.00	0.62	0.00	0.63	0.74	0.00
Avail Cap (c_a), veh/h	0	911	0	853	0	1741	462	0
Upstream Filter (I)	0.00	0.79	0.00	1.00	0.00	1.00	0.99	0.00
Uniform Delay (d1), s/veh	0.0	16.3	0.0	38.9	0.0	18.8	39.0	0.0
Incr Delay (d2), s/veh	0.0	1.8	0.0	2.3	0.0	1.7	5.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.1	0.0	41.2	0.0	20.6	44.7	0.0
1st-Term Q (Q1), veh/ln	0.0	7.0	0.0	4.0	0.0	8.8	5.3	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.4	0.5	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.53	0.00	1.80	0.00	1.54	1.68	0.00
%ile Back of Q (95%), veh/ln	0.0	11.4	0.0	7.5	0.0	14.2	9.7	0.0
%ile Storage Ratio (RQ%)	0.00	0.51	0.00	0.25	0.00	0.27	0.68	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	477	0	186	0	146	239	0
Grp Sat Flow (s), veh/h/ln	0	1740	0	1585	0	1585	1814	0
Q Serve Time (g_s), s	0.0	18.4	0.0	10.2	0.0	3.3	12.5	0.0
Cycle Q Clear Time (g_c), s	0.0	18.4	0.0	10.2	0.0	3.3	12.5	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.42	0.00	1.00	0.00	1.00	0.17	0.00
Lane Grp Cap (c), veh/h	0	893	0	374	0	777	320	0
V/C Ratio (X)	0.00	0.53	0.00	0.50	0.00	0.19	0.75	0.00
Avail Cap (c_a), veh/h	0	893	0	496	0	777	472	0
Upstream Filter (I)	0.00	0.79	0.00	1.00	0.00	1.00	0.99	0.00
Uniform Delay (d1), s/veh	0.0	16.3	0.0	33.1	0.0	6.0	39.0	0.0
Incr Delay (d2), s/veh	0.0	1.8	0.0	2.2	0.0	0.5	5.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.2	0.0	35.2	0.0	6.5	44.9	0.0
1st-Term Q (Q1), veh/ln	0.0	6.9	0.0	3.8	0.0	1.7	5.4	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.1	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.54	0.00	1.80	0.00	1.80	1.67	0.00
%ile Back of Q (95%), veh/ln	0.0	11.2	0.0	7.3	0.0	3.3	9.9	0.0
%ile Storage Ratio (RQ%)	0.00	0.51	0.00	2.05	0.00	0.72	0.70	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1351	45	74	1009	99	4	3	17	103	4	64
Future Volume (veh/h)	31	1351	45	74	1009	99	4	3	17	103	4	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	1468	49	80	1097	108	4	3	18	112	4	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	288	2223	74	207	2070	204	88	78	307	287	24	149
Arrive On Green	0.63	0.63	0.63	0.63	0.63	0.63	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	464	3509	117	344	3268	321	155	294	1153	834	90	558
Grp Volume(v), veh/h	34	742	775	80	596	609	25	0	0	186	0	0
Grp Sat Flow(s),veh/h/ln	464	1777	1849	344	1777	1813	1601	0	0	1482	0	0
Q Serve(g_s), s	3.9	23.7	23.8	17.2	16.7	16.7	0.0	0.0	0.0	8.0	0.0	0.0
Cycle Q Clear(g_c), s	20.6	23.7	23.8	41.0	16.7	16.7	1.0	0.0	0.0	9.3	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.18	0.16		0.72	0.60		0.38
Lane Grp Cap(c), veh/h	288	1125	1171	207	1125	1148	473	0	0	459	0	0
V/C Ratio(X)	0.12	0.66	0.66	0.39	0.53	0.53	0.05	0.00	0.00	0.40	0.00	0.00
Avail Cap(c_a), veh/h	288	1125	1171	207	1125	1148	473	0	0	459	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.55	0.61	0.61	0.61	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.8	10.4	10.4	23.4	9.1	9.1	24.6	0.0	0.0	27.5	0.0	0.0
Incr Delay (d2), s/veh	0.5	1.7	1.6	3.3	1.1	1.1	0.2	0.0	0.0	2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	11.7	12.2	2.7	8.8	9.0	0.8	0.0	0.0	6.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	12.1	12.1	26.7	10.2	10.2	24.8	0.0	0.0	30.2	0.0	0.0
LnGrp LOS	B	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1551			1285			25			186	
Approach Delay, s/veh		12.1			11.2			24.8			30.2	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.5		61.5		28.5		61.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		24.0		57.0		24.0		57.0				
Max Q Clear Time (g_c+I1), s		3.0		25.8		11.3		43.0				
Green Ext Time (p_c), s		0.1		14.3		0.8		7.8				
Intersection Summary												
HCM 6th Ctrl Delay			12.9									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1351	45	74	1009	99	4	3	17	103	4	64
Future Volume (veh/h)	31	1351	45	74	1009	99	4	3	17	103	4	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	1468	49	80	1097	108	4	3	18	112	4	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	288	2223	74	207	2070	204	88	78	307	287	24	149
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.63	0.63	0.63	0.63	0.63	0.63	0.27	0.27	0.27	0.27	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh	15.3	12.1	12.1	26.7	10.2	10.2	24.8	0.0	0.0	30.2	0.0	0.0
Ln Grp LOS	B	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1551			1285			25			186	
Approach Delay, s/veh		12.1			11.2			24.8			30.2	
Approach LOS		B			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		8.0		6.0		8.0		6.0
Phs Duration (G+Y+Rc), s		28.5		61.5		28.5		61.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		24.0		57.0		24.0		57.0
Max Allow Headway (MAH), s		5.5		5.2		5.4		5.5
Max Q Clear (g_c+I1), s		3.0		25.8		11.3		43.0
Green Ext Time (g_e), s		0.1		14.3		0.8		7.8
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		155		464		834		344
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		294		3509		90		3268
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1153		117		558		321
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L+T+R		L		L+T+R		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	25	0	34	0	186	0	80
Grp Sat Flow (s), veh/h/ln	0	1601	0	464	0	1482	0	344
Q Serve Time (g_s), s	0.0	0.0	0.0	3.9	0.0	8.0	0.0	17.2
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	20.6	0.0	9.3	0.0	41.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1347	0	464	0	1413	0	344
Shared LT Sat Flow (s_sh), veh/h/ln	0	1856	0	0	0	1816	0	0
Perm LT Eff Green (g_p), s	0.0	24.0	0.0	57.0	0.0	24.0	0.0	57.0
Perm LT Serve Time (g_u), s	0.0	14.7	0.0	40.3	0.0	23.0	0.0	33.2
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	3.9	0.0	8.0	0.0	17.2
Time to First Blk (g_f), s	0.0	9.2	0.0	0.0	0.0	1.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	1.0	0.0	0.0	0.0	1.3	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.16	0.00	1.00	0.00	0.60	0.00	1.00
Lane Grp Cap (c), veh/h	0	473	0	288	0	459	0	207
V/C Ratio (X)	0.00	0.05	0.00	0.12	0.00	0.40	0.00	0.39
Avail Cap (c_a), veh/h	0	473	0	288	0	459	0	207
Upstream Filter (I)	0.00	1.00	0.00	0.55	0.00	1.00	0.00	0.61
Uniform Delay (d1), s/veh	0.0	24.6	0.0	14.8	0.0	27.5	0.0	23.4
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.5	0.0	2.6	0.0	3.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.8	0.0	15.3	0.0	30.2	0.0	26.7
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.4	0.0	3.3	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.8	0.0	0.8	0.0	6.5	0.0	2.7
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.33	0.00	0.39	0.00	1.15
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	742	0	0	0	596
Grp Sat Flow (s), veh/h/ln	0	0	0	1777	0	0	0	1777
Q Serve Time (g_s), s	0.0	0.0	0.0	23.7	0.0	0.0	0.0	16.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	23.7	0.0	0.0	0.0	16.7
Lane Grp Cap (c), veh/h	0	0	0	1125	0	0	0	1125
V/C Ratio (X)	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.53
Avail Cap (c_a), veh/h	0	0	0	1125	0	0	0	1125
Upstream Filter (I)	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.61
Uniform Delay (d1), s/veh	0.0	0.0	0.0	10.4	0.0	0.0	0.0	9.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7	0.0	0.0	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	12.1	0.0	0.0	0.0	10.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	7.7	0.0	0.0	0.0	5.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.42	0.00	1.00	0.00	1.53
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	11.7	0.0	0.0	0.0	8.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.12
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment				T+R				T+R
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	775	0	0	0	609
Grp Sat Flow (s), veh/h/ln	0	0	0	1849	0	0	0	1813
Q Serve Time (g_s), s	0.0	0.0	0.0	23.8	0.0	0.0	0.0	16.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	23.8	0.0	0.0	0.0	16.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.72	0.00	0.06	0.00	0.38	0.00	0.18
Lane Grp Cap (c), veh/h	0	0	0	1171	0	0	0	1148
V/C Ratio (X)	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.53
Avail Cap (c_a), veh/h	0	0	0	1171	0	0	0	1148
Upstream Filter (I)	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.61
Uniform Delay (d1), s/veh	0.0	0.0	0.0	10.4	0.0	0.0	0.0	9.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	12.1	0.0	0.0	0.0	10.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	8.1	0.0	0.0	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.41	0.00	1.00	0.00	1.53
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	12.2	0.0	0.0	0.0	9.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.12
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		12.9						
HCM 6th LOS		B						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	892	100	23	743	160	84	90	8	682	249	464
Future Volume (veh/h)	174	892	100	23	743	160	84	90	8	682	249	464
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	189	970	109	25	808	174	91	98	9	741	271	504
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	505	2831	1263	434	2507	1118	168	371	34	806	958	893
Arrive On Green	0.05	0.80	0.80	0.71	0.71	0.71	0.22	0.22	0.22	0.23	0.51	0.51
Sat Flow, veh/h	1781	3554	1585	523	3554	1585	696	1687	155	3456	1870	1585
Grp Volume(v), veh/h	189	970	109	25	808	174	91	0	107	741	271	504
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	523	1777	1585	696	0	1842	1728	1870	1585
Q Serve(g_s), s	2.7	7.6	1.5	1.5	8.7	4.6	13.0	0.0	4.8	20.9	8.3	20.4
Cycle Q Clear(g_c), s	2.7	7.6	1.5	2.9	8.7	4.6	21.2	0.0	4.8	20.9	8.3	20.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	505	2831	1263	434	2507	1118	168	0	405	806	958	893
V/C Ratio(X)	0.37	0.34	0.09	0.06	0.32	0.16	0.54	0.00	0.26	0.92	0.28	0.56
Avail Cap(c_a), veh/h	582	2831	1263	434	2507	1118	168	0	405	829	958	893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.0	2.8	2.2	5.0	5.6	7.7	42.8	0.0	32.3	37.4	13.9	14.0
Incr Delay (d2), s/veh	0.3	0.2	0.1	0.3	0.3	0.3	3.6	0.0	0.3	15.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	3.2	0.6	0.3	5.0	2.2	4.3	0.0	4.0	15.4	5.9	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.3	3.0	2.3	5.2	6.0	8.0	46.4	0.0	32.6	52.5	14.1	14.8
LnGrp LOS	A	A	A	A	A	A	D	A	C	D	B	B
Approach Vol, veh/h		1268			1007			198			1516	
Approach Delay, s/veh		3.2			6.3			39.0			33.1	
Approach LOS		A			A			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	76.7		57.1		85.8	29.2	27.9
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9
Max Green Setting (Gmax), s	9.4	* 26		50.0		39.2	24.0	* 22
Max Q Clear Time (g_c+I1), s	4.7	10.7		22.4		9.6	22.9	23.2
Green Ext Time (p_c), s	0.2	5.6		3.5		8.2	0.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	892	100	23	743	160	84	90	8	682	249	464
Future Volume (veh/h)	174	892	100	23	743	160	84	90	8	682	249	464
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	189	970	109	25	808	174	91	98	9	741	271	504
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	505	2831	1263	434	2507	1118	168	371	34	806	958	893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.80	0.80	0.71	0.71	0.71	0.22	0.22	0.22	0.23	0.51	0.51
Unsig. Movement Delay												
Ln Grp Delay, s/veh	4.3	3.0	2.3	5.2	6.0	8.0	46.4	0.0	32.6	52.5	14.1	14.8
Ln Grp LOS	A	A	A	A	A	A	D	A	C	D	B	B
Approach Vol, veh/h		1268			1007			198			1516	
Approach Delay, s/veh		3.2			6.3			39.0			33.1	
Approach LOS		A			A			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	9.0	76.7		57.1		85.8	27.9	29.2
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	9.4	* 26		50.0		39.2	* 22	24.0
Max Allow Headway (MAH), s	3.8	5.0		4.3		5.0	5.9	3.7
Max Q Clear (g_c+l1), s	4.7	10.7		22.4		9.6	23.2	22.9
Green Ext Time (g_e), s	0.2	5.6		3.5		8.2	0.0	0.4
Prob of Phs Call (p_c)	0.99	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	0.45	0.00		0.00		0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	523					696	3456
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1687	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	155	
Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	189	25	0	0	0	0	91	741
Grp Sat Flow (s), veh/h/ln	1781	523	0	0	0	0	696	1728
Q Serve Time (g_s), s	2.7	1.5	0.0	0.0	0.0	0.0	13.0	20.9
Cycle Q Clear Time (g_c), s	2.7	2.9	0.0	0.0	0.0	0.0	21.2	20.9
Perm LT Sat Flow (s_l), veh/h/ln	573	523	0	0	0	0	696	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	72.5	70.5	0.0	0.0	0.0	0.0	22.0	0.0
Perm LT Serve Time (g_u), s	59.7	69.2	0.0	0.0	0.0	0.0	13.7	0.0
Perm LT Q Serve Time (g_ps), s	6.3	1.5	0.0	0.0	0.0	0.0	13.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	505	434	0	0	0	0	168	806
V/C Ratio (X)	0.37	0.06	0.00	0.00	0.00	0.00	0.54	0.92
Avail Cap (c_a), veh/h	582	434	0	0	0	0	168	829
Upstream Filter (I)	0.61	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	4.0	5.0	0.0	0.0	0.0	0.0	42.8	37.4
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.0	0.0	0.0	3.6	15.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	4.3	5.2	0.0	0.0	0.0	0.0	46.4	52.5
1st-Term Q (Q1), veh/ln	0.6	0.1	0.0	0.0	0.0	0.0	2.2	8.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.7
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.51
%ile Back of Q (95%), veh/ln	1.2	0.3	0.0	0.0	0.0	0.0	4.3	15.4
%ile Storage Ratio (RQ%)	0.31	0.05	0.00	0.00	0.00	0.00	1.10	1.74
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	808	0	271	0	970	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	8.7	0.0	8.3	0.0	7.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.7	0.0	8.3	0.0	7.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	2507	0	958	0	2831	0	0
V/C Ratio (X)	0.00	0.32	0.00	0.28	0.00	0.34	0.00	0.00
Avail Cap (c_a), veh/h	0	2507	0	958	0	2831	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.61	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.6	0.0	13.9	0.0	2.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.2	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.0	0.0	14.1	0.0	3.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	3.2	0.0	1.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	5.0	0.0	5.9	0.0	3.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.18	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	174	0	504	0	109	107	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1842	0
Q Serve Time (g_s), s	0.0	4.6	0.0	20.4	0.0	1.5	4.8	0.0
Cycle Q Clear Time (g_c), s	0.0	4.6	0.0	20.4	0.0	1.5	4.8	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.08	0.00
Lane Grp Cap (c), veh/h	0	1118	0	893	0	1263	405	0
V/C Ratio (X)	0.00	0.16	0.00	0.56	0.00	0.09	0.26	0.00
Avail Cap (c_a), veh/h	0	1118	0	893	0	1263	405	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.61	1.00	0.00
Uniform Delay (d1), s/veh	0.0	7.7	0.0	14.0	0.0	2.2	32.3	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.8	0.0	0.1	0.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.0	0.0	14.8	0.0	2.3	32.6	0.0
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	7.0	0.0	0.3	2.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.61	0.00	1.80	1.80	0.00
%ile Back of Q (95%), veh/ln	0.0	2.2	0.0	11.6	0.0	0.6	4.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.55	0.00	1.31	0.00	0.15	0.35	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Notes

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

HCM 6th Signalized Intersection Summary
1: Coldwater Canyon Avenue & Moorpark Street

05/18/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	704	78	110	579	143	99	1040	277	133	1050	146
Future Volume (veh/h)	102	704	78	110	579	143	99	1040	277	133	1050	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	765	85	120	629	155	108	1130	301	145	1141	159
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	661	560	80	661	560	192	1480	390	279	1668	232
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	1.00	1.00	1.00	0.53	0.53	0.53
Sat Flow, veh/h	690	1870	1585	649	1870	1585	424	2782	734	374	3133	435
Grp Volume(v), veh/h	111	765	85	120	629	155	108	718	713	145	646	654
Grp Sat Flow(s),veh/h/ln	690	1870	1585	649	1870	1585	424	1777	1738	374	1777	1792
Q Serve(g_s), s	2.3	31.8	3.3	0.0	29.5	6.3	22.2	0.0	0.0	26.7	24.0	24.2
Cycle Q Clear(g_c), s	31.8	31.8	3.3	31.8	29.5	6.3	46.5	0.0	0.0	26.7	24.0	24.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		0.24
Lane Grp Cap(c), veh/h	98	661	560	80	661	560	192	946	925	279	946	954
V/C Ratio(X)	1.14	1.16	0.15	1.50	0.95	0.28	0.56	0.76	0.77	0.52	0.68	0.69
Avail Cap(c_a), veh/h	98	661	560	80	661	560	192	946	925	279	946	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	29.1	19.9	45.0	28.4	20.9	11.7	0.0	0.0	16.1	15.5	15.5
Incr Delay (d2), s/veh	132.4	87.2	0.1	279.4	23.7	0.3	9.8	4.9	5.3	6.8	4.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.3	42.0	2.1	14.3	23.4	4.1	3.5	2.3	2.4	4.6	14.9	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	177.2	116.3	20.0	324.4	52.1	21.1	21.6	4.9	5.3	22.9	19.5	19.5
LnGrp LOS	F	F	C	F	D	C	C	A	A	C	B	B
Approach Vol, veh/h		961			904			1539			1445	
Approach Delay, s/veh		114.8			82.9			6.2			19.8	
Approach LOS		F			F			A			B	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green Setting (Gmax), s		47.9		* 32		47.9		* 32
Max Q Clear Time (g_c+I1), s		28.7		33.8		48.5		33.8
Green Ext Time (p_c), s		11.1		0.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	704	78	110	579	143	99	1040	277	133	1050	146
Future Volume (veh/h)	102	704	78	110	579	143	99	1040	277	133	1050	146
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	765	85	120	629	155	108	1130	301	145	1141	159
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	98	661	560	80	661	560	192	1480	390	279	1668	232
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	1.00	1.00	1.00	0.53	0.53	0.53
Unsig. Movement Delay												
Ln Grp Delay, s/veh	177.2	116.3	20.0	324.4	52.1	21.1	21.6	4.9	5.3	22.9	19.5	19.5
Ln Grp LOS	F	F	C	F	D	C	C	A	A	C	B	B
Approach Vol, veh/h		961			904			1539			1445	
Approach Delay, s/veh		114.8			82.9			6.2			19.8	
Approach LOS		F			F			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		47.9		* 32		47.9		* 32
Max Allow Headway (MAH), s		5.7		5.1		5.5		5.2
Max Q Clear (g_c+l1), s		28.7		33.8		48.5		33.8
Green Ext Time (g_e), s		11.1		0.0		0.0		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		1.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		374		649		424		690
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3133		1870		2782		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		435		1585		734		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	145	0	120	0	108	0	111
Grp Sat Flow (s), veh/h/ln	0	374	0	649	0	424	0	690
Q Serve Time (g_s), s	0.0	26.7	0.0	0.0	0.0	22.2	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	26.7	0.0	31.8	0.0	46.5	0.0	31.8
Perm LT Sat Flow (s_l), veh/h/ln	0	374	0	649	0	424	0	690
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	47.9	0.0	31.8	0.0	47.9	0.0	31.8
Perm LT Serve Time (g_u), s	0.0	47.9	0.0	0.0	0.0	23.7	0.0	2.3
Perm LT Q Serve Time (g_ps), s	0.0	26.7	0.0	0.0	0.0	22.2	0.0	2.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	279	0	80	0	192	0	98
V/C Ratio (X)	0.00	0.52	0.00	1.50	0.00	0.56	0.00	1.14
Avail Cap (c_a), veh/h	0	279	0	80	0	192	0	98
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.85	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.1	0.0	45.0	0.0	11.7	0.0	44.8
Incr Delay (d2), s/veh	0.0	6.8	0.0	279.4	0.0	9.8	0.0	132.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.9	0.0	324.4	0.0	21.6	0.0	177.2
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	1.7	0.0	1.4	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	6.2	0.0	0.5	0.0	3.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	4.6	0.0	14.3	0.0	3.5	0.0	10.3
%ile Storage Ratio (RQ%)	0.00	1.80	0.00	2.60	0.00	1.27	0.00	2.38
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	10.0	0.0	0.0	0.0	3.3
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	646	0	629	0	718	0	765
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	24.0	0.0	29.5	0.0	0.0	0.0	31.8
Cycle Q Clear Time (g_c), s	0.0	24.0	0.0	29.5	0.0	0.0	0.0	31.8
Lane Grp Cap (c), veh/h	0	946	0	661	0	946	0	661
V/C Ratio (X)	0.00	0.68	0.00	0.95	0.00	0.76	0.00	1.16
Avail Cap (c_a), veh/h	0	946	0	661	0	946	0	661
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.85	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.5	0.0	28.4	0.0	0.0	0.0	29.1
Incr Delay (d2), s/veh	0.0	4.0	0.0	23.7	0.0	4.9	0.0	87.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.5	0.0	52.1	0.0	4.9	0.0	116.3
1st-Term Q (Q1), veh/ln	0.0	8.7	0.0	12.4	0.0	0.0	0.0	13.3
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	4.4	0.0	1.3	0.0	16.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.53	0.00	1.40	0.00	1.80	0.00	1.43
%ile Back of Q (95%), veh/ln	0.0	14.9	0.0	23.4	0.0	2.3	0.0	42.0
%ile Storage Ratio (RQ%)	0.00	0.52	0.00	0.65	0.00	0.04	0.00	1.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	654	0	155	0	713	0	85
Grp Sat Flow (s), veh/h/ln	0	1792	0	1585	0	1738	0	1585
Q Serve Time (g_s), s	0.0	24.2	0.0	6.3	0.0	0.0	0.0	3.3
Cycle Q Clear Time (g_c), s	0.0	24.2	0.0	6.3	0.0	0.0	0.0	3.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.24	0.00	1.00	0.00	0.42	0.00	1.00
Lane Grp Cap (c), veh/h	0	954	0	560	0	925	0	560
V/C Ratio (X)	0.00	0.69	0.00	0.28	0.00	0.77	0.00	0.15
Avail Cap (c_a), veh/h	0	954	0	560	0	925	0	560
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.85	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.5	0.0	20.9	0.0	0.0	0.0	19.9
Incr Delay (d2), s/veh	0.0	4.0	0.0	0.3	0.0	5.3	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.5	0.0	21.1	0.0	5.3	0.0	20.0
1st-Term Q (Q1), veh/ln	0.0	8.8	0.0	2.2	0.0	0.0	0.0	1.2
2nd-Term Q (Q2), veh/ln	0.0	1.1	0.0	0.0	0.0	1.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.52	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	15.1	0.0	4.1	0.0	2.4	0.0	2.1
%ile Storage Ratio (RQ%)	0.00	0.52	0.00	1.04	0.00	0.04	0.00	0.64
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	7	44	80	7	149	33	1029	85	176	1453	24
Future Volume (veh/h)	32	7	44	80	7	149	33	1029	85	176	1453	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	8	48	87	8	162	36	1118	92	191	1579	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	46	140	140	23	187	305	2365	194	341	3681	61
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.71	0.71	0.71	1.00	1.00	1.00
Sat Flow, veh/h	418	245	740	458	122	990	316	3325	273	462	5174	85
Grp Volume(v), veh/h	91	0	0	257	0	0	36	597	613	191	1039	566
Grp Sat Flow(s),veh/h/ln	1403	0	0	1570	0	0	316	1777	1821	462	1702	1855
Q Serve(g_s), s	0.0	0.0	0.0	9.7	0.0	0.0	3.3	13.1	13.2	18.3	0.0	0.0
Cycle Q Clear(g_c), s	4.4	0.0	0.0	14.2	0.0	0.0	3.3	13.1	13.2	31.5	0.0	0.0
Prop In Lane	0.38		0.53	0.34		0.63	1.00		0.15	1.00		0.05
Lane Grp Cap(c), veh/h	320	0	0	350	0	0	305	1264	1296	341	2422	1320
V/C Ratio(X)	0.28	0.00	0.00	0.74	0.00	0.00	0.12	0.47	0.47	0.56	0.43	0.43
Avail Cap(c_a), veh/h	416	0	0	450	0	0	305	1264	1296	341	2422	1320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.09	0.09	0.09	0.53	0.53	0.53
Uniform Delay (d), s/veh	31.3	0.0	0.0	35.1	0.0	0.0	4.2	5.6	5.6	3.2	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	4.5	0.0	0.0	0.1	0.1	0.1	3.5	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	0.0	0.0	9.7	0.0	0.0	0.3	4.7	4.8	1.2	0.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	0.0	0.0	39.6	0.0	0.0	4.3	5.8	5.8	6.7	0.3	0.5
LnGrp LOS	C	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		91			257			1246			1796	
Approach Delay, s/veh		31.8			39.6			5.7			1.1	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.5		21.5		68.5		21.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		58.0		23.0		58.0		23.0				
Max Q Clear Time (g_c+I1), s		15.2		6.4		33.5		16.2				
Green Ext Time (p_c), s		11.7		0.4		15.4		0.8				
Intersection Summary												
HCM 6th Ctrl Delay			6.5									
HCM 6th LOS			A									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	7	44	80	7	149	33	1029	85	176	1453	24
Future Volume (veh/h)	32	7	44	80	7	149	33	1029	85	176	1453	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	8	48	87	8	162	36	1118	92	191	1579	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	134	46	140	140	23	187	305	2365	194	341	3681	61
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.71	0.71	0.71	1.00	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	31.8	0.0	0.0	39.6	0.0	0.0	4.3	5.8	5.8	6.7	0.3	0.5
Ln Grp LOS	C	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		91			257			1246			1796	
Approach Delay, s/veh		31.8			39.6			5.7			1.1	
Approach LOS		C			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		8.0		6.0		8.0
Phs Duration (G+Y+Rc), s		68.5		21.5		68.5		21.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		58.0		23.0		58.0		23.0
Max Allow Headway (MAH), s		5.3		5.6		5.5		5.5
Max Q Clear (g_c+l1), s		15.2		6.4		33.5		16.2
Green Ext Time (g_e), s		11.7		0.4		15.4		0.8
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.59
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		316		418		462		458
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3325		245		5174		122
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		273		740		85		990
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T+R		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	36	0	91	0	191	0	257
Grp Sat Flow (s), veh/h/ln	0	316	0	1403	0	462	0	1570
Q Serve Time (g_s), s	0.0	3.3	0.0	0.0	0.0	18.3	0.0	9.7
Cycle Q Clear Time (g_c), s	0.0	3.3	0.0	4.4	0.0	31.5	0.0	14.2
Perm LT Sat Flow (s_l), veh/h/ln	0	316	0	1234	0	462	0	1369
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1308	0	0	0	1839
Perm LT Eff Green (g_p), s	0.0	64.0	0.0	17.0	0.0	64.0	0.0	17.0
Perm LT Serve Time (g_u), s	0.0	64.0	0.0	2.8	0.0	50.8	0.0	12.5
Perm LT Q Serve Time (g_ps), s	0.0	3.3	0.0	0.0	0.0	18.3	0.0	9.7
Time to First Blk (g_f), s	0.0	0.0	0.0	3.1	0.0	0.0	0.0	2.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	3.1	0.0	0.0	0.0	2.2
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.38	0.00	1.00	0.00	0.34
Lane Grp Cap (c), veh/h	0	305	0	320	0	341	0	350
V/C Ratio (X)	0.00	0.12	0.00	0.28	0.00	0.56	0.00	0.74
Avail Cap (c_a), veh/h	0	305	0	416	0	341	0	450
Upstream Filter (I)	0.00	0.09	0.00	1.00	0.00	0.53	0.00	1.00
Uniform Delay (d1), s/veh	0.0	4.2	0.0	31.3	0.0	3.2	0.0	35.1
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.5	0.0	3.5	0.0	4.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.3	0.0	31.8	0.0	6.7	0.0	39.6
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	1.7	0.0	0.4	0.0	5.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.68
%ile Back of Q (95%), veh/ln	0.0	0.3	0.0	3.1	0.0	1.2	0.0	9.7
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.25	0.00	0.52	0.00	0.51
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	597	0	0	0	1039	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1264	0	0	0	2422	0	0
V/C Ratio (X)	0.00	0.47	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	1264	0	0	0	2422	0	0
Upstream Filter (I)	0.00	0.09	0.00	0.00	0.00	0.53	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.8	0.0	0.0	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.26	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	4.7	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R				T+R		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	613	0	0	0	566	0	0
Grp Sat Flow (s), veh/h/ln	0	1821	0	0	0	1855	0	0
Q Serve Time (g_s), s	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.15	0.00	0.53	0.00	0.05	0.00	0.63
Lane Grp Cap (c), veh/h	0	1296	0	0	0	1320	0	0
V/C Ratio (X)	0.00	0.47	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	1296	0	0	0	1320	0	0
Upstream Filter (I)	0.00	0.09	0.00	0.00	0.00	0.53	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.8	0.0	0.0	0.0	0.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.25	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	4.8	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.34	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		6.5
HCM 6th LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1058	153	206	1069	326	222	929	219	349	656	168
Future Volume (veh/h)	210	1058	153	206	1069	326	222	929	219	349	656	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	228	1150	166	224	1162	354	241	1010	238	379	713	183
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	437	3205	1429	510	2430	728	196	995	523	346	728	187
Arrive On Green	0.05	0.90	0.90	0.05	0.90	0.90	0.11	0.28	0.28	0.10	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	1781	2694	808	1781	3554	1585	3456	2800	718
Grp Volume(v), veh/h	228	1150	166	224	760	756	241	1010	238	379	452	444
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1725	1781	1777	1585	1728	1777	1741
Q Serve(g_s), s	0.7	4.7	4.6	0.7	7.3	7.7	11.0	28.0	11.8	10.0	25.3	25.3
Cycle Q Clear(g_c), s	0.7	4.7	4.6	0.7	7.3	7.7	11.0	28.0	11.8	10.0	25.3	25.3
Prop In Lane	1.00		1.00	1.00		0.47	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	437	3205	1429	510	1602	1556	196	995	523	346	462	453
V/C Ratio(X)	0.52	0.36	0.12	0.44	0.47	0.49	1.23	1.02	0.46	1.10	0.98	0.98
Avail Cap(c_a), veh/h	454	3205	1429	563	1602	1556	196	995	523	346	462	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.46	0.46	0.46	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	1.7	0.7	8.5	0.6	0.8	0.9	44.5	36.0	26.4	45.0	36.7	36.7
Incr Delay (d2), s/veh	1.0	0.3	0.2	0.3	0.5	0.5	139.8	32.3	1.3	74.1	34.0	34.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.3	0.4	0.1	0.4	0.4	19.6	22.9	8.0	12.5	20.9	20.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.7	1.0	8.7	0.9	1.3	1.4	184.3	68.3	27.7	119.1	70.7	71.2
LnGrp LOS	A	A	A	A	A	A	F	F	C	F	E	E
Approach Vol, veh/h		1544			1740			1489			1275	
Approach Delay, s/veh		2.1			1.3			80.6			85.3	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	96.6	14.0	33.0	8.0	96.6	16.0	31.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green Setting (Gmax), s	6.0	40.6	10.0	* 26	8.0	38.6	* 11	* 26
Max Q Clear Time (g_c+I1), s	2.7	9.7	12.0	30.0	2.7	6.7	13.0	27.3
Green Ext Time (p_c), s	0.2	23.0	0.0	0.0	0.3	19.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	38.7
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1058	153	206	1069	326	222	929	219	349	656	168
Future Volume (veh/h)	210	1058	153	206	1069	326	222	929	219	349	656	168
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	228	1150	166	224	1162	354	241	1010	238	379	713	183
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	437	3205	1429	510	2430	728	196	995	523	346	728	187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.90	0.90	0.05	0.90	0.90	0.11	0.28	0.28	0.10	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	2.7	1.0	8.7	0.9	1.3	1.4	184.3	68.3	27.7	119.1	70.7	71.2
Ln Grp LOS	A	A	A	A	A	A	F	F	C	F	E	E
Approach Vol, veh/h		1544			1740			1489			1275	
Approach Delay, s/veh		2.1			1.3			80.6			85.3	
Approach LOS		A			A			F			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	8.0	96.6	14.0	33.0	8.0	96.6	31.0	16.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	6.0	40.6	10.0	* 26	8.0	38.6	* 26	* 11
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.9	3.8	7.0	6.7	3.8
Max Q Clear (g_c+l1), s	2.7	9.7	12.0	30.0	2.7	6.7	27.3	13.0
Green Ext Time (g_e), s	0.2	23.0	0.0	0.0	0.3	19.3	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.32	0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2694		3554		3554	2800	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		808		1585		1585	718	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	228	0	379	0	224	0	0	241
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	0.7	0.0	10.0	0.0	0.7	0.0	0.0	11.0
Cycle Q Clear Time (g_c), s	0.7	0.0	10.0	0.0	0.7	0.0	0.0	11.0
Perm LT Sat Flow (s_l), veh/h/ln	345	0	0	0	417	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	90.2	0.0	0.0	0.0	90.2	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	80.0	0.0	0.0	0.0	83.6	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	19.9	0.0	0.0	0.0	7.7	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	437	0	346	0	510	0	0	196
V/C Ratio (X)	0.52	0.00	1.10	0.00	0.44	0.00	0.00	1.23
Avail Cap (c_a), veh/h	454	0	346	0	563	0	0	196
Upstream Filter (I)	1.00	0.00	0.88	0.00	0.46	0.00	0.00	1.00
Uniform Delay (d1), s/veh	1.7	0.0	45.0	0.0	0.6	0.0	0.0	44.5
Incr Delay (d2), s/veh	1.0	0.0	74.1	0.0	0.3	0.0	0.0	139.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	2.7	0.0	119.1	0.0	0.9	0.0	0.0	184.3
1st-Term Q (Q1), veh/ln	0.0	0.0	4.2	0.0	0.0	0.0	0.0	4.8
2nd-Term Q (Q2), veh/ln	0.1	0.0	3.6	0.0	0.0	0.0	0.0	7.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.61	0.00	1.80	0.00	0.00	1.59
%ile Back of Q (95%), veh/ln	0.2	0.0	12.5	0.0	0.1	0.0	0.0	19.6
%ile Storage Ratio (RQ%)	0.04	0.00	1.58	0.00	0.01	0.00	0.00	5.54
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	8.4	0.0	0.0	0.0	0.0	11.3
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	760	0	1010	0	1150	452	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	7.3	0.0	28.0	0.0	4.7	25.3	0.0
Cycle Q Clear Time (g_c), s	0.0	7.3	0.0	28.0	0.0	4.7	25.3	0.0
Lane Grp Cap (c), veh/h	0	1602	0	995	0	3205	462	0
V/C Ratio (X)	0.00	0.47	0.00	1.02	0.00	0.36	0.98	0.00
Avail Cap (c_a), veh/h	0	1602	0	995	0	3205	462	0
Upstream Filter (I)	0.00	0.46	0.00	1.00	0.00	1.00	0.88	0.00
Uniform Delay (d1), s/veh	0.0	0.8	0.0	36.0	0.0	0.7	36.7	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	32.3	0.0	0.3	34.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.3	0.0	68.3	0.0	1.0	70.7	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	11.7	0.0	0.0	10.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	4.5	0.0	0.1	4.4	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.42	0.00	1.80	1.40	0.00
%ile Back of Q (95%), veh/ln	0.0	0.4	0.0	22.9	0.0	0.3	20.9	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.75	0.00	0.00	1.46	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	756	0	238	0	166	444	0
Grp Sat Flow (s), veh/h/ln	0	1725	0	1585	0	1585	1741	0
Q Serve Time (g_s), s	0.0	7.7	0.0	11.8	0.0	4.6	25.3	0.0
Cycle Q Clear Time (g_c), s	0.0	7.7	0.0	11.8	0.0	4.6	25.3	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.47	0.00	1.00	0.00	1.00	0.41	0.00
Lane Grp Cap (c), veh/h	0	1556	0	523	0	1429	453	0
V/C Ratio (X)	0.00	0.49	0.00	0.46	0.00	0.12	0.98	0.00
Avail Cap (c_a), veh/h	0	1556	0	523	0	1429	453	0
Upstream Filter (I)	0.00	0.46	0.00	1.00	0.00	1.00	0.88	0.00
Uniform Delay (d1), s/veh	0.0	0.9	0.0	26.4	0.0	8.5	36.7	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	1.3	0.0	0.2	34.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.4	0.0	27.7	0.0	8.7	71.2	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.3	0.0	0.1	10.4	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.2	0.0	0.1	4.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.77	0.00	1.80	1.40	0.00
%ile Back of Q (95%), veh/ln	0.0	0.4	0.0	8.0	0.0	0.4	20.6	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	2.26	0.00	0.08	1.44	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	38.7
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1709	30	58	1362	142	5	6	12	111	5	90
Future Volume (veh/h)	48	1709	30	58	1362	142	5	6	12	111	5	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	1858	33	63	1480	154	5	7	13	121	5	98
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	2163	38	122	1969	203	116	165	253	282	28	193
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	307	3573	63	240	3251	336	233	561	859	748	94	654
Grp Volume(v), veh/h	52	922	969	63	803	831	25	0	0	224	0	0
Grp Sat Flow(s),veh/h/ln	307	1777	1859	240	1777	1810	1653	0	0	1496	0	0
Q Serve(g_s), s	13.4	38.3	38.7	15.8	29.3	30.1	0.0	0.0	0.0	9.3	0.0	0.0
Cycle Q Clear(g_c), s	43.5	38.3	38.7	54.5	29.3	30.1	0.9	0.0	0.0	11.0	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.19	0.20		0.52	0.54		0.44
Lane Grp Cap(c), veh/h	163	1076	1126	122	1076	1096	535	0	0	502	0	0
V/C Ratio(X)	0.32	0.86	0.86	0.52	0.75	0.76	0.05	0.00	0.00	0.45	0.00	0.00
Avail Cap(c_a), veh/h	163	1076	1126	122	1076	1096	535	0	0	502	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.33	0.33	0.33	0.30	0.30	0.30	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.8	14.5	14.6	39.7	12.8	12.9	22.7	0.0	0.0	26.2	0.0	0.0
Incr Delay (d2), s/veh	0.4	2.5	2.5	1.1	0.9	0.9	0.2	0.0	0.0	2.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	17.1	18.0	2.5	13.0	13.6	0.7	0.0	0.0	7.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	17.0	17.1	40.9	13.7	13.9	22.9	0.0	0.0	29.0	0.0	0.0
LnGrp LOS	C	B	B	D	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1943			1697			25			224	
Approach Delay, s/veh		17.4			14.8			22.9			29.0	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		59.0		31.0		59.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		54.5		26.5		54.5				
Max Q Clear Time (g_c+I1), s		2.9		45.5		13.0		56.5				
Green Ext Time (p_c), s		0.1		7.6		1.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			17.0
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1709	30	58	1362	142	5	6	12	111	5	90
Future Volume (veh/h)	48	1709	30	58	1362	142	5	6	12	111	5	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	1858	33	63	1480	154	5	7	13	121	5	98
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	163	2163	38	122	1969	203	116	165	253	282	28	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.29	0.29	0.29	0.29	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	29.2	17.0	17.1	40.9	13.7	13.9	22.9	0.0	0.0	29.0	0.0	0.0
Ln Grp LOS	C	B	B	D	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1943			1697			25			224	
Approach Delay, s/veh		17.4			14.8			22.9			29.0	
Approach LOS		B			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		8.0		6.0		8.0		6.0
Phs Duration (G+Y+Rc), s		31.0		59.0		31.0		59.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		26.5		54.5		26.5		54.5
Max Allow Headway (MAH), s		5.5		5.3		5.4		5.5
Max Q Clear (g_c+I1), s		2.9		45.5		13.0		56.5
Green Ext Time (g_e), s		0.1		7.6		1.0		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.93		0.00		1.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		233		307		748		240
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		561		3573		94		3251
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		859		63		654		336
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L+T+R		L		L+T+R		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	25	0	52	0	224	0	63
Grp Sat Flow (s), veh/h/ln	0	1653	0	307	0	1496	0	240
Q Serve Time (g_s), s	0.0	0.0	0.0	13.4	0.0	9.3	0.0	15.8
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	43.5	0.0	11.0	0.0	54.5
Perm LT Sat Flow (s_l), veh/h/ln	0	1312	0	307	0	1414	0	240
Shared LT Sat Flow (s_sh), veh/h/ln	0	1852	0	0	0	1821	0	0
Perm LT Eff Green (g_p), s	0.0	26.5	0.0	54.5	0.0	26.5	0.0	54.5
Perm LT Serve Time (g_u), s	0.0	15.5	0.0	24.4	0.0	25.6	0.0	15.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	13.4	0.0	9.3	0.0	15.8
Time to First Blk (g_f), s	0.0	7.6	0.0	0.0	0.0	1.7	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.9	0.0	0.0	0.0	1.7	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.20	0.00	1.00	0.00	0.54	0.00	1.00
Lane Grp Cap (c), veh/h	0	535	0	163	0	502	0	122
V/C Ratio (X)	0.00	0.05	0.00	0.32	0.00	0.45	0.00	0.52
Avail Cap (c_a), veh/h	0	535	0	163	0	502	0	122
Upstream Filter (I)	0.00	1.00	0.00	0.33	0.00	1.00	0.00	0.30
Uniform Delay (d1), s/veh	0.0	22.7	0.0	28.8	0.0	26.2	0.0	39.7
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.4	0.0	2.9	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.9	0.0	29.2	0.0	29.0	0.0	40.9
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.9	0.0	3.9	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.79	0.00	1.75
%ile Back of Q (95%), veh/ln	0.0	0.7	0.0	1.7	0.0	7.7	0.0	2.5
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.73	0.00	0.46	0.00	1.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	922	0	0	0	803
Grp Sat Flow (s), veh/h/ln	0	0	0	1777	0	0	0	1777
Q Serve Time (g_s), s	0.0	0.0	0.0	38.3	0.0	0.0	0.0	29.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	38.3	0.0	0.0	0.0	29.3
Lane Grp Cap (c), veh/h	0	0	0	1076	0	0	0	1076
V/C Ratio (X)	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.75
Avail Cap (c_a), veh/h	0	0	0	1076	0	0	0	1076
Upstream Filter (I)	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.30
Uniform Delay (d1), s/veh	0.0	0.0	0.0	14.5	0.0	0.0	0.0	12.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	17.0	0.0	0.0	0.0	13.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	12.9	0.0	0.0	0.0	9.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.26	0.00	1.00	0.00	1.28
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	17.1	0.0	0.0	0.0	13.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment				T+R				T+R
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	969	0	0	0	831
Grp Sat Flow (s), veh/h/ln	0	0	0	1859	0	0	0	1810
Q Serve Time (g_s), s	0.0	0.0	0.0	38.7	0.0	0.0	0.0	30.1
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	38.7	0.0	0.0	0.0	30.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.52	0.00	0.03	0.00	0.44	0.00	0.19
Lane Grp Cap (c), veh/h	0	0	0	1126	0	0	0	1096
V/C Ratio (X)	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.76
Avail Cap (c_a), veh/h	0	0	0	1126	0	0	0	1096
Upstream Filter (I)	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.30
Uniform Delay (d1), s/veh	0.0	0.0	0.0	14.6	0.0	0.0	0.0	12.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	17.1	0.0	0.0	0.0	13.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	13.7	0.0	0.0	0.0	10.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.25	0.00	1.00	0.00	1.28
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	18.0	0.0	0.0	0.0	13.6
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		17.0
HCM 6th LOS		B

HCM 6th Signalized Intersection Summary
5: Whitsett Avenue & Ventura Boulevard

05/18/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1059	246	28	1160	346	130	208	10	248	162	284
Future Volume (veh/h)	342	1059	246	28	1160	346	130	208	10	248	162	284
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	372	1151	267	30	1261	376	141	226	11	270	176	309
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	492	4222	1883	480	3902	1740	212	389	19	276	671	648
Arrive On Green	0.05	1.00	1.00	1.00	1.00	1.00	0.22	0.22	0.22	0.08	0.36	0.36
Sat Flow, veh/h	1781	3554	1585	379	3554	1585	911	1769	86	3456	1870	1585
Grp Volume(v), veh/h	372	1151	267	30	1261	376	141	0	237	270	176	309
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	379	1777	1585	911	0	1855	1728	1870	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	15.3	0.0	11.4	7.8	6.7	14.3
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.1	0.0	0.0	22.0	0.0	11.4	7.8	6.7	14.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	492	4222	1883	480	3902	1740	212	0	408	276	671	648
V/C Ratio(X)	0.76	0.27	0.14	0.06	0.32	0.22	0.67	0.00	0.58	0.98	0.26	0.48
Avail Cap(c_a), veh/h	670	4222	1883	480	3902	1740	212	0	408	276	671	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.21	0.21	0.21	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.2	0.0	0.0	0.0	0.0	0.0	42.4	0.0	34.9	45.9	22.7	21.7
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.2	0.2	0.3	7.7	0.0	2.1	47.5	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	0.0	0.1	0.2	0.2	7.1	0.0	9.2	8.8	5.1	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.9	0.0	0.0	0.3	0.2	0.3	50.1	0.0	36.9	93.4	22.9	22.2
LnGrp LOS	A	A	A	A	A	A	D	A	D	F	C	C
Approach Vol, veh/h		1790			1667			378			755	
Approach Delay, s/veh		1.3			0.2			41.8			47.8	
Approach LOS		A			A			D			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	9.0	116.6		41.8		125.6	13.9	27.9				
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9				
Max Green Setting (Gmax), s	15.0	* 36		34.0		55.2	8.0	* 22				
Max Q Clear Time (g_c+I1), s	2.0	4.1		16.3		2.0	9.8	24.0				
Green Ext Time (p_c), s	0.9	14.3		1.8		12.8	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			B									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1059	246	28	1160	346	130	208	10	248	162	284
Future Volume (veh/h)	342	1059	246	28	1160	346	130	208	10	248	162	284
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	372	1151	267	30	1261	376	141	226	11	270	176	309
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	492	4222	1883	480	3902	1740	212	389	19	276	671	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	1.00	1.00	1.00	1.00	1.00	0.22	0.22	0.22	0.08	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	5.9	0.0	0.0	0.3	0.2	0.3	50.1	0.0	36.9	93.4	22.9	22.2
Ln Grp LOS	A	A	A	A	A	A	D	A	D	F	C	C
Approach Vol, veh/h		1790			1667			378			755	
Approach Delay, s/veh		1.3			0.2			41.8			47.8	
Approach LOS		A			A			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	9.0	116.6		41.8		125.6	27.9	13.9
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	15.0	* 36		34.0		55.2	* 22	8.0
Max Allow Headway (MAH), s	3.8	5.0		4.3		4.9	5.3	3.7
Max Q Clear (g_c+l1), s	2.0	4.1		16.3		2.0	24.0	9.8
Green Ext Time (g_e), s	0.9	14.3		1.8		12.8	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	0.01	0.00		0.01		0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	379					911	3456
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1769	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	86	
Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	372	30	0	0	0	0	141	270
Grp Sat Flow (s), veh/h/ln	1781	379	0	0	0	0	911	1728
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	0.0	15.3	7.8
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	0.0	0.0	0.0	22.0	7.8
Perm LT Sat Flow (s_l), veh/h/ln	307	379	0	0	0	0	911	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	111.8	109.8	0.0	0.0	0.0	0.0	22.0	0.0
Perm LT Serve Time (g_u), s	107.8	107.9	0.0	0.0	0.0	0.0	15.3	0.0
Perm LT Q Serve Time (g_ps), s	107.8	0.1	0.0	0.0	0.0	0.0	15.3	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	492	480	0	0	0	0	212	276
V/C Ratio (X)	0.76	0.06	0.00	0.00	0.00	0.00	0.67	0.98
Avail Cap (c_a), veh/h	670	480	0	0	0	0	212	276
Upstream Filter (I)	0.21	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	5.2	0.0	0.0	0.0	0.0	0.0	42.4	45.9
Incr Delay (d2), s/veh	0.7	0.2	0.0	0.0	0.0	0.0	7.7	47.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	5.9	0.3	0.0	0.0	0.0	0.0	50.1	93.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.3
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.5	1.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.73
%ile Back of Q (95%), veh/ln	0.2	0.1	0.0	0.0	0.0	0.0	7.1	8.8
%ile Storage Ratio (RQ%)	0.04	0.01	0.00	0.00	0.00	0.00	1.80	0.99
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	1261	0	176	0	1151	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	3902	0	671	0	4222	0	0
V/C Ratio (X)	0.00	0.32	0.00	0.26	0.00	0.27	0.00	0.00
Avail Cap (c_a), veh/h	0	3902	0	671	0	4222	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.21	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	22.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	22.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.2	0.0	5.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.16	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	376	0	309	0	267	237	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1855	0
Q Serve Time (g_s), s	0.0	0.0	0.0	14.3	0.0	0.0	11.4	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	14.3	0.0	0.0	11.4	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.05	0.00
Lane Grp Cap (c), veh/h	0	1740	0	648	0	1883	408	0
V/C Ratio (X)	0.00	0.22	0.00	0.48	0.00	0.14	0.58	0.00
Avail Cap (c_a), veh/h	0	1740	0	648	0	1883	408	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.21	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	21.7	0.0	0.0	34.9	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.5	0.0	0.0	2.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	22.2	0.0	0.0	36.9	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	5.3	0.0	0.0	5.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.71	0.00	1.80	1.71	0.00
%ile Back of Q (95%), veh/ln	0.0	0.2	0.0	9.2	0.0	0.0	9.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	1.03	0.00	0.01	0.83	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	732	42	56	490	100	43	520	69	116	474	137
Future Volume (veh/h)	112	732	42	56	490	100	43	520	69	116	474	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	796	46	61	533	109	47	565	75	126	515	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	937	794	166	937	794	265	1213	161	277	1047	301
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	787	1870	1585	653	1870	1585	772	3154	418	789	2722	784
Grp Volume(v), veh/h	122	796	46	61	533	109	47	318	322	126	335	329
Grp Sat Flow(s),veh/h/ln	787	1870	1585	653	1870	1585	772	1777	1795	789	1777	1729
Q Serve(g_s), s	11.5	33.3	1.3	8.0	17.9	3.3	4.4	12.1	12.1	12.8	12.9	13.0
Cycle Q Clear(g_c), s	29.4	33.3	1.3	41.3	17.9	3.3	17.4	12.1	12.1	25.0	12.9	13.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		0.45
Lane Grp Cap(c), veh/h	318	937	794	166	937	794	265	683	690	277	683	665
V/C Ratio(X)	0.38	0.85	0.06	0.37	0.57	0.14	0.18	0.46	0.47	0.45	0.49	0.49
Avail Cap(c_a), veh/h	343	998	845	187	998	845	265	683	690	277	683	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	19.5	11.5	37.4	15.7	12.0	27.7	20.8	20.8	30.1	21.0	21.1
Incr Delay (d2), s/veh	0.8	6.7	0.0	1.4	0.7	0.1	1.5	2.3	2.3	5.3	2.5	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	21.1	0.8	2.4	11.6	2.0	1.6	8.9	9.0	5.0	9.4	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	26.2	11.6	38.8	16.3	12.1	29.1	23.0	23.0	35.5	23.5	23.7
LnGrp LOS	C	C	B	D	B	B	C	C	C	D	C	C
Approach Vol, veh/h		964			703			687			790	
Approach Delay, s/veh		25.6			17.6			23.5			25.5	
Approach LOS		C			B			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		39.7		50.3		39.7		50.3				
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2				
Max Green Setting (Gmax), s		31.7		* 48		31.7		* 48				
Max Q Clear Time (g_c+I1), s		27.0		43.3		19.4		35.3				
Green Ext Time (p_c), s		2.0		1.8		3.3		5.3				
Intersection Summary												
HCM 6th Ctrl Delay			23.3									
HCM 6th LOS			C									

Notes

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

HCM 6th Signalized Intersection Capacity Analysis
1: Coldwater Canyon Avenue & Moorpark Street

05/03/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	732	42	56	490	100	43	520	69	116	474	137
Future Volume (veh/h)	112	732	42	56	490	100	43	520	69	116	474	137
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	796	46	61	533	109	47	565	75	126	515	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	318	937	794	166	937	794	265	1213	161	277	1047	301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.38	0.38	0.38	0.38	0.38	0.38
Unsig. Movement Delay												
Ln Grp Delay, s/veh	26.7	26.2	11.6	38.8	16.3	12.1	29.1	23.0	23.0	35.5	23.5	23.7
Ln Grp LOS	C	C	B	D	B	B	C	C	C	D	C	C
Approach Vol, veh/h		964			703			687			790	
Approach Delay, s/veh		25.6			17.6			23.5			25.5	
Approach LOS		C			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		39.7		50.3		39.7		50.3
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		31.7		* 48		31.7		* 48
Max Allow Headway (MAH), s		5.3		5.1		5.2		5.1
Max Q Clear (g_c+l1), s		27.0		43.3		19.4		35.3
Green Ext Time (g_e), s		2.0		1.8		3.3		5.3
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		0.43
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		789		653		772		787
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2722		1870		3154		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		784		1585		418		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	126	0	61	0	47	0	122
Grp Sat Flow (s), veh/h/ln	0	789	0	653	0	772	0	787
Q Serve Time (g_s), s	0.0	12.8	0.0	8.0	0.0	4.4	0.0	11.5
Cycle Q Clear Time (g_c), s	0.0	25.0	0.0	41.3	0.0	17.4	0.0	29.4
Perm LT Sat Flow (s_l), veh/h/ln	0	789	0	653	0	772	0	787
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	34.6	0.0	45.1	0.0	34.6	0.0	45.1
Perm LT Serve Time (g_u), s	0.0	22.5	0.0	11.8	0.0	21.6	0.0	27.2
Perm LT Q Serve Time (g_ps), s	0.0	12.8	0.0	8.0	0.0	4.4	0.0	11.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	277	0	166	0	265	0	318
V/C Ratio (X)	0.00	0.45	0.00	0.37	0.00	0.18	0.00	0.38
Avail Cap (c_a), veh/h	0	277	0	187	0	265	0	343
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	30.1	0.0	37.4	0.0	27.7	0.0	25.9
Incr Delay (d2), s/veh	0.0	5.3	0.0	1.4	0.0	1.5	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	35.5	0.0	38.8	0.0	29.1	0.0	26.7
1st-Term Q (Q1), veh/ln	0.0	2.3	0.0	1.3	0.0	0.8	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.1	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	5.0	0.0	2.4	0.0	1.6	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	1.94	0.00	0.43	0.00	0.59	0.00	0.89
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	335	0	533	0	318	0	796
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	12.9	0.0	17.9	0.0	12.1	0.0	33.3
Cycle Q Clear Time (g_c), s	0.0	12.9	0.0	17.9	0.0	12.1	0.0	33.3
Lane Grp Cap (c), veh/h	0	683	0	937	0	683	0	937
V/C Ratio (X)	0.00	0.49	0.00	0.57	0.00	0.46	0.00	0.85
Avail Cap (c_a), veh/h	0	683	0	998	0	683	0	998
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.0	0.0	15.7	0.0	20.8	0.0	19.5
Incr Delay (d2), s/veh	0.0	2.5	0.0	0.7	0.0	2.3	0.0	6.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.5	0.0	16.3	0.0	23.0	0.0	26.2
1st-Term Q (Q1), veh/ln	0.0	5.1	0.0	7.0	0.0	4.7	0.0	13.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.2	0.0	0.4	0.0	1.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.70	0.00	1.61	0.00	1.72	0.00	1.43
%ile Back of Q (95%), veh/ln	0.0	9.4	0.0	11.6	0.0	8.9	0.0	21.1
%ile Storage Ratio (RQ%)	0.00	0.33	0.00	0.32	0.00	0.16	0.00	0.57
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	329	0	109	0	322	0	46
Grp Sat Flow (s), veh/h/ln	0	1729	0	1585	0	1795	0	1585
Q Serve Time (g_s), s	0.0	13.0	0.0	3.3	0.0	12.1	0.0	1.3
Cycle Q Clear Time (g_c), s	0.0	13.0	0.0	3.3	0.0	12.1	0.0	1.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.45	0.00	1.00	0.00	0.23	0.00	1.00
Lane Grp Cap (c), veh/h	0	665	0	794	0	690	0	794
V/C Ratio (X)	0.00	0.49	0.00	0.14	0.00	0.47	0.00	0.06
Avail Cap (c_a), veh/h	0	665	0	845	0	690	0	845
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.1	0.0	12.0	0.0	20.8	0.0	11.5
Incr Delay (d2), s/veh	0.0	2.6	0.0	0.1	0.0	2.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.7	0.0	12.1	0.0	23.0	0.0	11.6
1st-Term Q (Q1), veh/ln	0.0	5.0	0.0	1.1	0.0	4.8	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.70	0.00	1.80	0.00	1.72	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	9.3	0.0	2.0	0.0	9.0	0.0	0.8
%ile Storage Ratio (RQ%)	0.00	0.32	0.00	0.51	0.00	0.16	0.00	0.24
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	1	73	18	2	34	24	482	19	38	523	10
Future Vol, veh/h	36	1	73	18	2	34	24	482	19	38	523	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	1	79	20	2	37	26	524	21	41	568	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	971	1253	290	897	1248	273	579	0	0	545	0	0
Stage 1	656	656	-	587	587	-	-	-	-	-	-	-
Stage 2	315	597	-	310	661	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	7.14	6.99	6.54	6.94	5.34	-	-	4.14	-	-
Critical Hdwy Stg 1	7.34	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.92	3.67	4.02	3.32	3.12	-	-	2.22	-	-
Pot Cap-1 Maneuver	235	171	603	262	172	725	622	-	-	1020	-	-
Stage 1	353	460	-	449	495	-	-	-	-	-	-	-
Stage 2	647	490	-	640	458	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	207	157	603	212	158	725	622	-	-	1020	-	-
Mov Cap-2 Maneuver	207	157	-	212	158	-	-	-	-	-	-	-
Stage 1	338	442	-	430	474	-	-	-	-	-	-	-
Stage 2	586	469	-	532	440	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.6	16.4	0.5	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	622	-	-	365	374	1020	-	-
HCM Lane V/C Ratio	0.042	-	-	0.328	0.157	0.04	-	-
HCM Control Delay (s)	11	-	-	19.6	16.4	8.7	-	-
HCM Lane LOS	B	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	0.6	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	913	126	155	620	108	94	303	148	206	364	28
Future Volume (veh/h)	99	913	126	155	620	108	94	303	148	206	364	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	108	992	137	168	674	117	102	329	161	224	396	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	509	1826	814	351	1610	279	136	522	337	345	537	40
Arrive On Green	0.05	0.51	0.51	0.13	1.00	1.00	0.08	0.15	0.15	0.10	0.16	0.16
Sat Flow, veh/h	1781	3554	1585	1781	3028	525	1781	3554	1585	3456	3349	253
Grp Volume(v), veh/h	108	992	137	168	395	396	102	329	161	224	209	217
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1776	1781	1777	1585	1728	1777	1825
Q Serve(g_s), s	2.8	18.8	2.9	4.5	0.0	0.0	5.6	8.7	8.9	6.2	11.2	11.3
Cycle Q Clear(g_c), s	2.8	18.8	2.9	4.5	0.0	0.0	5.6	8.7	8.9	6.2	11.2	11.3
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	509	1826	814	351	945	944	136	522	337	345	285	292
V/C Ratio(X)	0.21	0.54	0.17	0.48	0.42	0.42	0.75	0.63	0.48	0.65	0.74	0.74
Avail Cap(c_a), veh/h	549	1826	814	412	945	944	196	853	484	346	426	438
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.2	16.4	5.1	11.4	0.0	0.0	45.2	40.1	34.5	43.3	40.0	40.0
Incr Delay (d2), s/veh	0.2	1.2	0.4	1.0	1.4	1.4	9.0	2.7	2.2	4.2	6.2	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	11.9	2.9	2.7	0.6	0.6	5.0	7.1	6.4	5.1	9.1	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.4	17.6	5.6	12.4	1.4	1.4	54.2	42.8	36.8	47.5	46.2	46.2
LnGrp LOS	B	B	A	B	A	A	D	D	D	D	D	D
Approach Vol, veh/h		1237			959			592			650	
Approach Delay, s/veh		15.6			3.3			43.1			46.7	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	58.6	14.0	19.7	9.5	56.8	12.7	21.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green Setting (Gmax), s	7.0	41.6	10.0	* 24	10.0	38.6	* 11	* 24
Max Q Clear Time (g_c+I1), s	4.8	2.0	8.2	10.9	6.5	20.8	7.6	13.3
Green Ext Time (p_c), s	0.0	11.6	0.1	3.8	0.1	11.2	0.1	2.7

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	913	126	155	620	108	94	303	148	206	364	28
Future Volume (veh/h)	99	913	126	155	620	108	94	303	148	206	364	28
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	108	992	137	168	674	117	102	329	161	224	396	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	509	1826	814	351	1610	279	136	522	337	345	537	40
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.51	0.51	0.13	1.00	1.00	0.08	0.15	0.15	0.10	0.16	0.16
Unsig. Movement Delay												
Ln Grp Delay, s/veh	10.4	17.6	5.6	12.4	1.4	1.4	54.2	42.8	36.8	47.5	46.2	46.2
Ln Grp LOS	B	B	A	B	A	A	D	D	D	D	D	D
Approach Vol, veh/h		1237			959			592			650	
Approach Delay, s/veh		15.6			3.3			43.1			46.7	
Approach LOS		B			A			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	7.8	58.6	14.0	19.7	9.5	56.8	21.0	12.7
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	7.0	41.6	10.0	* 24	10.0	38.6	* 24	* 11
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.8	3.8	7.0	6.6	3.8
Max Q Clear (g_c+I1), s	4.8	2.0	8.2	10.9	6.5	20.8	13.3	7.6
Green Ext Time (g_e), s	0.0	11.6	0.1	3.8	0.1	11.2	2.7	0.1
Prob of Phs Call (p_c)	0.95	1.00	1.00	1.00	0.99	1.00	1.00	0.94
Prob of Max Out (p_x)	1.00	0.00	1.00	0.34	1.00	0.00	0.46	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3028		3554		3554	3349	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		525		1585		1585	253	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	108	0	224	0	168	0	0	102
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	2.8	0.0	6.2	0.0	4.5	0.0	0.0	5.6
Cycle Q Clear Time (g_c), s	2.8	0.0	6.2	0.0	4.5	0.0	0.0	5.6
Perm LT Sat Flow (s_l), veh/h/ln	685	0	0	0	499	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	51.4	0.0	0.0	0.0	52.2	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	51.4	0.0	0.0	0.0	32.6	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	8.9	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	509	0	345	0	351	0	0	136
V/C Ratio (X)	0.21	0.00	0.65	0.00	0.48	0.00	0.00	0.75
Avail Cap (c_a), veh/h	549	0	346	0	412	0	0	196
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	10.2	0.0	43.3	0.0	11.4	0.0	0.0	45.2
Incr Delay (d2), s/veh	0.2	0.0	4.2	0.0	1.0	0.0	0.0	9.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	10.4	0.0	47.5	0.0	12.4	0.0	0.0	54.2
1st-Term Q (Q1), veh/ln	1.0	0.0	2.6	0.0	1.4	0.0	0.0	2.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	1.9	0.0	5.1	0.0	2.7	0.0	0.0	5.0
%ile Storage Ratio (RQ%)	0.34	0.00	0.65	0.00	0.36	0.00	0.00	1.41
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	395	0	329	0	992	209	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	0.0	0.0	8.7	0.0	18.8	11.2	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	8.7	0.0	18.8	11.2	0.0
Lane Grp Cap (c), veh/h	0	945	0	522	0	1826	285	0
V/C Ratio (X)	0.00	0.42	0.00	0.63	0.00	0.54	0.74	0.00
Avail Cap (c_a), veh/h	0	945	0	853	0	1826	426	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	40.1	0.0	16.4	40.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	2.7	0.0	1.2	6.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.4	0.0	42.8	0.0	17.6	46.2	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.7	0.0	7.2	4.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.3	0.5	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.60	1.71	0.00
%ile Back of Q (95%), veh/ln	0.0	0.6	0.0	7.1	0.0	11.9	9.1	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.23	0.00	0.23	0.63	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	396	0	161	0	137	217	0
Grp Sat Flow (s), veh/h/ln	0	1776	0	1585	0	1585	1825	0
Q Serve Time (g_s), s	0.0	0.0	0.0	8.9	0.0	2.9	11.3	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	8.9	0.0	2.9	11.3	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.30	0.00	1.00	0.00	1.00	0.14	0.00
Lane Grp Cap (c), veh/h	0	944	0	337	0	814	292	0
V/C Ratio (X)	0.00	0.42	0.00	0.48	0.00	0.17	0.74	0.00
Avail Cap (c_a), veh/h	0	944	0	484	0	814	438	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	34.5	0.0	5.1	40.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	2.2	0.0	0.4	6.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.4	0.0	36.8	0.0	5.6	46.2	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.4	0.0	1.5	5.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.1	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.70	0.00
%ile Back of Q (95%), veh/ln	0.0	0.6	0.0	6.4	0.0	2.9	9.3	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	1.81	0.00	0.63	0.65	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1166	42	70	845	37	4	1	16	29	1	39
Future Vol, veh/h	12	1166	42	70	845	37	4	1	16	29	1	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1267	46	76	918	40	4	1	17	32	1	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	958	0	0	1313	0	0	1928	2426	657	1750	2429	479
Stage 1	-	-	-	-	-	-	1316	1316	-	1090	1090	-
Stage 2	-	-	-	-	-	-	612	1110	-	660	1339	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	714	-	-	523	-	-	40	32	407	55	32	533
Stage 1	-	-	-	-	-	-	166	226	-	230	289	-
Stage 2	-	-	-	-	-	-	447	283	-	418	220	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	714	-	-	523	-	-	31	27	407	45	27	533
Mov Cap-2 Maneuver	-	-	-	-	-	-	31	27	-	45	27	-
Stage 1	-	-	-	-	-	-	163	222	-	226	247	-
Stage 2	-	-	-	-	-	-	350	242	-	391	216	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1	50.2	132.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	102	714	-	-	523	-	-	91
HCM Lane V/C Ratio	0.224	0.018	-	-	0.145	-	-	0.824
HCM Control Delay (s)	50.2	10.1	-	-	13.1	-	-	132.4
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0.5	-	-	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	776	90	22	660	150	76	84	8	641	234	382
Future Volume (veh/h)	105	776	90	22	660	150	76	84	8	641	234	382
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	843	98	24	717	163	83	91	9	697	254	415
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	1421	634	199	1065	475	170	347	34	782	921	875
Arrive On Green	0.06	0.40	0.40	0.30	0.30	0.30	0.21	0.21	0.21	0.23	0.49	0.49
Sat Flow, veh/h	1781	3554	1585	596	3554	1585	768	1675	166	3456	1870	1585
Grp Volume(v), veh/h	114	843	98	24	717	163	83	0	100	697	254	415
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	596	1777	1585	768	0	1841	1728	1870	1585
Q Serve(g_s), s	4.2	18.7	4.0	3.3	17.7	4.2	10.6	0.0	4.6	19.5	8.0	15.9
Cycle Q Clear(g_c), s	4.2	18.7	4.0	12.0	17.7	4.2	18.6	0.0	4.6	19.5	8.0	15.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	256	1421	634	199	1065	475	170	0	381	782	921	875
V/C Ratio(X)	0.44	0.59	0.15	0.12	0.67	0.34	0.49	0.00	0.26	0.89	0.28	0.47
Avail Cap(c_a), veh/h	288	1421	634	199	1065	475	180	0	405	878	961	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	23.6	19.2	32.3	30.7	7.5	42.7	0.0	33.3	37.5	14.9	13.6
Incr Delay (d2), s/veh	1.2	1.8	0.5	1.2	3.4	2.0	2.2	0.0	0.4	10.5	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	12.5	2.7	1.0	12.4	5.6	3.8	0.0	3.8	14.0	5.8	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	25.4	19.7	33.5	34.1	9.4	44.9	0.0	33.6	48.0	15.1	14.0
LnGrp LOS	C	C	B	C	C	A	D	A	C	D	B	B
Approach Vol, veh/h		1055			904			183			1366	
Approach Delay, s/veh		24.8			29.7			38.7			31.6	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	10.0	34.9		55.1		44.9	28.5	26.6				
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9				
Max Green Setting (Gmax), s	7.8	* 26		51.4		37.8	25.4	* 22				
Max Q Clear Time (g_c+I1), s	6.2	19.7		17.9		20.7	21.5	20.6				
Green Ext Time (p_c), s	0.0	2.9		3.0		5.7	1.1	0.1				
Intersection Summary												
HCM 6th Ctrl Delay			29.4									
HCM 6th LOS			C									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	776	90	22	660	150	76	84	8	641	234	382
Future Volume (veh/h)	105	776	90	22	660	150	76	84	8	641	234	382
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	843	98	24	717	163	83	91	9	697	254	415
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	256	1421	634	199	1065	475	170	347	34	782	921	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.40	0.40	0.30	0.30	0.30	0.21	0.21	0.21	0.23	0.49	0.49
Unsig. Movement Delay												
Ln Grp Delay, s/veh	24.1	25.4	19.7	33.5	34.1	9.4	44.9	0.0	33.6	48.0	15.1	14.0
Ln Grp LOS	C	C	B	C	C	A	D	A	C	D	B	B
Approach Vol, veh/h		1055			904			183			1366	
Approach Delay, s/veh		24.8			29.7			38.7			31.6	
Approach LOS		C			C			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	10.0	34.9		55.1		44.9	26.6	28.5
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	7.8	* 26		51.4		37.8	* 22	25.4
Max Allow Headway (MAH), s	3.8	5.0		4.4		5.0	5.7	3.7
Max Q Clear (g_c+I1), s	6.2	19.7		17.9		20.7	20.6	21.5
Green Ext Time (g_e), s	0.0	2.9		3.0		5.7	0.1	1.1
Prob of Phs Call (p_c)	0.96	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00		0.00	1.00	0.96
Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	596					768	3456
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1675	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	166	
Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	114	24	0	0	0	0	83	697
Grp Sat Flow (s), veh/h/ln	1781	596	0	0	0	0	768	1728
Q Serve Time (g_s), s	4.2	3.3	0.0	0.0	0.0	0.0	10.6	19.5
Cycle Q Clear Time (g_c), s	4.2	12.0	0.0	0.0	0.0	0.0	18.6	19.5
Perm LT Sat Flow (s_l), veh/h/ln	631	596	0	0	0	0	768	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	32.0	30.0	0.0	0.0	0.0	0.0	20.7	0.0
Perm LT Serve Time (g_u), s	12.3	21.3	0.0	0.0	0.0	0.0	12.7	0.0
Perm LT Q Serve Time (g_ps), s	4.3	3.3	0.0	0.0	0.0	0.0	10.6	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	256	199	0	0	0	0	170	782
V/C Ratio (X)	0.44	0.12	0.00	0.00	0.00	0.00	0.49	0.89
Avail Cap (c_a), veh/h	288	199	0	0	0	0	180	878
Upstream Filter (I)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	22.9	32.3	0.0	0.0	0.0	0.0	42.7	37.5
Incr Delay (d2), s/veh	1.2	1.2	0.0	0.0	0.0	0.0	2.2	10.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	24.1	33.5	0.0	0.0	0.0	0.0	44.9	48.0
1st-Term Q (Q1), veh/ln	1.7	0.5	0.0	0.0	0.0	0.0	2.0	7.9
2nd-Term Q (Q2), veh/ln	0.1	0.1	0.0	0.0	0.0	0.0	0.1	1.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.54
%ile Back of Q (95%), veh/ln	3.2	1.0	0.0	0.0	0.0	0.0	3.8	14.0
%ile Storage Ratio (RQ%)	0.82	0.16	0.00	0.00	0.00	0.00	0.96	1.58
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	717	0	254	0	843	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	17.7	0.0	8.0	0.0	18.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.7	0.0	8.0	0.0	18.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1065	0	921	0	1421	0	0
V/C Ratio (X)	0.00	0.67	0.00	0.28	0.00	0.59	0.00	0.00
Avail Cap (c_a), veh/h	0	1065	0	961	0	1421	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	30.7	0.0	14.9	0.0	23.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.4	0.0	0.2	0.0	1.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.1	0.0	15.1	0.0	25.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.3	0.0	3.2	0.0	7.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.59	0.00	1.80	0.00	1.58	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	12.4	0.0	5.8	0.0	12.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.33	0.00	0.18	0.00	0.17	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	163	0	415	0	98	100	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1841	0
Q Serve Time (g_s), s	0.0	4.2	0.0	15.9	0.0	4.0	4.6	0.0
Cycle Q Clear Time (g_c), s	0.0	4.2	0.0	15.9	0.0	4.0	4.6	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.09	0.00
Lane Grp Cap (c), veh/h	0	475	0	875	0	634	381	0
V/C Ratio (X)	0.00	0.34	0.00	0.47	0.00	0.15	0.26	0.00
Avail Cap (c_a), veh/h	0	475	0	910	0	634	405	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	13.6	0.0	19.2	33.3	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.4	0.0	0.5	0.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.4	0.0	14.0	0.0	19.7	33.6	0.0
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	5.5	0.0	1.4	2.1	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.69	0.00	1.80	1.80	0.00
%ile Back of Q (95%), veh/ln	0.0	5.6	0.0	9.5	0.0	2.7	3.8	0.0
%ile Storage Ratio (RQ%)	0.00	1.43	0.00	1.07	0.00	0.69	0.34	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	661	52	93	544	103	77	893	254	85	876	138
Future Volume (veh/h)	96	661	52	93	544	103	77	893	254	85	876	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	718	57	101	591	112	84	971	276	92	952	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	827	701	146	827	701	179	1212	343	140	1364	215
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	744	1870	1585	696	1870	1585	512	2734	774	446	3076	484
Grp Volume(v), veh/h	104	718	57	101	591	112	84	630	617	92	550	552
Grp Sat Flow(s),veh/h/ln	744	1870	1585	696	1870	1585	512	1777	1731	446	1777	1783
Q Serve(g_s), s	11.9	31.3	1.9	8.5	23.2	3.8	14.3	27.5	27.8	12.1	22.4	22.5
Cycle Q Clear(g_c), s	35.1	31.3	1.9	39.8	23.2	3.8	36.7	27.5	27.8	39.9	22.4	22.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.45	1.00		0.27
Lane Grp Cap(c), veh/h	217	827	701	146	827	701	179	788	767	140	788	791
V/C Ratio(X)	0.48	0.87	0.08	0.69	0.71	0.16	0.47	0.80	0.80	0.66	0.70	0.70
Avail Cap(c_a), veh/h	217	827	701	146	827	701	179	788	767	140	788	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	22.7	14.5	42.2	20.5	15.1	35.0	21.6	21.7	41.0	20.2	20.2
Incr Delay (d2), s/veh	1.6	9.8	0.0	13.1	2.9	0.1	8.6	8.3	8.8	21.6	5.1	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	21.2	1.2	4.9	15.2	2.4	3.9	18.1	18.0	5.1	14.8	14.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.4	32.5	14.6	55.4	23.4	15.2	43.6	29.9	30.4	62.6	25.3	25.3
LnGrp LOS	D	C	B	E	C	B	D	C	C	E	C	C
Approach Vol, veh/h		879			804			1331			1194	
Approach Delay, s/veh		31.8			26.3			31.0			28.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		45.0		45.0		45.0		45.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green Setting (Gmax), s		39.9		* 40		39.9		* 40
Max Q Clear Time (g_c+I1), s		41.9		41.8		38.7		37.1
Green Ext Time (p_c), s		0.0		0.0		0.9		1.4

Intersection Summary	
HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	661	52	93	544	103	77	893	254	85	876	138
Future Volume (veh/h)	96	661	52	93	544	103	77	893	254	85	876	138
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	718	57	101	591	112	84	971	276	92	952	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	217	827	701	146	827	701	179	1212	343	140	1364	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Unsig. Movement Delay												
Ln Grp Delay, s/veh	36.4	32.5	14.6	55.4	23.4	15.2	43.6	29.9	30.4	62.6	25.3	25.3
Ln Grp LOS	D	C	B	E	C	B	D	C	C	E	C	C
Approach Vol, veh/h		879			804			1331			1194	
Approach Delay, s/veh		31.8			26.3			31.0			28.2	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		45.0		45.0		45.0		45.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		39.9		* 40		39.9		* 40
Max Allow Headway (MAH), s		5.4		5.1		5.4		5.1
Max Q Clear (g_c+I1), s		41.9		41.8		38.7		37.1
Green Ext Time (g_e), s		0.0		0.0		0.9		1.4
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		1.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		446		696		512		744
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3076		1870		2734		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		484		1585		774		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	92	0	101	0	84	0	104
Grp Sat Flow (s), veh/h/ln	0	446	0	696	0	512	0	744
Q Serve Time (g_s), s	0.0	12.1	0.0	8.5	0.0	14.3	0.0	11.9
Cycle Q Clear Time (g_c), s	0.0	39.9	0.0	39.8	0.0	36.7	0.0	35.1
Perm LT Sat Flow (s_l), veh/h/ln	0	446	0	696	0	512	0	744
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	39.9	0.0	39.8	0.0	39.9	0.0	39.8
Perm LT Serve Time (g_u), s	0.0	12.1	0.0	8.5	0.0	17.4	0.0	16.6
Perm LT Q Serve Time (g_ps), s	0.0	12.1	0.0	8.5	0.0	14.3	0.0	11.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	140	0	146	0	179	0	217
V/C Ratio (X)	0.00	0.66	0.00	0.69	0.00	0.47	0.00	0.48
Avail Cap (c_a), veh/h	0	140	0	146	0	179	0	217
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	41.0	0.0	42.2	0.0	35.0	0.0	34.8
Incr Delay (d2), s/veh	0.0	21.6	0.0	13.1	0.0	8.6	0.0	1.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	62.6	0.0	55.4	0.0	43.6	0.0	36.4
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	2.2	0.0	1.7	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.5	0.0	0.4	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	5.1	0.0	4.9	0.0	3.9	0.0	3.9
%ile Storage Ratio (RQ%)	0.00	2.00	0.00	0.89	0.00	1.40	0.00	0.91
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	550	0	591	0	630	0	718
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	22.4	0.0	23.2	0.0	27.5	0.0	31.3
Cycle Q Clear Time (g_c), s	0.0	22.4	0.0	23.2	0.0	27.5	0.0	31.3
Lane Grp Cap (c), veh/h	0	788	0	827	0	788	0	827
V/C Ratio (X)	0.00	0.70	0.00	0.71	0.00	0.80	0.00	0.87
Avail Cap (c_a), veh/h	0	788	0	827	0	788	0	827
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	20.2	0.0	20.5	0.0	21.6	0.0	22.7
Incr Delay (d2), s/veh	0.0	5.1	0.0	2.9	0.0	8.3	0.0	9.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.3	0.0	23.4	0.0	29.9	0.0	32.5
1st-Term Q (Q1), veh/ln	0.0	8.6	0.0	9.4	0.0	10.5	0.0	12.6
2nd-Term Q (Q2), veh/ln	0.0	1.1	0.0	0.7	0.0	1.8	0.0	2.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.53	0.00	1.52	0.00	1.47	0.00	1.43
%ile Back of Q (95%), veh/ln	0.0	14.8	0.0	15.2	0.0	18.1	0.0	21.2
%ile Storage Ratio (RQ%)	0.00	0.51	0.00	0.42	0.00	0.33	0.00	0.58
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	552	0	112	0	617	0	57
Grp Sat Flow (s), veh/h/ln	0	1783	0	1585	0	1731	0	1585
Q Serve Time (g_s), s	0.0	22.5	0.0	3.8	0.0	27.8	0.0	1.9
Cycle Q Clear Time (g_c), s	0.0	22.5	0.0	3.8	0.0	27.8	0.0	1.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.27	0.00	1.00	0.00	0.45	0.00	1.00
Lane Grp Cap (c), veh/h	0	791	0	701	0	767	0	701
V/C Ratio (X)	0.00	0.70	0.00	0.16	0.00	0.80	0.00	0.08
Avail Cap (c_a), veh/h	0	791	0	701	0	767	0	701
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	20.2	0.0	15.1	0.0	21.7	0.0	14.5
Incr Delay (d2), s/veh	0.0	5.1	0.0	0.1	0.0	8.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.3	0.0	15.2	0.0	30.4	0.0	14.6
1st-Term Q (Q1), veh/ln	0.0	8.6	0.0	1.3	0.0	10.4	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	1.1	0.0	0.0	0.0	1.9	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.53	0.00	1.80	0.00	1.47	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	14.9	0.0	2.4	0.0	18.0	0.0	1.2
%ile Storage Ratio (RQ%)	0.00	0.52	0.00	0.61	0.00	0.33	0.00	0.35
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	14.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	1	41	25	2	47	31	920	23	47	1308	23
Future Vol, veh/h	30	1	41	25	2	47	31	920	23	47	1308	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	1	45	27	2	51	34	1000	25	51	1422	25

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2106	2630	724	1752	2630	513	1447	0	0	1025	0	0
Stage 1	1537	1537	-	1081	1081	-	-	-	-	-	-	-
Stage 2	569	1093	-	671	1549	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	7.14	6.99	6.54	6.94	5.34	-	-	4.14	-	-
Critical Hdwy Stg 1	7.34	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.92	3.67	4.02	3.32	3.12	-	-	2.22	-	-
Pot Cap-1 Maneuver	40	23	316	70	23	506	237	-	-	673	-	-
Stage 1	85	176	-	227	292	-	-	-	-	-	-	-
Stage 2	460	288	-	386	174	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 27	18	316	48	18	506	237	-	-	673	-	-
Mov Cap-2 Maneuver	~ 27	18	-	48	18	-	-	-	-	-	-	-
Stage 1	73	163	-	195	250	-	-	-	-	-	-	-
Stage 2	351	247	-	304	161	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 378.8	114.3	0.7	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	237	-	-	56	102	673	-	-
HCM Lane V/C Ratio	0.142	-	-	1.398	0.789	0.076	-	-
HCM Control Delay (s)	22.7	-	-	$ 378.8	114.3	10.8	-	-
HCM Lane LOS	C	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	7	4.3	0.2	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	942	144	179	964	236	209	865	187	249	611	152
Future Volume (veh/h)	188	942	144	179	964	236	209	865	187	249	611	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	204	1024	157	195	1048	257	227	940	203	271	664	165
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	2262	1009	407	1795	438	232	995	536	345	677	168
Arrive On Green	0.06	0.64	0.64	0.02	0.21	0.21	0.13	0.28	0.28	0.10	0.24	0.24
Sat Flow, veh/h	1781	3554	1585	1781	2832	691	1781	3554	1585	3456	2821	700
Grp Volume(v), veh/h	204	1024	157	195	656	649	227	940	203	271	418	411
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1746	1781	1777	1585	1728	1777	1744
Q Serve(g_s), s	4.0	14.7	4.2	3.6	33.2	33.5	12.7	25.9	9.7	7.7	23.4	23.4
Cycle Q Clear(g_c), s	4.0	14.7	4.2	3.6	33.2	33.5	12.7	25.9	9.7	7.7	23.4	23.4
Prop In Lane	1.00		1.00	1.00		0.40	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	306	2262	1009	407	1126	1107	232	995	536	345	426	419
V/C Ratio(X)	0.67	0.45	0.16	0.48	0.58	0.59	0.98	0.94	0.38	0.78	0.98	0.98
Avail Cap(c_a), veh/h	340	2262	1009	464	1126	1107	232	995	536	346	426	419
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	9.3	7.9	7.5	27.6	27.7	43.4	35.2	25.1	44.0	37.8	37.8
Incr Delay (d2), s/veh	4.3	0.7	0.3	0.9	2.2	2.3	53.4	17.2	0.9	11.3	38.4	39.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.1	9.0	2.4	2.4	23.0	22.8	13.8	19.1	6.6	6.8	20.6	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	9.9	8.3	8.3	29.8	30.0	96.7	52.4	26.1	55.2	76.2	76.9
LnGrp LOS	C	A	A	A	C	C	F	D	C	E	E	E
Approach Vol, veh/h		1385			1500			1370			1100	
Approach Delay, s/veh		11.3			27.1			55.8			71.3	
Approach LOS		B			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	68.8	14.0	33.0	8.8	69.1	18.0	29.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green Setting (Gmax), s	8.0	38.6	10.0	* 26	9.0	37.6	* 13	* 24
Max Q Clear Time (g_c+I1), s	6.0	35.5	9.7	27.9	5.6	16.7	14.7	25.4
Green Ext Time (p_c), s	0.1	2.7	0.0	0.0	0.2	13.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.4
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	942	144	179	964	236	209	865	187	249	611	152
Future Volume (veh/h)	188	942	144	179	964	236	209	865	187	249	611	152
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	204	1024	157	195	1048	257	227	940	203	271	664	165
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	306	2262	1009	407	1795	438	232	995	536	345	677	168
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.64	0.64	0.02	0.21	0.21	0.13	0.28	0.28	0.10	0.24	0.24
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.5	9.9	8.3	8.3	29.8	30.0	96.7	52.4	26.1	55.2	76.2	76.9
Ln Grp LOS	C	A	A	A	C	C	F	D	C	E	E	E
Approach Vol, veh/h		1385			1500			1370			1100	
Approach Delay, s/veh		11.3			27.1			55.8			71.3	
Approach LOS		B			C			E			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	9.0	68.8	14.0	33.0	8.8	69.1	29.0	18.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	8.0	38.6	10.0	* 26	9.0	37.6	* 24	* 13
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.9	3.8	7.0	6.7	3.8
Max Q Clear (g_c+I1), s	6.0	35.5	9.7	27.9	5.6	16.7	25.4	14.7
Green Ext Time (g_e), s	0.1	2.7	0.0	0.0	0.2	13.0	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2832		3554		3554	2821	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		691		1585		1585	700	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	204	0	271	0	195	0	0	227
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	4.0	0.0	7.7	0.0	3.6	0.0	0.0	12.7
Cycle Q Clear Time (g_c), s	4.0	0.0	7.7	0.0	3.6	0.0	0.0	12.7
Perm LT Sat Flow (s_l), veh/h/ln	422	0	0	0	475	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	63.4	0.0	0.0	0.0	63.4	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	29.8	0.0	0.0	0.0	48.8	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	29.8	0.0	0.0	0.0	10.9	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	306	0	345	0	407	0	0	232
V/C Ratio (X)	0.67	0.00	0.78	0.00	0.48	0.00	0.00	0.98
Avail Cap (c_a), veh/h	340	0	346	0	464	0	0	232
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	16.2	0.0	44.0	0.0	7.5	0.0	0.0	43.4
Incr Delay (d2), s/veh	4.3	0.0	11.3	0.0	0.9	0.0	0.0	53.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	20.5	0.0	55.2	0.0	8.3	0.0	0.0	96.7
1st-Term Q (Q1), veh/ln	2.5	0.0	3.2	0.0	1.2	0.0	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.5	0.0	0.1	0.0	0.0	3.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	0.00	1.55
%ile Back of Q (95%), veh/ln	5.1	0.0	6.8	0.0	2.4	0.0	0.0	13.8
%ile Storage Ratio (RQ%)	0.89	0.00	0.86	0.00	0.32	0.00	0.00	3.89
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	656	0	940	0	1024	418	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	33.2	0.0	25.9	0.0	14.7	23.4	0.0
Cycle Q Clear Time (g_c), s	0.0	33.2	0.0	25.9	0.0	14.7	23.4	0.0
Lane Grp Cap (c), veh/h	0	1126	0	995	0	2262	426	0
V/C Ratio (X)	0.00	0.58	0.00	0.94	0.00	0.45	0.98	0.00
Avail Cap (c_a), veh/h	0	1126	0	995	0	2262	426	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	27.6	0.0	35.2	0.0	9.3	37.8	0.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	17.2	0.0	0.7	38.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	29.8	0.0	52.4	0.0	9.9	76.2	0.0
1st-Term Q (Q1), veh/ln	0.0	15.7	0.0	10.8	0.0	5.0	9.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	2.4	0.0	0.2	4.5	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.41	0.00	1.45	0.00	1.72	1.43	0.00
%ile Back of Q (95%), veh/ln	0.0	23.0	0.0	19.1	0.0	9.0	20.6	0.0
%ile Storage Ratio (RQ%)	0.00	1.04	0.00	0.63	0.00	0.17	1.44	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	649	0	203	0	157	411	0
Grp Sat Flow (s), veh/h/ln	0	1746	0	1585	0	1585	1744	0
Q Serve Time (g_s), s	0.0	33.5	0.0	9.7	0.0	4.2	23.4	0.0
Cycle Q Clear Time (g_c), s	0.0	33.5	0.0	9.7	0.0	4.2	23.4	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.40	0.00	1.00	0.00	1.00	0.40	0.00
Lane Grp Cap (c), veh/h	0	1107	0	536	0	1009	419	0
V/C Ratio (X)	0.00	0.59	0.00	0.38	0.00	0.16	0.98	0.00
Avail Cap (c_a), veh/h	0	1107	0	536	0	1009	419	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	27.7	0.0	25.1	0.0	7.9	37.8	0.0
Incr Delay (d2), s/veh	0.0	2.3	0.0	0.9	0.0	0.3	39.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.0	0.0	26.1	0.0	8.3	76.9	0.0
1st-Term Q (Q1), veh/ln	0.0	15.5	0.0	3.6	0.0	1.2	9.7	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.1	0.0	0.1	4.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.41	0.00	1.80	0.00	1.80	1.43	0.00
%ile Back of Q (95%), veh/ln	0.0	22.8	0.0	6.6	0.0	2.4	20.4	0.0
%ile Storage Ratio (RQ%)	0.00	1.03	0.00	1.88	0.00	0.52	1.43	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.4
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	44.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1476	28	55	1168	42	5	2	11	38	2	63
Future Vol, veh/h	18	1476	28	55	1168	42	5	2	11	38	2	63
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	1604	30	60	1270	46	5	2	12	41	2	68

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1316	0	0	1634	0	0	2415	3095	817	2256	3087	658
Stage 1	-	-	-	-	-	-	1659	1659	-	1413	1413	-
Stage 2	-	-	-	-	-	-	756	1436	-	843	1674	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	521	-	-	393	-	-	17	12	320	~ 22	12	407
Stage 1	-	-	-	-	-	-	102	153	-	145	202	-
Stage 2	-	-	-	-	-	-	366	197	-	325	151	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	521	-	-	393	-	-	10	10	320	~ 15	10	407
Mov Cap-2 Maneuver	-	-	-	-	-	-	10	10	-	~ 15	10	-
Stage 1	-	-	-	-	-	-	98	147	-	139	171	-
Stage 2	-	-	-	-	-	-	255	167	-	296	145	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.7	$ 330.5	$ 1184.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	25	521	-	-	393	-	-	36
HCM Lane V/C Ratio	0.783	0.038	-	-	0.152	-	-	3.11
HCM Control Delay (s)	$ 330.5	12.2	-	-	15.8	-	-	$ 1184.1
HCM Lane LOS	F	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	2.4	0.1	-	-	0.5	-	-	12.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	261	947	229	26	1021	324	119	195	9	232	152	194
Future Volume (veh/h)	261	947	229	26	1021	324	119	195	9	232	152	194
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	284	1029	249	28	1110	352	129	212	10	252	165	211
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	403	2994	1335	387	2625	1171	221	372	18	311	671	670
Arrive On Green	0.08	1.00	1.00	0.74	0.74	0.74	0.21	0.21	0.21	0.09	0.36	0.36
Sat Flow, veh/h	1781	3554	1585	433	3554	1585	1007	1772	84	3456	1870	1585
Grp Volume(v), veh/h	284	1029	249	28	1110	352	129	0	222	252	165	211
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	433	1777	1585	1007	0	1855	1728	1870	1585
Q Serve(g_s), s	3.5	0.0	0.0	1.9	11.9	10.6	12.5	0.0	10.7	7.2	6.2	8.9
Cycle Q Clear(g_c), s	3.5	0.0	0.0	2.9	11.9	10.6	18.7	0.0	10.7	7.2	6.2	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	403	2994	1335	387	2625	1171	221	0	389	311	671	670
V/C Ratio(X)	0.70	0.34	0.19	0.07	0.42	0.30	0.58	0.00	0.57	0.81	0.25	0.31
Avail Cap(c_a), veh/h	539	2994	1335	387	2625	1171	231	0	408	311	671	670
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.1	0.0	0.0	4.0	5.0	8.9	41.6	0.0	35.5	44.7	22.5	19.2
Incr Delay (d2), s/veh	2.7	0.3	0.3	0.4	0.5	0.7	3.5	0.0	1.7	14.8	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	0.2	0.2	0.3	6.4	6.6	6.0	0.0	8.7	6.5	4.8	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.8	0.3	0.3	4.3	5.5	9.6	45.1	0.0	37.2	59.5	22.7	19.5
LnGrp LOS	A	A	A	A	A	A	D	A	D	E	C	B
Approach Vol, veh/h		1562			1490			351			628	
Approach Delay, s/veh		2.0			6.4			40.1			36.4	
Approach LOS		A			A			D			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	10.2	79.8		41.8		90.0	14.9	26.9				
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9				
Max Green Setting (Gmax), s	14.0	* 36		35.0		54.2	9.0	* 22				
Max Q Clear Time (g_c+I1), s	5.5	13.9		10.9		2.0	9.2	20.7				
Green Ext Time (p_c), s	0.5	10.3		1.5		10.7	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay			12.3									
HCM 6th LOS			B									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	261	947	229	26	1021	324	119	195	9	232	152	194
Future Volume (veh/h)	261	947	229	26	1021	324	119	195	9	232	152	194
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	284	1029	249	28	1110	352	129	212	10	252	165	211
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	403	2994	1335	387	2625	1171	221	372	18	311	671	670
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	1.00	1.00	0.74	0.74	0.74	0.21	0.21	0.21	0.09	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	9.8	0.3	0.3	4.3	5.5	9.6	45.1	0.0	37.2	59.5	22.7	19.5
Ln Grp LOS	A	A	A	A	A	A	D	A	D	E	C	B
Approach Vol, veh/h		1562			1490			351			628	
Approach Delay, s/veh		2.0			6.4			40.1			36.4	
Approach LOS		A			A			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	10.2	79.8		41.8		90.0	26.9	14.9
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	14.0	* 36		35.0		54.2	* 22	9.0
Max Allow Headway (MAH), s	3.8	4.9		4.4		4.9	5.2	3.7
Max Q Clear (g_c+I1), s	5.5	13.9		10.9		2.0	20.7	9.2
Green Ext Time (g_e), s	0.5	10.3		1.5		10.7	0.3	0.0
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	0.05	0.00		0.00		0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	433					1007	3456
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1772	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	84	
Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	284	28	0	0	0	0	129	252
Grp Sat Flow (s), veh/h/ln	1781	433	0	0	0	0	1007	1728
Q Serve Time (g_s), s	3.5	1.9	0.0	0.0	0.0	0.0	12.5	7.2
Cycle Q Clear Time (g_c), s	3.5	2.9	0.0	0.0	0.0	0.0	18.7	7.2
Perm LT Sat Flow (s_l), veh/h/ln	363	433	0	0	0	0	1007	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	75.9	73.9	0.0	0.0	0.0	0.0	21.0	0.0
Perm LT Serve Time (g_u), s	60.0	72.8	0.0	0.0	0.0	0.0	14.8	0.0
Perm LT Q Serve Time (g_ps), s	51.7	1.9	0.0	0.0	0.0	0.0	12.5	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	403	387	0	0	0	0	221	311
V/C Ratio (X)	0.70	0.07	0.00	0.00	0.00	0.00	0.58	0.81
Avail Cap (c_a), veh/h	539	387	0	0	0	0	231	311
Upstream Filter (I)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	7.1	4.0	0.0	0.0	0.0	0.0	41.6	44.7
Incr Delay (d2), s/veh	2.7	0.4	0.0	0.0	0.0	0.0	3.5	14.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	9.8	4.3	0.0	0.0	0.0	0.0	45.1	59.5
1st-Term Q (Q1), veh/ln	1.5	0.1	0.0	0.0	0.0	0.0	3.1	3.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.80
%ile Back of Q (95%), veh/ln	3.3	0.3	0.0	0.0	0.0	0.0	6.0	6.5
%ile Storage Ratio (RQ%)	0.84	0.05	0.00	0.00	0.00	0.00	1.52	0.74
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	1110	0	165	0	1029	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	11.9	0.0	6.2	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.9	0.0	6.2	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2625	0	671	0	2994	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.25	0.00	0.34	0.00	0.00
Avail Cap (c_a), veh/h	0	2625	0	671	0	2994	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.0	0.0	22.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.2	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.5	0.0	22.7	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.4	0.0	2.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	6.4	0.0	4.8	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.15	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	352	0	211	0	249	222	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1855	0
Q Serve Time (g_s), s	0.0	10.6	0.0	8.9	0.0	0.0	10.7	0.0
Cycle Q Clear Time (g_c), s	0.0	10.6	0.0	8.9	0.0	0.0	10.7	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	6.4	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.05	0.00
Lane Grp Cap (c), veh/h	0	1171	0	670	0	1335	389	0
V/C Ratio (X)	0.00	0.30	0.00	0.31	0.00	0.19	0.57	0.00
Avail Cap (c_a), veh/h	0	1171	0	670	0	1335	408	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	8.9	0.0	19.2	0.0	0.0	35.5	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.3	0.0	0.3	1.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.6	0.0	19.5	0.0	0.3	37.2	0.0
1st-Term Q (Q1), veh/ln	0.0	3.5	0.0	3.2	0.0	0.0	4.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.73	0.00
%ile Back of Q (95%), veh/ln	0.0	6.6	0.0	5.9	0.0	0.2	8.7	0.0
%ile Storage Ratio (RQ%)	0.00	1.68	0.00	0.67	0.00	0.05	0.78	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

Notes

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

HCM 6th Signalized Intersection Summary
1: Coldwater Canyon Avenue & Moorpark Street

05/18/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	732	50	60	490	100	59	564	76	116	496	137
Future Volume (veh/h)	112	732	50	60	490	100	59	564	76	116	496	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	796	54	65	533	109	64	613	83	126	539	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	938	795	166	938	795	256	1208	163	256	1057	291
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	787	1870	1585	649	1870	1585	755	3146	425	749	2753	758
Grp Volume(v), veh/h	122	796	54	65	533	109	64	346	350	126	347	341
Grp Sat Flow(s),veh/h/ln	787	1870	1585	649	1870	1585	755	1777	1794	749	1777	1734
Q Serve(g_s), s	11.5	33.2	1.6	8.7	17.9	3.3	6.4	13.4	13.4	13.9	13.5	13.6
Cycle Q Clear(g_c), s	29.4	33.2	1.6	41.9	17.9	3.3	20.0	13.4	13.4	27.4	13.5	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		0.44
Lane Grp Cap(c), veh/h	318	938	795	166	938	795	256	682	689	256	682	666
V/C Ratio(X)	0.38	0.85	0.07	0.39	0.57	0.14	0.25	0.51	0.51	0.49	0.51	0.51
Avail Cap(c_a), veh/h	333	973	824	178	973	824	256	682	689	256	682	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	19.5	11.6	37.7	15.6	12.0	28.9	21.2	21.2	31.7	21.2	21.2
Incr Delay (d2), s/veh	0.8	7.0	0.0	1.5	0.7	0.1	2.3	2.7	2.7	6.6	2.7	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	21.1	1.0	2.5	11.6	2.0	2.3	9.7	9.8	5.2	9.8	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	26.5	11.6	39.2	16.4	12.1	31.2	23.9	23.9	38.3	23.9	24.0
LnGrp LOS	C	C	B	D	B	B	C	C	C	D	C	C
Approach Vol, veh/h		972			707			760			814	
Approach Delay, s/veh		25.7			17.8			24.5			26.2	
Approach LOS		C			B			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		39.7		50.3		39.7		50.3				
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2				
Max Green Setting (Gmax), s		32.9		* 47		32.9		* 47				
Max Q Clear Time (g_c+I1), s		29.4		43.9		22.0		35.2				
Green Ext Time (p_c), s		1.7		1.2		3.5		5.0				
Intersection Summary												
HCM 6th Ctrl Delay			23.8									
HCM 6th LOS			C									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	732	50	60	490	100	59	564	76	116	496	137
Future Volume (veh/h)	112	732	50	60	490	100	59	564	76	116	496	137
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	796	54	65	533	109	64	613	83	126	539	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	318	938	795	166	938	795	256	1208	163	256	1057	291
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.38	0.38	0.38	0.38	0.38	0.38
Unsig. Movement Delay												
Ln Grp Delay, s/veh	26.6	26.5	11.6	39.2	16.4	12.1	31.2	23.9	23.9	38.3	23.9	24.0
Ln Grp LOS	C	C	B	D	B	B	C	C	C	D	C	C
Approach Vol, veh/h		972			707			760			814	
Approach Delay, s/veh		25.7			17.8			24.5			26.2	
Approach LOS		C			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		39.7		50.3		39.7		50.3
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		32.9		* 47		32.9		* 47
Max Allow Headway (MAH), s		5.3		5.1		5.2		5.1
Max Q Clear (g_c+I1), s		29.4		43.9		22.0		35.2
Green Ext Time (g_e), s		1.7		1.2		3.5		5.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		0.49

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		749		649		755		787

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2753		1870		3146		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		758		1585		425		1585

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	126	0	65	0	64	0	122
Grp Sat Flow (s), veh/h/ln	0	749	0	649	0	755	0	787
Q Serve Time (g_s), s	0.0	13.9	0.0	8.7	0.0	6.4	0.0	11.5
Cycle Q Clear Time (g_c), s	0.0	27.4	0.0	41.9	0.0	20.0	0.0	29.4
Perm LT Sat Flow (s_l), veh/h/ln	0	749	0	649	0	755	0	787
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	34.6	0.0	45.1	0.0	34.6	0.0	45.1
Perm LT Serve Time (g_u), s	0.0	21.1	0.0	11.9	0.0	21.0	0.0	27.3
Perm LT Q Serve Time (g_ps), s	0.0	13.9	0.0	8.7	0.0	6.4	0.0	11.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	256	0	166	0	256	0	318
V/C Ratio (X)	0.00	0.49	0.00	0.39	0.00	0.25	0.00	0.38
Avail Cap (c_a), veh/h	0	256	0	178	0	256	0	333
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.7	0.0	37.7	0.0	28.9	0.0	25.9
Incr Delay (d2), s/veh	0.0	6.6	0.0	1.5	0.0	2.3	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.3	0.0	39.2	0.0	31.2	0.0	26.6
1st-Term Q (Q1), veh/ln	0.0	2.4	0.0	1.3	0.0	1.1	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.1	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	5.2	0.0	2.5	0.0	2.3	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	2.04	0.00	0.46	0.00	0.84	0.00	0.89
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	347	0	533	0	346	0	796
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	13.5	0.0	17.9	0.0	13.4	0.0	33.2
Cycle Q Clear Time (g_c), s	0.0	13.5	0.0	17.9	0.0	13.4	0.0	33.2
Lane Grp Cap (c), veh/h	0	682	0	938	0	682	0	938
V/C Ratio (X)	0.00	0.51	0.00	0.57	0.00	0.51	0.00	0.85
Avail Cap (c_a), veh/h	0	682	0	973	0	682	0	973
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.2	0.0	15.6	0.0	21.2	0.0	19.5
Incr Delay (d2), s/veh	0.0	2.7	0.0	0.7	0.0	2.7	0.0	7.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.9	0.0	16.4	0.0	23.9	0.0	26.5
1st-Term Q (Q1), veh/ln	0.0	5.3	0.0	7.0	0.0	5.3	0.0	13.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.2	0.0	0.5	0.0	1.8

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.68	0.00	1.61	0.00	1.68	0.00	1.43
%ile Back of Q (95%), veh/ln	0.0	9.8	0.0	11.6	0.0	9.7	0.0	21.1
%ile Storage Ratio (RQ%)	0.00	0.34	0.00	0.32	0.00	0.18	0.00	0.57
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	341	0	109	0	350	0	54
Grp Sat Flow (s), veh/h/ln	0	1734	0	1585	0	1794	0	1585
Q Serve Time (g_s), s	0.0	13.6	0.0	3.3	0.0	13.4	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	13.6	0.0	3.3	0.0	13.4	0.0	1.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.44	0.00	1.00	0.00	0.24	0.00	1.00
Lane Grp Cap (c), veh/h	0	666	0	795	0	689	0	795
V/C Ratio (X)	0.00	0.51	0.00	0.14	0.00	0.51	0.00	0.07
Avail Cap (c_a), veh/h	0	666	0	824	0	689	0	824
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.2	0.0	12.0	0.0	21.2	0.0	11.6
Incr Delay (d2), s/veh	0.0	2.8	0.0	0.1	0.0	2.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.0	0.0	12.1	0.0	23.9	0.0	11.6
1st-Term Q (Q1), veh/ln	0.0	5.2	0.0	1.1	0.0	5.4	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.68	0.00	1.80	0.00	1.68	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	9.7	0.0	2.0	0.0	9.8	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.33	0.00	0.51	0.00	0.18	0.00	0.29
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		23.8						
HCM 6th LOS		C						

Notes

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

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	4	73	61	6	113	24	489	47	96	527	10
Future Vol, veh/h	36	4	73	61	6	113	24	489	47	96	527	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	4	79	66	7	123	26	532	51	104	573	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1109	1422	292	1049	1402	292	584	0	0	583	0	0
Stage 1	787	787	-	610	610	-	-	-	-	-	-	-
Stage 2	322	635	-	439	792	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	7.14	6.99	6.54	6.94	5.34	-	-	4.14	-	-
Critical Hdwy Stg 1	7.34	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.92	3.67	4.02	3.32	3.12	-	-	2.22	-	-
Pot Cap-1 Maneuver	190	135	601	208	139	704	618	-	-	987	-	-
Stage 1	287	401	-	435	483	-	-	-	-	-	-	-
Stage 2	641	471	-	535	399	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	134	116	601	156	119	704	618	-	-	987	-	-
Mov Cap-2 Maneuver	134	116	-	156	119	-	-	-	-	-	-	-
Stage 1	275	359	-	417	463	-	-	-	-	-	-	-
Stage 2	500	451	-	410	357	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	29.6	37.2	0.5	1.4
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	618	-	-	266	299	987	-	-
HCM Lane V/C Ratio	0.042	-	-	0.462	0.654	0.106	-	-
HCM Control Delay (s)	11.1	-	-	29.6	37.2	9.1	-	-
HCM Lane LOS	B	-	-	D	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.3	4.3	0.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	916	126	155	626	124	94	307	148	228	371	34
Future Volume (veh/h)	102	916	126	155	626	124	94	307	148	228	371	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	996	137	168	680	135	102	334	161	248	403	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	501	1825	814	349	1569	311	130	524	337	345	542	50
Arrive On Green	0.05	0.51	0.51	0.13	1.00	1.00	0.07	0.15	0.15	0.10	0.16	0.16
Sat Flow, veh/h	1781	3554	1585	1781	2955	586	1781	3554	1585	3456	3292	301
Grp Volume(v), veh/h	111	996	137	168	409	406	102	334	161	248	217	223
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1765	1781	1777	1585	1728	1777	1816
Q Serve(g_s), s	2.9	18.9	2.9	4.5	0.0	0.0	5.6	8.8	8.9	7.0	11.6	11.7
Cycle Q Clear(g_c), s	2.9	18.9	2.9	4.5	0.0	0.0	5.6	8.8	8.9	7.0	11.6	11.7
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	501	1825	814	349	943	937	130	524	337	345	292	299
V/C Ratio(X)	0.22	0.55	0.17	0.48	0.43	0.43	0.79	0.64	0.48	0.72	0.74	0.75
Avail Cap(c_a), veh/h	541	1825	814	393	943	937	196	853	484	346	426	436
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.3	16.4	5.2	11.5	0.0	0.0	45.6	40.1	34.5	43.6	39.7	39.8
Incr Delay (d2), s/veh	0.2	1.2	0.4	1.0	1.4	1.5	11.4	2.7	2.2	7.0	6.4	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	12.0	2.9	2.8	0.7	0.7	5.1	7.2	6.4	5.9	9.3	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	17.6	5.7	12.5	1.4	1.5	57.0	42.9	36.7	50.7	46.1	46.3
LnGrp LOS	B	B	A	B	A	A	E	D	D	D	D	D
Approach Vol, veh/h		1244			983			597			688	
Approach Delay, s/veh		15.7			3.3			43.6			47.8	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	58.5	14.0	19.7	9.5	56.8	12.3	21.5
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green Setting (Gmax), s	7.0	41.6	10.0	* 24	9.0	39.6	* 11	* 24
Max Q Clear Time (g_c+I1), s	4.9	2.0	9.0	10.9	6.5	20.9	7.6	13.7
Green Ext Time (p_c), s	0.0	12.1	0.1	3.8	0.1	11.6	0.1	2.7

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	916	126	155	626	124	94	307	148	228	371	34
Future Volume (veh/h)	102	916	126	155	626	124	94	307	148	228	371	34
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	996	137	168	680	135	102	334	161	248	403	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	501	1825	814	349	1569	311	130	524	337	345	542	50
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.51	0.51	0.13	1.00	1.00	0.07	0.15	0.15	0.10	0.16	0.16
Unsig. Movement Delay												
Ln Grp Delay, s/veh	10.5	17.6	5.7	12.5	1.4	1.5	57.0	42.9	36.7	50.7	46.1	46.3
Ln Grp LOS	B	B	A	B	A	A	E	D	D	D	D	D
Approach Vol, veh/h		1244			983			597			688	
Approach Delay, s/veh		15.7			3.3			43.6			47.8	
Approach LOS		B			A			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	7.8	58.5	14.0	19.7	9.5	56.8	21.5	12.3
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	7.0	41.6	10.0	* 24	9.0	39.6	* 24	* 11
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.8	3.8	7.0	6.6	3.8
Max Q Clear (g_c+l1), s	4.9	2.0	9.0	10.9	6.5	20.9	13.7	7.6
Green Ext Time (g_e), s	0.0	12.1	0.1	3.8	0.1	11.6	2.7	0.1
Prob of Phs Call (p_c)	0.95	1.00	1.00	1.00	0.99	1.00	1.00	0.94
Prob of Max Out (p_x)	1.00	0.00	1.00	0.35	1.00	0.00	0.51	1.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2955		3554		3554	3292	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		586		1585		1585	301	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	111	0	248	0	168	0	0	102
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	2.9	0.0	7.0	0.0	4.5	0.0	0.0	5.6
Cycle Q Clear Time (g_c), s	2.9	0.0	7.0	0.0	4.5	0.0	0.0	5.6
Perm LT Sat Flow (s_l), veh/h/ln	670	0	0	0	497	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	51.4	0.0	0.0	0.0	52.1	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	51.4	0.0	0.0	0.0	32.4	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	501	0	345	0	349	0	0	130
V/C Ratio (X)	0.22	0.00	0.72	0.00	0.48	0.00	0.00	0.79
Avail Cap (c_a), veh/h	541	0	346	0	393	0	0	196
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	10.3	0.0	43.6	0.0	11.5	0.0	0.0	45.6
Incr Delay (d2), s/veh	0.2	0.0	7.0	0.0	1.0	0.0	0.0	11.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	10.5	0.0	50.7	0.0	12.5	0.0	0.0	57.0
1st-Term Q (Q1), veh/ln	1.1	0.0	2.9	0.0	1.4	0.0	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	2.0	0.0	5.9	0.0	2.8	0.0	0.0	5.1
%ile Storage Ratio (RQ%)	0.35	0.00	0.75	0.00	0.36	0.00	0.00	1.45
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	409	0	334	0	996	217	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	0.0	0.0	8.8	0.0	18.9	11.6	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	8.8	0.0	18.9	11.6	0.0
Lane Grp Cap (c), veh/h	0	943	0	524	0	1825	292	0
V/C Ratio (X)	0.00	0.43	0.00	0.64	0.00	0.55	0.74	0.00
Avail Cap (c_a), veh/h	0	943	0	853	0	1825	426	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	40.1	0.0	16.4	39.7	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	2.7	0.0	1.2	6.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.4	0.0	42.9	0.0	17.6	46.1	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.8	0.0	7.2	5.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.3	0.5	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.60	1.70	0.00
%ile Back of Q (95%), veh/ln	0.0	0.7	0.0	7.2	0.0	12.0	9.3	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.24	0.00	0.23	0.65	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	406	0	161	0	137	223	0
Grp Sat Flow (s), veh/h/ln	0	1765	0	1585	0	1585	1816	0
Q Serve Time (g_s), s	0.0	0.0	0.0	8.9	0.0	2.9	11.7	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	8.9	0.0	2.9	11.7	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.33	0.00	1.00	0.00	1.00	0.17	0.00
Lane Grp Cap (c), veh/h	0	937	0	337	0	814	299	0
V/C Ratio (X)	0.00	0.43	0.00	0.48	0.00	0.17	0.75	0.00
Avail Cap (c_a), veh/h	0	937	0	484	0	814	436	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	34.5	0.0	5.2	39.8	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	2.2	0.0	0.4	6.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.5	0.0	36.7	0.0	5.7	46.3	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.4	0.0	1.5	5.1	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.1	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.69	0.00
%ile Back of Q (95%), veh/ln	0.0	0.7	0.0	6.4	0.0	2.9	9.6	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	1.81	0.00	0.63	0.67	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		23.3						
HCM 6th LOS		C						

Notes

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

Intersection	
Int Delay, s/veh	58.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	1184	42	70	853	82	4	2	16	86	3	57
Future Vol, veh/h	25	1184	42	70	853	82	4	2	16	86	3	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1287	46	76	927	89	4	2	17	93	3	62

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1016	0	0	1333	0	0	1981	2532	667	1823	2511	508
Stage 1	-	-	-	-	-	-	1364	1364	-	1124	1124	-
Stage 2	-	-	-	-	-	-	617	1168	-	699	1387	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	678	-	-	513	-	-	37	27	401	~ 48	28	510
Stage 1	-	-	-	-	-	-	155	214	-	219	279	-
Stage 2	-	-	-	-	-	-	444	266	-	397	208	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	678	-	-	513	-	-	25	22	401	~ 37	23	510
Mov Cap-2 Maneuver	-	-	-	-	-	-	25	22	-	~ 37	23	-
Stage 1	-	-	-	-	-	-	149	205	-	210	238	-
Stage 2	-	-	-	-	-	-	328	227	-	361	200	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.9	72.8	$ 959.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	76	678	-	-	513	-	-	57
HCM Lane V/C Ratio	0.315	0.04	-	-	0.148	-	-	2.784
HCM Control Delay (s)	72.8	10.5	-	-	13.2	-	-	$ 959.8
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	1.2	0.1	-	-	0.5	-	-	16.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	826	93	22	685	150	78	84	8	641	234	386
Future Volume (veh/h)	112	826	93	22	685	150	78	84	8	641	234	386
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	898	101	24	745	163	85	91	9	697	254	420
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	252	1416	631	182	1047	467	171	351	35	778	923	884
Arrive On Green	0.06	0.40	0.40	0.29	0.29	0.29	0.21	0.21	0.21	0.23	0.49	0.49
Sat Flow, veh/h	1781	3554	1585	564	3554	1585	764	1675	166	3456	1870	1585
Grp Volume(v), veh/h	122	898	101	24	745	163	85	0	100	697	254	420
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	564	1777	1585	764	0	1841	1728	1870	1585
Q Serve(g_s), s	4.6	20.3	4.1	3.6	18.7	4.3	10.9	0.0	4.5	19.6	8.0	16.0
Cycle Q Clear(g_c), s	4.6	20.3	4.1	13.5	18.7	4.3	18.8	0.0	4.5	19.6	8.0	16.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	252	1416	631	182	1047	467	171	0	386	778	923	884
V/C Ratio(X)	0.48	0.63	0.16	0.13	0.71	0.35	0.50	0.00	0.26	0.90	0.28	0.48
Avail Cap(c_a), veh/h	275	1416	631	182	1047	467	179	0	405	857	950	906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	24.2	19.3	33.9	31.5	7.7	42.6	0.0	33.0	37.6	14.8	13.3
Incr Delay (d2), s/veh	1.4	2.2	0.5	1.5	4.1	2.1	2.2	0.0	0.4	11.3	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	13.4	2.8	1.0	13.1	5.7	3.9	0.0	3.7	14.1	5.8	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	26.4	19.9	35.3	35.6	9.8	44.8	0.0	33.4	49.0	15.0	13.7
LnGrp LOS	C	C	B	D	D	A	D	A	C	D	B	B
Approach Vol, veh/h		1121			932			185			1371	
Approach Delay, s/veh		25.6			31.1			38.6			31.9	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4		6	7	8
Phs Duration (G+Y+Rc), s	10.4	34.4		55.3		44.7	28.4	26.9
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9
Max Green Setting (Gmax), s	7.7	* 27		50.8		38.4	24.8	* 22
Max Q Clear Time (g_c+I1), s	6.6	20.7		18.0		22.3	21.6	20.8
Green Ext Time (p_c), s	0.0	2.9		3.0		5.9	0.9	0.1

Intersection Summary		
HCM 6th Ctrl Delay		30.1
HCM 6th LOS		C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	826	93	22	685	150	78	84	8	641	234	386
Future Volume (veh/h)	112	826	93	22	685	150	78	84	8	641	234	386
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	898	101	24	745	163	85	91	9	697	254	420
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	252	1416	631	182	1047	467	171	351	35	778	923	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.40	0.40	0.29	0.29	0.29	0.21	0.21	0.21	0.23	0.49	0.49
Unsig. Movement Delay												
Ln Grp Delay, s/veh	24.9	26.4	19.9	35.3	35.6	9.8	44.8	0.0	33.4	49.0	15.0	13.7
Ln Grp LOS	C	C	B	D	D	A	D	A	C	D	B	B
Approach Vol, veh/h		1121			932			185			1371	
Approach Delay, s/veh		25.6			31.1			38.6			31.9	
Approach LOS		C			C			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	10.4	34.4		55.3		44.7	26.9	28.4
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	7.7	* 27		50.8		38.4	* 22	24.8
Max Allow Headway (MAH), s	3.8	5.0		4.4		5.0	5.7	3.7
Max Q Clear (g_c+I1), s	6.6	20.7		18.0		22.3	20.8	21.6
Green Ext Time (g_e), s	0.0	2.9		3.0		5.9	0.1	0.9
Prob of Phs Call (p_c)	0.97	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00		0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	564					764	3456
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1675	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	166	
Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	122	24	0	0	0	0	85	697
Grp Sat Flow (s), veh/h/ln	1781	564	0	0	0	0	764	1728
Q Serve Time (g_s), s	4.6	3.6	0.0	0.0	0.0	0.0	10.9	19.6
Cycle Q Clear Time (g_c), s	4.6	13.5	0.0	0.0	0.0	0.0	18.8	19.6
Perm LT Sat Flow (s_l), veh/h/ln	614	564	0	0	0	0	764	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	31.5	29.5	0.0	0.0	0.0	0.0	21.0	0.0
Perm LT Serve Time (g_u), s	10.7	19.5	0.0	0.0	0.0	0.0	13.0	0.0
Perm LT Q Serve Time (g_ps), s	5.1	3.6	0.0	0.0	0.0	0.0	10.9	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	252	182	0	0	0	0	171	778
V/C Ratio (X)	0.48	0.13	0.00	0.00	0.00	0.00	0.50	0.90
Avail Cap (c_a), veh/h	275	182	0	0	0	0	179	857
Upstream Filter (I)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	23.4	33.9	0.0	0.0	0.0	0.0	42.6	37.6
Incr Delay (d2), s/veh	1.4	1.5	0.0	0.0	0.0	0.0	2.2	11.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	24.9	35.3	0.0	0.0	0.0	0.0	44.8	49.0
1st-Term Q (Q1), veh/ln	1.9	0.5	0.0	0.0	0.0	0.0	2.1	7.9
2nd-Term Q (Q2), veh/ln	0.1	0.1	0.0	0.0	0.0	0.0	0.1	1.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.54
%ile Back of Q (95%), veh/ln	3.5	1.0	0.0	0.0	0.0	0.0	3.9	14.1
%ile Storage Ratio (RQ%)	0.89	0.17	0.00	0.00	0.00	0.00	0.99	1.59
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	745	0	254	0	898	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	18.7	0.0	8.0	0.0	20.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.7	0.0	8.0	0.0	20.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1047	0	923	0	1416	0	0
V/C Ratio (X)	0.00	0.71	0.00	0.28	0.00	0.63	0.00	0.00
Avail Cap (c_a), veh/h	0	1047	0	950	0	1416	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	31.5	0.0	14.8	0.0	24.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.1	0.0	0.2	0.0	2.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	35.6	0.0	15.0	0.0	26.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.8	0.0	3.2	0.0	8.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.4	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.57	0.00	1.80	0.00	1.56	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	13.1	0.0	5.8	0.0	13.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.35	0.00	0.18	0.00	0.18	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	163	0	420	0	101	100	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1841	0
Q Serve Time (g_s), s	0.0	4.3	0.0	16.0	0.0	4.1	4.5	0.0
Cycle Q Clear Time (g_c), s	0.0	4.3	0.0	16.0	0.0	4.1	4.5	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	6.4	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.09	0.00
Lane Grp Cap (c), veh/h	0	467	0	884	0	631	386	0
V/C Ratio (X)	0.00	0.35	0.00	0.48	0.00	0.16	0.26	0.00
Avail Cap (c_a), veh/h	0	467	0	906	0	631	405	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	7.7	0.0	13.3	0.0	19.3	33.0	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.0	0.4	0.0	0.5	0.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.8	0.0	13.7	0.0	19.9	33.4	0.0
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	5.5	0.0	1.5	2.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.69	0.00	1.80	1.80	0.00
%ile Back of Q (95%), veh/ln	0.0	5.7	0.0	9.5	0.0	2.8	3.7	0.0
%ile Storage Ratio (RQ%)	0.00	1.45	0.00	1.07	0.00	0.71	0.34	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	661	68	101	544	103	87	921	258	85	923	138
Future Volume (veh/h)	96	661	68	101	544	103	87	921	258	85	923	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	718	74	110	591	112	95	1001	280	92	1003	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	827	701	145	827	701	166	1217	339	132	1375	205
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	744	1870	1585	685	1870	1585	487	2745	764	432	3101	463
Grp Volume(v), veh/h	104	718	74	110	591	112	95	646	635	92	574	579
Grp Sat Flow(s),veh/h/ln	744	1870	1585	685	1870	1585	487	1777	1733	432	1777	1787
Q Serve(g_s), s	11.9	31.3	2.5	8.5	23.2	3.8	15.9	28.6	29.0	10.9	23.9	24.0
Cycle Q Clear(g_c), s	35.1	31.3	2.5	39.8	23.2	3.8	39.9	28.6	29.0	39.9	23.9	24.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	1.00		0.26
Lane Grp Cap(c), veh/h	217	827	701	145	827	701	166	788	768	132	788	792
V/C Ratio(X)	0.48	0.87	0.11	0.76	0.71	0.16	0.57	0.82	0.83	0.69	0.73	0.73
Avail Cap(c_a), veh/h	217	827	701	145	827	701	166	788	768	132	788	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	22.7	14.7	42.5	20.5	15.1	37.8	21.9	22.0	41.9	20.6	20.6
Incr Delay (d2), s/veh	1.6	9.8	0.1	20.5	2.9	0.1	13.5	9.3	9.9	26.0	5.9	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	21.2	1.5	5.8	15.2	2.4	4.8	18.9	18.8	5.3	15.7	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.4	32.5	14.8	63.0	23.4	15.2	51.3	31.3	31.9	67.9	26.5	26.5
LnGrp LOS	D	C	B	E	C	B	D	C	C	E	C	C
Approach Vol, veh/h		896			813			1376			1245	
Approach Delay, s/veh		31.5			27.6			32.9			29.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		45.0		45.0		45.0		45.0				
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2				
Max Green Setting (Gmax), s		39.9		* 40		39.9		* 40				
Max Q Clear Time (g_c+I1), s		41.9		41.8		41.9		37.1				
Green Ext Time (p_c), s		0.0		0.0		0.0		1.5				
Intersection Summary												
HCM 6th Ctrl Delay			30.7									
HCM 6th LOS			C									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	661	68	101	544	103	87	921	258	85	923	138
Future Volume (veh/h)	96	661	68	101	544	103	87	921	258	85	923	138
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	718	74	110	591	112	95	1001	280	92	1003	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	217	827	701	145	827	701	166	1217	339	132	1375	205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Unsig. Movement Delay												
Ln Grp Delay, s/veh	36.4	32.5	14.8	63.0	23.4	15.2	51.3	31.3	31.9	67.9	26.5	26.5
Ln Grp LOS	D	C	B	E	C	B	D	C	C	E	C	C
Approach Vol, veh/h		896			813			1376			1245	
Approach Delay, s/veh		31.5			27.6			32.9			29.5	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		45.0		45.0		45.0		45.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		39.9		* 40		39.9		* 40
Max Allow Headway (MAH), s		5.4		5.1		5.4		5.1
Max Q Clear (g_c+I1), s		41.9		41.8		41.9		37.1
Green Ext Time (g_e), s		0.0		0.0		0.0		1.5
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		1.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		432		685		487		744
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3101		1870		2745		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		463		1585		764		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	92	0	110	0	95	0	104
Grp Sat Flow (s), veh/h/ln	0	432	0	685	0	487	0	744
Q Serve Time (g_s), s	0.0	10.9	0.0	8.5	0.0	15.9	0.0	11.9
Cycle Q Clear Time (g_c), s	0.0	39.9	0.0	39.8	0.0	39.9	0.0	35.1
Perm LT Sat Flow (s_l), veh/h/ln	0	432	0	685	0	487	0	744
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	39.9	0.0	39.8	0.0	39.9	0.0	39.8
Perm LT Serve Time (g_u), s	0.0	10.9	0.0	8.5	0.0	15.9	0.0	16.6
Perm LT Q Serve Time (g_ps), s	0.0	10.9	0.0	8.5	0.0	15.9	0.0	11.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	132	0	145	0	166	0	217
V/C Ratio (X)	0.00	0.69	0.00	0.76	0.00	0.57	0.00	0.48
Avail Cap (c_a), veh/h	0	132	0	145	0	166	0	217
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	41.9	0.0	42.5	0.0	37.8	0.0	34.8
Incr Delay (d2), s/veh	0.0	26.0	0.0	20.5	0.0	13.5	0.0	1.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	67.9	0.0	63.0	0.0	51.3	0.0	36.4
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	2.4	0.0	2.1	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	0.8	0.0	0.6	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	5.3	0.0	5.8	0.0	4.8	0.0	3.9
%ile Storage Ratio (RQ%)	0.00	2.09	0.00	1.06	0.00	1.75	0.00	0.91
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	574	0	591	0	646	0	718
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	23.9	0.0	23.2	0.0	28.6	0.0	31.3
Cycle Q Clear Time (g_c), s	0.0	23.9	0.0	23.2	0.0	28.6	0.0	31.3
Lane Grp Cap (c), veh/h	0	788	0	827	0	788	0	827
V/C Ratio (X)	0.00	0.73	0.00	0.71	0.00	0.82	0.00	0.87
Avail Cap (c_a), veh/h	0	788	0	827	0	788	0	827
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	20.6	0.0	20.5	0.0	21.9	0.0	22.7
Incr Delay (d2), s/veh	0.0	5.9	0.0	2.9	0.0	9.3	0.0	9.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.5	0.0	23.4	0.0	31.3	0.0	32.5
1st-Term Q (Q1), veh/ln	0.0	9.2	0.0	9.4	0.0	11.0	0.0	12.6
2nd-Term Q (Q2), veh/ln	0.0	1.3	0.0	0.7	0.0	2.0	0.0	2.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.51	0.00	1.52	0.00	1.45	0.00	1.43
%ile Back of Q (95%), veh/ln	0.0	15.7	0.0	15.2	0.0	18.9	0.0	21.2
%ile Storage Ratio (RQ%)	0.00	0.55	0.00	0.42	0.00	0.34	0.00	0.58
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	579	0	112	0	635	0	74
Grp Sat Flow (s), veh/h/ln	0	1787	0	1585	0	1733	0	1585
Q Serve Time (g_s), s	0.0	24.0	0.0	3.8	0.0	29.0	0.0	2.5
Cycle Q Clear Time (g_c), s	0.0	24.0	0.0	3.8	0.0	29.0	0.0	2.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.26	0.00	1.00	0.00	0.44	0.00	1.00
Lane Grp Cap (c), veh/h	0	792	0	701	0	768	0	701
V/C Ratio (X)	0.00	0.73	0.00	0.16	0.00	0.83	0.00	0.11
Avail Cap (c_a), veh/h	0	792	0	701	0	768	0	701
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	20.6	0.0	15.1	0.0	22.0	0.0	14.7
Incr Delay (d2), s/veh	0.0	5.9	0.0	0.1	0.0	9.9	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.5	0.0	15.2	0.0	31.9	0.0	14.8
1st-Term Q (Q1), veh/ln	0.0	9.2	0.0	1.3	0.0	10.8	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	1.3	0.0	0.0	0.0	2.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.51	0.00	1.80	0.00	1.46	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	15.9	0.0	2.4	0.0	18.8	0.0	1.5
%ile Storage Ratio (RQ%)	0.00	0.55	0.00	0.61	0.00	0.34	0.00	0.46
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		30.7
HCM 6th LOS		C

Notes

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

Intersection	
Int Delay, s/veh	226.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	6	41	64	6	119	31	924	71	146	1316	23
Future Vol, veh/h	30	6	41	64	6	119	31	924	71	146	1316	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	7	45	70	7	129	34	1004	77	159	1430	25

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2335	2910	728	2005	2884	541	1455	0	0	1081	0	0
Stage 1	1761	1761	-	1111	1111	-	-	-	-	-	-	-
Stage 2	574	1149	-	894	1773	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	7.14	6.99	6.54	6.94	5.34	-	-	4.14	-	-
Critical Hdwy Stg 1	7.34	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.92	3.67	4.02	3.32	3.12	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 28	15	314	~ 47	16	485	235	-	-	641	-	-
Stage 1	58	136	-	218	283	-	-	-	-	-	-	-
Stage 2	457	271	-	280	134	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 7	10	314	~ 15	10	485	235	-	-	641	-	-
Mov Cap-2 Maneuver	~ 7	10	-	~ 15	10	-	-	-	-	-	-	-
Stage 1	50	102	-	186	242	-	-	-	-	-	-	-
Stage 2	279	232	-	169	101	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 2565.6	$ 2263.3	0.7	1.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	235	-	-	15	37	641	-	-
HCM Lane V/C Ratio	0.143	-	-	5.58	5.552	0.248	-	-
HCM Control Delay (s)	22.9	-	$ 2565.6		$ 2263.3	12.5	-	-
HCM Lane LOS	C	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	11.4	24.2	1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	949	144	179	968	257	209	873	187	269	615	156
Future Volume (veh/h)	195	949	144	179	968	257	209	873	187	269	615	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	1032	157	195	1052	279	227	949	203	292	668	170
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	305	2317	1034	412	1803	475	232	995	533	346	673	171
Arrive On Green	0.06	0.65	0.65	0.02	0.21	0.21	0.13	0.28	0.28	0.10	0.24	0.24
Sat Flow, veh/h	1781	3554	1585	1781	2782	733	1781	3554	1585	3456	2805	713
Grp Volume(v), veh/h	212	1032	157	195	670	661	227	949	203	292	423	415
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1738	1781	1777	1585	1728	1777	1742
Q Serve(g_s), s	3.9	14.2	4.1	3.5	33.8	34.2	12.7	26.2	9.7	8.3	23.7	23.8
Cycle Q Clear(g_c), s	3.9	14.2	4.1	3.5	33.8	34.2	12.7	26.2	9.7	8.3	23.7	23.8
Prop In Lane	1.00		1.00	1.00		0.42	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	305	2317	1034	412	1151	1126	232	995	533	346	426	418
V/C Ratio(X)	0.69	0.45	0.15	0.47	0.58	0.59	0.98	0.95	0.38	0.84	0.99	0.99
Avail Cap(c_a), veh/h	340	2317	1034	472	1151	1126	232	995	533	346	426	418
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	8.5	7.9	6.9	27.1	27.3	43.4	35.4	25.2	44.2	37.9	37.9
Incr Delay (d2), s/veh	5.3	0.6	0.3	0.8	2.1	2.2	53.4	18.7	1.0	17.2	41.3	42.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	8.6	2.2	2.3	23.3	23.1	13.8	19.5	6.7	7.7	21.2	21.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	9.2	8.2	7.7	29.3	29.5	96.7	54.0	26.2	61.5	79.2	80.0
LnGrp LOS	C	A	A	A	C	C	F	D	C	E	E	F
Approach Vol, veh/h		1401			1526			1379			1130	
Approach Delay, s/veh		11.0			26.6			57.0			74.9	
Approach LOS		B			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	70.2	14.0	33.0	8.6	70.7	18.0	29.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green Setting (Gmax), s	8.0	38.6	10.0	* 26	9.0	37.6	* 13	* 24
Max Q Clear Time (g_c+I1), s	5.9	36.2	10.3	28.2	5.5	16.2	14.7	25.8
Green Ext Time (p_c), s	0.1	2.1	0.0	0.0	0.2	13.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.3
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	949	144	179	968	257	209	873	187	269	615	156
Future Volume (veh/h)	195	949	144	179	968	257	209	873	187	269	615	156
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	1032	157	195	1052	279	227	949	203	292	668	170
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	305	2317	1034	412	1803	475	232	995	533	346	673	171
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.65	0.65	0.02	0.21	0.21	0.13	0.28	0.28	0.10	0.24	0.24
Unsig. Movement Delay												
Ln Grp Delay, s/veh	22.1	9.2	8.2	7.7	29.3	29.5	96.7	54.0	26.2	61.5	79.2	80.0
Ln Grp LOS	C	A	A	A	C	C	F	D	C	E	E	F
Approach Vol, veh/h		1401			1526			1379			1130	
Approach Delay, s/veh		11.0			26.6			57.0			74.9	
Approach LOS		B			C			E			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	9.0	70.2	14.0	33.0	8.6	70.7	29.0	18.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	8.0	38.6	10.0	* 26	9.0	37.6	* 24	* 13
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.9	3.8	7.0	6.7	3.8
Max Q Clear (g_c+l1), s	5.9	36.2	10.3	28.2	5.5	16.2	25.8	14.7
Green Ext Time (g_e), s	0.1	2.1	0.0	0.0	0.2	13.3	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2782		3554		3554	2805	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		733		1585		1585	713	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	212	0	292	0	195	0	0	227
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	3.9	0.0	8.3	0.0	3.5	0.0	0.0	12.7
Cycle Q Clear Time (g_c), s	3.9	0.0	8.3	0.0	3.5	0.0	0.0	12.7
Perm LT Sat Flow (s_l), veh/h/ln	411	0	0	0	471	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	64.8	0.0	0.0	0.0	64.8	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	30.5	0.0	0.0	0.0	50.8	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	30.5	0.0	0.0	0.0	10.5	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	305	0	346	0	412	0	0	232
V/C Ratio (X)	0.69	0.00	0.84	0.00	0.47	0.00	0.00	0.98
Avail Cap (c_a), veh/h	340	0	346	0	472	0	0	232
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	16.8	0.0	44.2	0.0	6.9	0.0	0.0	43.4
Incr Delay (d2), s/veh	5.3	0.0	17.2	0.0	0.8	0.0	0.0	53.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	22.1	0.0	61.5	0.0	7.7	0.0	0.0	96.7
1st-Term Q (Q1), veh/ln	2.8	0.0	3.5	0.0	1.2	0.0	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.4	0.0	0.8	0.0	0.1	0.0	0.0	3.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.79	0.00	1.80	0.00	0.00	1.55
%ile Back of Q (95%), veh/ln	5.9	0.0	7.7	0.0	2.3	0.0	0.0	13.8
%ile Storage Ratio (RQ%)	1.03	0.00	0.98	0.00	0.29	0.00	0.00	3.89
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	670	0	949	0	1032	423	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	33.8	0.0	26.2	0.0	14.2	23.7	0.0
Cycle Q Clear Time (g_c), s	0.0	33.8	0.0	26.2	0.0	14.2	23.7	0.0
Lane Grp Cap (c), veh/h	0	1151	0	995	0	2317	426	0
V/C Ratio (X)	0.00	0.58	0.00	0.95	0.00	0.45	0.99	0.00
Avail Cap (c_a), veh/h	0	1151	0	995	0	2317	426	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	27.1	0.0	35.4	0.0	8.5	37.9	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.0	18.7	0.0	0.6	41.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	29.3	0.0	54.0	0.0	9.2	79.2	0.0
1st-Term Q (Q1), veh/ln	0.0	16.0	0.0	10.9	0.0	4.8	10.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	2.6	0.0	0.2	4.9	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.40	0.00	1.45	0.00	1.74	1.43	0.00
%ile Back of Q (95%), veh/ln	0.0	23.3	0.0	19.5	0.0	8.6	21.2	0.0
%ile Storage Ratio (RQ%)	0.00	1.05	0.00	0.64	0.00	0.17	1.48	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	661	0	203	0	157	415	0
Grp Sat Flow (s), veh/h/ln	0	1738	0	1585	0	1585	1742	0
Q Serve Time (g_s), s	0.0	34.2	0.0	9.7	0.0	4.1	23.8	0.0
Cycle Q Clear Time (g_c), s	0.0	34.2	0.0	9.7	0.0	4.1	23.8	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.42	0.00	1.00	0.00	1.00	0.41	0.00
Lane Grp Cap (c), veh/h	0	1126	0	533	0	1034	418	0
V/C Ratio (X)	0.00	0.59	0.00	0.38	0.00	0.15	0.99	0.00
Avail Cap (c_a), veh/h	0	1126	0	533	0	1034	418	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	27.3	0.0	25.2	0.0	7.9	37.9	0.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	1.0	0.0	0.3	42.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	29.5	0.0	26.2	0.0	8.2	80.0	0.0
1st-Term Q (Q1), veh/ln	0.0	15.8	0.0	3.6	0.0	1.2	9.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.1	0.0	0.1	4.9	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.40	0.00	1.80	0.00	1.80	1.43	0.00
%ile Back of Q (95%), veh/ln	0.0	23.1	0.0	6.7	0.0	2.2	21.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.04	0.00	1.88	0.00	0.49	1.47	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.3
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	555.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	1488	28	55	1184	119	5	5	11	90	4	80
Future Vol, veh/h	41	1488	28	55	1184	119	5	5	11	90	4	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	45	1617	30	60	1287	129	5	5	12	98	4	87

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1416	0	0	1647	0	0	2488	3258	824	2373	3209	708
Stage 1	-	-	-	-	-	-	1722	1722	-	1472	1472	-
Stage 2	-	-	-	-	-	-	766	1536	-	901	1737	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	477	-	-	389	-	-	15	9	316	~ 18	10	377
Stage 1	-	-	-	-	-	-	93	142	-	133	189	-
Stage 2	-	-	-	-	-	-	361	176	-	299	140	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	477	-	-	389	-	-	6	7	316	~ 5	8	377
Mov Cap-2 Maneuver	-	-	-	-	-	-	6	7	-	~ 5	8	-
Stage 1	-	-	-	-	-	-	84	129	-	120	160	-
Stage 2	-	-	-	-	-	-	229	149	-	250	127	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.6	$ 949.7	$ 9813.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	13	477	-	-	389	-	-	9
HCM Lane V/C Ratio	1.756	0.093	-	-	0.154	-	-	21.014
HCM Control Delay (s)	$ 949.7	13.3	-	-	15.9	-	-	$ 9813.6
HCM Lane LOS	F	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	3.6	0.3	-	-	0.5	-	-	25.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	265	979	231	26	1075	324	122	195	9	232	152	202
Future Volume (veh/h)	265	979	231	26	1075	324	122	195	9	232	152	202
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	288	1064	251	28	1168	352	133	212	10	252	165	220
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	434	3449	1538	434	3128	1395	224	379	18	311	678	654
Arrive On Green	0.07	1.00	1.00	0.88	0.88	0.88	0.21	0.21	0.21	0.09	0.36	0.36
Sat Flow, veh/h	1781	3554	1585	418	3554	1585	998	1772	84	3456	1870	1585
Grp Volume(v), veh/h	288	1064	251	28	1168	352	133	0	222	252	165	220
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	418	1777	1585	998	0	1855	1728	1870	1585
Q Serve(g_s), s	1.0	0.0	0.0	1.0	5.9	10.4	13.0	0.0	10.7	7.2	6.2	9.5
Cycle Q Clear(g_c), s	1.0	0.0	0.0	2.3	5.9	10.4	19.2	0.0	10.7	7.2	6.2	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	434	3449	1538	434	3128	1395	224	0	396	311	678	654
V/C Ratio(X)	0.66	0.31	0.16	0.06	0.37	0.25	0.59	0.00	0.56	0.81	0.24	0.34
Avail Cap(c_a), veh/h	593	3449	1538	434	3128	1395	230	0	408	311	678	654
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.2	0.0	0.0	0.9	1.1	8.5	41.5	0.0	35.1	44.7	22.3	20.0
Incr Delay (d2), s/veh	1.7	0.2	0.2	0.3	0.3	0.4	3.9	0.0	1.6	14.8	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.2	0.2	0.1	0.6	6.3	6.2	0.0	8.7	6.5	4.7	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.9	0.2	0.2	1.2	1.4	8.9	45.4	0.0	36.8	59.5	22.5	20.3
LnGrp LOS	A	A	A	A	A	A	D	A	D	E	C	C
Approach Vol, veh/h		1603			1548			355			637	
Approach Delay, s/veh		1.1			3.1			40.0			36.4	
Approach LOS		A			A			D			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	9.0	94.2		42.2		103.2	14.9	27.3				
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9				
Max Green Setting (Gmax), s	13.9	* 36		35.0		54.2	9.0	* 22				
Max Q Clear Time (g_c+I1), s	3.0	12.4		11.5		2.0	9.2	21.2				
Green Ext Time (p_c), s	0.6	11.3		1.6		11.3	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			10.6									
HCM 6th LOS			B									
Notes												

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	265	979	231	26	1075	324	122	195	9	232	152	202
Future Volume (veh/h)	265	979	231	26	1075	324	122	195	9	232	152	202
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	288	1064	251	28	1168	352	133	212	10	252	165	220
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	434	3449	1538	434	3128	1395	224	379	18	311	678	654
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	1.00	1.00	0.88	0.88	0.88	0.21	0.21	0.21	0.09	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	4.9	0.2	0.2	1.2	1.4	8.9	45.4	0.0	36.8	59.5	22.5	20.3
Ln Grp LOS	A	A	A	A	A	A	D	A	D	E	C	C
Approach Vol, veh/h		1603			1548			355			637	
Approach Delay, s/veh		1.1			3.1			40.0			36.4	
Approach LOS		A			A			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	9.0	94.2		42.2		103.2	27.3	14.9
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	13.9	* 36		35.0		54.2	* 22	9.0
Max Allow Headway (MAH), s	3.8	4.9		4.4		4.9	5.2	3.7
Max Q Clear (g_c+l1), s	3.0	12.4		11.5		2.0	21.2	9.2
Green Ext Time (g_e), s	0.6	11.3		1.6		11.3	0.2	0.0
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	0.01	0.00		0.00		0.00	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	418					998	3456

Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1772	

Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	84	

Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	288	28	0	0	0	0	133	252
Grp Sat Flow (s), veh/h/ln	1781	418	0	0	0	0	998	1728
Q Serve Time (g_s), s	1.0	1.0	0.0	0.0	0.0	0.0	13.0	7.2
Cycle Q Clear Time (g_c), s	1.0	2.3	0.0	0.0	0.0	0.0	19.2	7.2
Perm LT Sat Flow (s_l), veh/h/ln	343	418	0	0	0	0	998	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	90.0	88.0	0.0	0.0	0.0	0.0	21.4	0.0
Perm LT Serve Time (g_u), s	79.6	86.7	0.0	0.0	0.0	0.0	15.2	0.0
Perm LT Q Serve Time (g_ps), s	49.0	1.0	0.0	0.0	0.0	0.0	13.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	434	434	0	0	0	0	224	311
V/C Ratio (X)	0.66	0.06	0.00	0.00	0.00	0.00	0.59	0.81
Avail Cap (c_a), veh/h	593	434	0	0	0	0	230	311
Upstream Filter (I)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	3.2	0.9	0.0	0.0	0.0	0.0	41.5	44.7
Incr Delay (d2), s/veh	1.7	0.3	0.0	0.0	0.0	0.0	3.9	14.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	4.9	1.2	0.0	0.0	0.0	0.0	45.4	59.5
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	3.2	3.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.80
%ile Back of Q (95%), veh/ln	0.4	0.1	0.0	0.0	0.0	0.0	6.2	6.5
%ile Storage Ratio (RQ%)	0.10	0.02	0.00	0.00	0.00	0.00	1.58	0.74
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	1168	0	165	0	1064	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	5.9	0.0	6.2	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.9	0.0	6.2	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	3128	0	678	0	3449	0	0
V/C Ratio (X)	0.00	0.37	0.00	0.24	0.00	0.31	0.00	0.00
Avail Cap (c_a), veh/h	0	3128	0	678	0	3449	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.1	0.0	22.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.2	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.4	0.0	22.5	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	2.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.6	0.0	4.7	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.15	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	352	0	220	0	251	222	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1855	0
Q Serve Time (g_s), s	0.0	10.4	0.0	9.5	0.0	0.0	10.7	0.0
Cycle Q Clear Time (g_c), s	0.0	10.4	0.0	9.5	0.0	0.0	10.7	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.05	0.00
Lane Grp Cap (c), veh/h	0	1395	0	654	0	1538	396	0
V/C Ratio (X)	0.00	0.25	0.00	0.34	0.00	0.16	0.56	0.00
Avail Cap (c_a), veh/h	0	1395	0	654	0	1538	408	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	8.5	0.0	20.0	0.0	0.0	35.1	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.3	0.0	0.2	1.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.9	0.0	20.3	0.0	0.2	36.8	0.0
1st-Term Q (Q1), veh/ln	0.0	3.4	0.0	3.5	0.0	0.0	4.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.73	0.00
%ile Back of Q (95%), veh/ln	0.0	6.3	0.0	6.4	0.0	0.2	8.7	0.0
%ile Storage Ratio (RQ%)	0.00	1.61	0.00	0.72	0.00	0.04	0.78	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

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

HCM 6th Signalized Intersection Summary
1: Coldwater Canyon Avenue & Moorpark Street 05/05/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	778	50	62	522	141	51	611	76	153	557	145
Future Volume (veh/h)	119	778	50	62	522	141	51	611	76	153	557	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	846	54	67	567	153	55	664	83	166	605	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	931	789	131	931	789	233	1233	154	241	1082	282
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	732	1870	1585	619	1870	1585	704	3179	397	714	2789	727
Grp Volume(v), veh/h	129	846	54	67	567	153	55	371	376	166	385	378
Grp Sat Flow(s),veh/h/ln	732	1870	1585	619	1870	1585	704	1777	1799	714	1777	1740
Q Serve(g_s), s	13.9	37.3	1.6	7.5	19.7	4.8	6.0	14.5	14.6	20.3	15.2	15.3
Cycle Q Clear(g_c), s	33.5	37.3	1.6	44.8	19.7	4.8	21.3	14.5	14.6	34.9	15.2	15.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		0.42
Lane Grp Cap(c), veh/h	285	931	789	131	931	789	233	689	698	241	689	675
V/C Ratio(X)	0.45	0.91	0.07	0.51	0.61	0.19	0.24	0.54	0.54	0.69	0.56	0.56
Avail Cap(c_a), veh/h	285	931	789	131	931	789	233	689	698	241	689	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	20.7	11.8	42.1	16.3	12.6	29.9	21.3	21.3	35.1	21.5	21.6
Incr Delay (d2), s/veh	1.1	12.6	0.0	3.3	1.2	0.1	2.4	3.0	3.0	14.9	3.3	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	24.8	1.0	2.9	12.6	2.9	2.0	10.4	10.5	8.0	10.8	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	33.3	11.8	45.4	17.4	12.7	32.2	24.3	24.3	50.0	24.8	24.9
LnGrp LOS	C	C	B	D	B	B	C	C	C	D	C	C
Approach Vol, veh/h		1029			787			802			929	
Approach Delay, s/veh		31.7			18.9			24.9			29.3	
Approach LOS		C			B			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		50.0		40.0		50.0				
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2				
Max Green Setting (Gmax), s		34.9		* 45		34.9		* 45				
Max Q Clear Time (g_c+I1), s		36.9		46.8		23.3		39.3				
Green Ext Time (p_c), s		0.0		0.0		3.9		3.1				
Intersection Summary												
HCM 6th Ctrl Delay			26.7									
HCM 6th LOS			C									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	778	50	62	522	141	51	611	76	153	557	145
Future Volume (veh/h)	119	778	50	62	522	141	51	611	76	153	557	145
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	846	54	67	567	153	55	664	83	166	605	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	285	931	789	131	931	789	233	1233	154	241	1082	282
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.39	0.39	0.39	0.39	0.39	0.39
Unsig. Movement Delay												
Ln Grp Delay, s/veh	29.5	33.3	11.8	45.4	17.4	12.7	32.2	24.3	24.3	50.0	24.8	24.9
Ln Grp LOS	C	C	B	D	B	B	C	C	C	D	C	C
Approach Vol, veh/h		1029			787			802			929	
Approach Delay, s/veh		31.7			18.9			24.9			29.3	
Approach LOS		C			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		40.0		50.0		40.0		50.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		34.9		* 45		34.9		* 45
Max Allow Headway (MAH), s		5.4		5.1		5.2		5.2
Max Q Clear (g_c+I1), s		36.9		46.8		23.3		39.3
Green Ext Time (g_e), s		0.0		0.0		3.9		3.1
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		0.97
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		714		619		704		732
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2789		1870		3179		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		727		1585		397		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	166	0	67	0	55	0	129
Grp Sat Flow (s), veh/h/ln	0	714	0	619	0	704	0	732
Q Serve Time (g_s), s	0.0	20.3	0.0	7.5	0.0	6.0	0.0	13.9
Cycle Q Clear Time (g_c), s	0.0	34.9	0.0	44.8	0.0	21.3	0.0	33.5
Perm LT Sat Flow (s_l), veh/h/ln	0	714	0	619	0	704	0	732
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	34.9	0.0	44.8	0.0	34.9	0.0	44.8
Perm LT Serve Time (g_u), s	0.0	20.3	0.0	7.5	0.0	19.6	0.0	25.1
Perm LT Q Serve Time (g_ps), s	0.0	20.3	0.0	7.5	0.0	6.0	0.0	13.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	241	0	131	0	233	0	285
V/C Ratio (X)	0.00	0.69	0.00	0.51	0.00	0.24	0.00	0.45
Avail Cap (c_a), veh/h	0	241	0	131	0	233	0	285
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	35.1	0.0	42.1	0.0	29.9	0.0	28.4
Incr Delay (d2), s/veh	0.0	14.9	0.0	3.3	0.0	2.4	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	50.0	0.0	45.4	0.0	32.2	0.0	29.5
1st-Term Q (Q1), veh/ln	0.0	3.5	0.0	1.5	0.0	1.0	0.0	2.3
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	0.1	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.77	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	8.0	0.0	2.9	0.0	2.0	0.0	4.4
%ile Storage Ratio (RQ%)	0.00	3.12	0.00	0.52	0.00	0.74	0.00	1.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	385	0	567	0	371	0	846
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	15.2	0.0	19.7	0.0	14.5	0.0	37.3
Cycle Q Clear Time (g_c), s	0.0	15.2	0.0	19.7	0.0	14.5	0.0	37.3
Lane Grp Cap (c), veh/h	0	689	0	931	0	689	0	931
V/C Ratio (X)	0.00	0.56	0.00	0.61	0.00	0.54	0.00	0.91
Avail Cap (c_a), veh/h	0	689	0	931	0	689	0	931
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.5	0.0	16.3	0.0	21.3	0.0	20.7
Incr Delay (d2), s/veh	0.0	3.3	0.0	1.2	0.0	3.0	0.0	12.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.8	0.0	17.4	0.0	24.3	0.0	33.3
1st-Term Q (Q1), veh/ln	0.0	6.0	0.0	7.7	0.0	5.7	0.0	14.6
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.3	0.0	0.6	0.0	3.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.64	0.00	1.58	0.00	1.65	0.00	1.39
%ile Back of Q (95%), veh/ln	0.0	10.8	0.0	12.6	0.0	10.4	0.0	24.8
%ile Storage Ratio (RQ%)	0.00	0.38	0.00	0.35	0.00	0.19	0.00	0.67
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	378	0	153	0	376	0	54
Grp Sat Flow (s), veh/h/ln	0	1740	0	1585	0	1799	0	1585
Q Serve Time (g_s), s	0.0	15.3	0.0	4.8	0.0	14.6	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	15.3	0.0	4.8	0.0	14.6	0.0	1.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.42	0.00	1.00	0.00	0.22	0.00	1.00
Lane Grp Cap (c), veh/h	0	675	0	789	0	698	0	789
V/C Ratio (X)	0.00	0.56	0.00	0.19	0.00	0.54	0.00	0.07
Avail Cap (c_a), veh/h	0	675	0	789	0	698	0	789
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.6	0.0	12.6	0.0	21.3	0.0	11.8
Incr Delay (d2), s/veh	0.0	3.3	0.0	0.1	0.0	3.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.9	0.0	12.7	0.0	24.3	0.0	11.8
1st-Term Q (Q1), veh/ln	0.0	5.9	0.0	1.6	0.0	5.8	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.64	0.00	1.80	0.00	1.65	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	10.7	0.0	2.9	0.0	10.5	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.37	0.00	0.74	0.00	0.19	0.00	0.29
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.7
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	2	77	30	3	57	25	558	30	60	597	11
Future Vol, veh/h	38	2	77	30	3	57	25	558	30	60	597	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	2	84	33	3	62	27	607	33	65	649	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1144	1479	331	1069	1469	320	661	0	0	640	0	0
Stage 1	785	785	-	678	678	-	-	-	-	-	-	-
Stage 2	359	694	-	391	791	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	7.14	6.99	6.54	6.94	5.34	-	-	4.14	-	-
Critical Hdwy Stg 1	7.34	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.92	3.67	4.02	3.32	3.12	-	-	2.22	-	-
Pot Cap-1 Maneuver	180	125	567	202	126	676	569	-	-	940	-	-
Stage 1	288	402	-	396	450	-	-	-	-	-	-	-
Stage 2	610	442	-	572	399	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	146	111	567	155	112	676	569	-	-	940	-	-
Mov Cap-2 Maneuver	146	111	-	155	112	-	-	-	-	-	-	-
Stage 1	274	374	-	377	429	-	-	-	-	-	-	-
Stage 2	524	421	-	451	371	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27.7	23.1	0.5	0.8
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	569	-	-	283	295	940	-	-
HCM Lane V/C Ratio	0.048	-	-	0.449	0.332	0.069	-	-
HCM Control Delay (s)	11.6	-	-	27.7	23.1	9.1	-	-
HCM Lane LOS	B	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.2	1.4	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	1006	134	181	699	166	100	325	171	268	389	32
Future Volume (veh/h)	107	1006	134	181	699	166	100	325	171	268	389	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	116	1093	146	197	760	180	109	353	186	291	423	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	453	1741	777	324	1469	348	142	571	374	346	569	47
Arrive On Green	0.05	0.49	0.49	0.15	1.00	1.00	0.08	0.16	0.16	0.10	0.17	0.17
Sat Flow, veh/h	1781	3554	1585	1781	2851	675	1781	3554	1585	3456	3324	274
Grp Volume(v), veh/h	116	1093	146	197	474	466	109	353	186	291	225	233
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1749	1781	1777	1585	1728	1777	1821
Q Serve(g_s), s	3.2	22.7	3.3	5.5	0.0	0.0	6.0	9.3	10.2	8.3	12.0	12.1
Cycle Q Clear(g_c), s	3.2	22.7	3.3	5.5	0.0	0.0	6.0	9.3	10.2	8.3	12.0	12.1
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	453	1741	777	324	916	901	142	571	374	346	304	312
V/C Ratio(X)	0.26	0.63	0.19	0.61	0.52	0.52	0.77	0.62	0.50	0.84	0.74	0.75
Avail Cap(c_a), veh/h	453	1741	777	351	916	901	178	853	500	346	444	455
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	18.8	5.9	13.6	0.0	0.0	45.1	39.1	33.1	44.2	39.3	39.4
Incr Delay (d2), s/veh	0.3	1.7	0.5	2.6	2.1	2.1	14.4	2.3	2.2	16.9	6.1	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	14.1	3.3	3.5	1.0	1.0	5.7	7.5	7.3	7.7	9.6	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	20.5	6.4	16.3	2.1	2.1	59.5	41.4	35.2	61.1	45.5	45.6
LnGrp LOS	B	C	A	B	A	A	E	D	D	E	D	D
Approach Vol, veh/h		1355			1137			648			749	
Approach Delay, s/veh		18.2			4.6			42.7			51.6	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	56.9	14.0	21.1	10.5	54.4	13.0	22.1
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green Setting (Gmax), s	5.0	43.6	10.0	* 24	9.0	39.6	* 10	* 25
Max Q Clear Time (g_c+I1), s	5.2	2.0	10.3	12.2	7.5	24.7	8.0	14.1
Green Ext Time (p_c), s	0.0	15.0	0.0	3.9	0.1	10.6	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	1006	134	181	699	166	100	325	171	268	389	32
Future Volume (veh/h)	107	1006	134	181	699	166	100	325	171	268	389	32
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	116	1093	146	197	760	180	109	353	186	291	423	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	453	1741	777	324	1469	348	142	571	374	346	569	47
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.49	0.49	0.15	1.00	1.00	0.08	0.16	0.16	0.10	0.17	0.17
Unsig. Movement Delay												
Ln Grp Delay, s/veh	11.6	20.5	6.4	16.3	2.1	2.1	59.5	41.4	35.2	61.1	45.5	45.6
Ln Grp LOS	B	C	A	B	A	A	E	D	D	E	D	D
Approach Vol, veh/h		1355			1137			648			749	
Approach Delay, s/veh		18.2			4.6			42.7			51.6	
Approach LOS		B			A			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	8.0	56.9	14.0	21.1	10.5	54.4	22.1	13.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	5.0	43.6	10.0	* 24	9.0	39.6	* 25	* 10
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.7	3.8	7.0	6.6	3.8
Max Q Clear (g_c+I1), s	5.2	2.0	10.3	12.2	7.5	24.7	14.1	8.0
Green Ext Time (g_e), s	0.0	15.0	0.0	3.9	0.1	10.6	3.0	0.0
Prob of Phs Call (p_c)	0.96	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Prob of Max Out (p_x)	1.00	0.00	1.00	0.46	1.00	0.00	0.47	1.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2851		3554		3554	3324	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		675		1585		1585	274	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	116	0	291	0	197	0	0	109
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	3.2	0.0	8.3	0.0	5.5	0.0	0.0	6.0
Cycle Q Clear Time (g_c), s	3.2	0.0	8.3	0.0	5.5	0.0	0.0	6.0
Perm LT Sat Flow (s_l), veh/h/ln	596	0	0	0	449	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	49.0	0.0	0.0	0.0	50.5	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	49.0	0.0	0.0	0.0	26.3	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	16.3	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	453	0	346	0	324	0	0	142
V/C Ratio (X)	0.26	0.00	0.84	0.00	0.61	0.00	0.00	0.77
Avail Cap (c_a), veh/h	453	0	346	0	351	0	0	178
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	11.3	0.0	44.2	0.0	13.6	0.0	0.0	45.1
Incr Delay (d2), s/veh	0.3	0.0	16.9	0.0	2.6	0.0	0.0	14.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.6	0.0	61.1	0.0	16.3	0.0	0.0	59.5
1st-Term Q (Q1), veh/ln	1.2	0.0	3.5	0.0	1.7	0.0	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.8	0.0	0.2	0.0	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.79	0.00	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	2.2	0.0	7.7	0.0	3.5	0.0	0.0	5.7
%ile Storage Ratio (RQ%)	0.39	0.00	0.98	0.00	0.46	0.00	0.00	1.61
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	474	0	353	0	1093	225	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	0.0	0.0	9.3	0.0	22.7	12.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	9.3	0.0	22.7	12.0	0.0
Lane Grp Cap (c), veh/h	0	916	0	571	0	1741	304	0
V/C Ratio (X)	0.00	0.52	0.00	0.62	0.00	0.63	0.74	0.00
Avail Cap (c_a), veh/h	0	916	0	853	0	1741	444	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	39.1	0.0	18.8	39.3	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.0	2.3	0.0	1.7	6.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.1	0.0	41.4	0.0	20.5	45.5	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.0	0.0	8.7	5.1	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.2	0.0	0.4	0.5	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.54	1.69	0.00
%ile Back of Q (95%), veh/ln	0.0	1.0	0.0	7.5	0.0	14.1	9.6	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.25	0.00	0.27	0.67	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	466	0	186	0	146	233	0
Grp Sat Flow (s), veh/h/ln	0	1749	0	1585	0	1585	1821	0
Q Serve Time (g_s), s	0.0	0.0	0.0	10.2	0.0	3.3	12.1	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	10.2	0.0	3.3	12.1	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.39	0.00	1.00	0.00	1.00	0.15	0.00
Lane Grp Cap (c), veh/h	0	901	0	374	0	777	312	0
V/C Ratio (X)	0.00	0.52	0.00	0.50	0.00	0.19	0.75	0.00
Avail Cap (c_a), veh/h	0	901	0	500	0	777	455	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	33.1	0.0	5.9	39.4	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.0	2.2	0.0	0.5	6.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.1	0.0	35.2	0.0	6.4	45.6	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.8	0.0	1.7	5.3	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.2	0.0	0.1	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.68	0.00
%ile Back of Q (95%), veh/ln	0.0	1.0	0.0	7.3	0.0	3.3	9.8	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	2.05	0.00	0.72	0.69	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	32.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1333	45	74	1001	54	4	2	17	46	2	46
Future Vol, veh/h	18	1333	45	74	1001	54	4	2	17	46	2	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	1449	49	80	1088	59	4	2	18	50	2	50

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1147	0	0	1498	0	0	2219	2821	749	2044	2816	574
Stage 1	-	-	-	-	-	-	1514	1514	-	1278	1278	-
Stage 2	-	-	-	-	-	-	705	1307	-	766	1538	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	605	-	-	444	-	-	24	18	354	~ 33	18	462
Stage 1	-	-	-	-	-	-	125	181	-	176	235	-
Stage 2	-	-	-	-	-	-	393	228	-	361	176	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	605	-	-	444	-	-	16	14	354	~ 23	14	462
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	14	-	~ 23	14	-
Stage 1	-	-	-	-	-	-	121	175	-	170	193	-
Stage 2	-	-	-	-	-	-	284	187	-	327	170	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1	126.6	$ 857.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	52	605	-	-	444	-	-	42
HCM Lane V/C Ratio	0.481	0.032	-	-	0.181	-	-	2.433
HCM Control Delay (s)	126.6	11.1	-	-	14.9	-	-	$ 857.8
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	1.8	0.1	-	-	0.7	-	-	11

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	842	97	23	718	160	82	90	8	682	249	460
Future Volume (veh/h)	167	842	97	23	718	160	82	90	8	682	249	460
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	915	105	25	780	174	89	98	9	741	271	500
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	516	2827	1261	454	2505	1118	168	371	34	806	958	892
Arrive On Green	0.05	0.80	0.80	0.71	0.71	0.71	0.22	0.22	0.22	0.23	0.51	0.51
Sat Flow, veh/h	1781	3554	1585	553	3554	1585	698	1687	155	3456	1870	1585
Grp Volume(v), veh/h	182	915	105	25	780	174	89	0	107	741	271	500
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	553	1777	1585	698	0	1842	1728	1870	1585
Q Serve(g_s), s	2.6	7.1	1.5	1.5	8.3	4.6	12.6	0.0	4.8	20.9	8.3	20.2
Cycle Q Clear(g_c), s	2.6	7.1	1.5	2.8	8.3	4.6	20.9	0.0	4.8	20.9	8.3	20.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	516	2827	1261	454	2505	1118	168	0	405	806	958	892
V/C Ratio(X)	0.35	0.32	0.08	0.06	0.31	0.16	0.53	0.00	0.26	0.92	0.28	0.56
Avail Cap(c_a), veh/h	590	2827	1261	454	2505	1118	168	0	405	829	958	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.9	2.8	2.2	5.0	5.6	7.7	42.6	0.0	32.3	37.4	13.9	14.0
Incr Delay (d2), s/veh	0.4	0.3	0.1	0.2	0.3	0.3	3.1	0.0	0.3	15.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	3.1	0.6	0.3	4.8	2.2	4.2	0.0	4.0	15.4	5.9	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.3	3.1	2.4	5.2	5.9	8.0	45.8	0.0	32.6	52.5	14.1	14.8
LnGrp LOS	A	A	A	A	A	A	D	A	C	D	B	B
Approach Vol, veh/h		1202			979			196			1512	
Approach Delay, s/veh		3.2			6.2			38.6			33.1	
Approach LOS		A			A			D			C	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	9.0	76.7		57.1		85.7	29.2	27.9				
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9				
Max Green Setting (Gmax), s	9.2	* 26		50.0		39.2	24.0	* 22				
Max Q Clear Time (g_c+I1), s	4.6	10.3		22.2		9.1	22.9	22.9				
Green Ext Time (p_c), s	0.2	5.5		3.5		7.7	0.4	0.0				

Intersection Summary			
HCM 6th Ctrl Delay			17.4
HCM 6th LOS			B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	842	97	23	718	160	82	90	8	682	249	460
Future Volume (veh/h)	167	842	97	23	718	160	82	90	8	682	249	460
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	915	105	25	780	174	89	98	9	741	271	500
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	516	2827	1261	454	2505	1118	168	371	34	806	958	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.80	0.80	0.71	0.71	0.71	0.22	0.22	0.22	0.23	0.51	0.51
Unsig. Movement Delay												
Ln Grp Delay, s/veh	4.3	3.1	2.4	5.2	5.9	8.0	45.8	0.0	32.6	52.5	14.1	14.8
Ln Grp LOS	A	A	A	A	A	A	D	A	C	D	B	B
Approach Vol, veh/h		1202			979			196			1512	
Approach Delay, s/veh		3.2			6.2			38.6			33.1	
Approach LOS		A			A			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	9.0	76.7		57.1		85.7	27.9	29.2
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	9.2	* 26		50.0		39.2	* 22	24.0
Max Allow Headway (MAH), s	3.8	5.0		4.3		5.0	5.9	3.7
Max Q Clear (g_c+I1), s	4.6	10.3		22.2		9.1	22.9	22.9
Green Ext Time (g_e), s	0.2	5.5		3.5		7.7	0.0	0.4
Prob of Phs Call (p_c)	0.99	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	0.48	0.00		0.00		0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	553					698	3456
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1687	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	155	
Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	182	25	0	0	0	0	89	741
Grp Sat Flow (s), veh/h/ln	1781	553	0	0	0	0	698	1728
Q Serve Time (g_s), s	2.6	1.5	0.0	0.0	0.0	0.0	12.6	20.9
Cycle Q Clear Time (g_c), s	2.6	2.8	0.0	0.0	0.0	0.0	20.9	20.9
Perm LT Sat Flow (s_l), veh/h/ln	588	553	0	0	0	0	698	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	72.5	70.5	0.0	0.0	0.0	0.0	22.0	0.0
Perm LT Serve Time (g_u), s	60.2	69.2	0.0	0.0	0.0	0.0	13.7	0.0
Perm LT Q Serve Time (g_ps), s	5.5	1.5	0.0	0.0	0.0	0.0	12.6	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	516	454	0	0	0	0	168	806
V/C Ratio (X)	0.35	0.06	0.00	0.00	0.00	0.00	0.53	0.92
Avail Cap (c_a), veh/h	590	454	0	0	0	0	168	829
Upstream Filter (I)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	3.9	5.0	0.0	0.0	0.0	0.0	42.6	37.4
Incr Delay (d2), s/veh	0.4	0.2	0.0	0.0	0.0	0.0	3.1	15.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	4.3	5.2	0.0	0.0	0.0	0.0	45.8	52.5
1st-Term Q (Q1), veh/ln	0.6	0.1	0.0	0.0	0.0	0.0	2.2	8.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.7
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.51
%ile Back of Q (95%), veh/ln	1.2	0.3	0.0	0.0	0.0	0.0	4.2	15.4
%ile Storage Ratio (RQ%)	0.31	0.05	0.00	0.00	0.00	0.00	1.06	1.74
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	780	0	271	0	915	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	8.3	0.0	8.3	0.0	7.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.3	0.0	8.3	0.0	7.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2505	0	958	0	2827	0	0
V/C Ratio (X)	0.00	0.31	0.00	0.28	0.00	0.32	0.00	0.00
Avail Cap (c_a), veh/h	0	2505	0	958	0	2827	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.6	0.0	13.9	0.0	2.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.2	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.9	0.0	14.1	0.0	3.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.5	0.0	3.2	0.0	1.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	4.8	0.0	5.9	0.0	3.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.18	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	174	0	500	0	105	107	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1842	0
Q Serve Time (g_s), s	0.0	4.6	0.0	20.2	0.0	1.5	4.8	0.0
Cycle Q Clear Time (g_c), s	0.0	4.6	0.0	20.2	0.0	1.5	4.8	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.08	0.00
Lane Grp Cap (c), veh/h	0	1118	0	892	0	1261	405	0
V/C Ratio (X)	0.00	0.16	0.00	0.56	0.00	0.08	0.26	0.00
Avail Cap (c_a), veh/h	0	1118	0	892	0	1261	405	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	7.7	0.0	14.0	0.0	2.2	32.3	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.8	0.0	0.1	0.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.0	0.0	14.8	0.0	2.4	32.6	0.0
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	6.9	0.0	0.3	2.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.61	0.00	1.80	1.80	0.00
%ile Back of Q (95%), veh/ln	0.0	2.2	0.0	11.5	0.0	0.6	4.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.55	0.00	1.30	0.00	0.15	0.35	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Notes

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

HCM 6th Signalized Intersection Summary
1: Coldwater Canyon Avenue & Moorpark Street

05/05/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	704	62	102	579	143	89	1012	273	133	1003	146
Future Volume (veh/h)	102	704	62	102	579	143	89	1012	273	133	1003	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	765	67	111	629	155	97	1100	297	145	1090	159
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	661	560	80	661	560	204	1475	395	165	1657	241
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	690	1870	1585	660	1870	1585	445	2772	742	386	3113	453
Grp Volume(v), veh/h	111	765	67	111	629	155	97	702	695	145	621	628
Grp Sat Flow(s),veh/h/ln	690	1870	1585	660	1870	1585	445	1777	1737	386	1777	1789
Q Serve(g_s), s	2.3	31.8	2.6	0.0	29.5	6.3	18.1	27.5	28.1	19.8	22.6	22.8
Cycle Q Clear(g_c), s	31.8	31.8	2.6	31.8	29.5	6.3	40.8	27.5	28.1	47.9	22.6	22.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		0.25
Lane Grp Cap(c), veh/h	98	661	560	80	661	560	204	946	924	165	946	952
V/C Ratio(X)	1.14	1.16	0.12	1.39	0.95	0.28	0.47	0.74	0.75	0.88	0.66	0.66
Avail Cap(c_a), veh/h	98	661	560	80	661	560	204	946	924	165	946	952
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	29.1	19.6	45.0	28.4	20.9	29.9	16.3	16.4	39.2	15.1	15.2
Incr Delay (d2), s/veh	132.4	87.2	0.1	234.3	23.7	0.3	7.7	5.2	5.6	43.9	3.6	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.3	42.0	1.7	12.5	23.4	4.1	4.1	16.8	16.9	8.9	14.1	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	177.2	116.3	19.7	279.3	52.1	21.1	37.6	21.5	22.0	83.1	18.7	18.7
LnGrp LOS	F	F	B	F	D	C	D	C	C	F	B	B
Approach Vol, veh/h		943			895			1494			1394	
Approach Delay, s/veh		116.6			74.9			22.8			25.4	
Approach LOS		F			E			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0				
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2				
Max Green Setting (Gmax), s		47.9		* 32		47.9		* 32				
Max Q Clear Time (g_c+I1), s		49.9		33.8		42.8		33.8				
Green Ext Time (p_c), s		0.0		0.0		3.9		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			52.2									
HCM 6th LOS			D									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	704	62	102	579	143	89	1012	273	133	1003	146
Future Volume (veh/h)	102	704	62	102	579	143	89	1012	273	133	1003	146
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	765	67	111	629	155	97	1100	297	145	1090	159
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	98	661	560	80	661	560	204	1475	395	165	1657	241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.53	0.53	0.53	0.53	0.53	0.53
Unsig. Movement Delay												
Ln Grp Delay, s/veh	177.2	116.3	19.7	279.3	52.1	21.1	37.6	21.5	22.0	83.1	18.7	18.7
Ln Grp LOS	F	F	B	F	D	C	D	C	C	F	B	B
Approach Vol, veh/h		943			895			1494			1394	
Approach Delay, s/veh		116.6			74.9			22.8			25.4	
Approach LOS		F			E			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		47.9		* 32		47.9		* 32
Max Allow Headway (MAH), s		5.7		5.1		5.4		5.2
Max Q Clear (g_c+I1), s		49.9		33.8		42.8		33.8
Green Ext Time (g_e), s		0.0		0.0		3.9		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		1.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		386		660		445		690
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3113		1870		2772		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		453		1585		742		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	145	0	111	0	97	0	111
Grp Sat Flow (s), veh/h/ln	0	386	0	660	0	445	0	690
Q Serve Time (g_s), s	0.0	19.8	0.0	0.0	0.0	18.1	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	47.9	0.0	31.8	0.0	40.8	0.0	31.8
Perm LT Sat Flow (s_l), veh/h/ln	0	386	0	660	0	445	0	690
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	47.9	0.0	31.8	0.0	47.9	0.0	31.8
Perm LT Serve Time (g_u), s	0.0	19.8	0.0	0.0	0.0	25.1	0.0	2.3
Perm LT Q Serve Time (g_ps), s	0.0	19.8	0.0	0.0	0.0	18.1	0.0	2.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	165	0	80	0	204	0	98
V/C Ratio (X)	0.00	0.88	0.00	1.39	0.00	0.47	0.00	1.14
Avail Cap (c_a), veh/h	0	165	0	80	0	204	0	98
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	39.2	0.0	45.0	0.0	29.9	0.0	44.8
Incr Delay (d2), s/veh	0.0	43.9	0.0	234.3	0.0	7.7	0.0	132.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	83.1	0.0	279.3	0.0	37.6	0.0	177.2
1st-Term Q (Q1), veh/ln	0.0	3.2	0.0	1.7	0.0	1.8	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	2.0	0.0	5.2	0.0	0.4	0.0	3.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.72	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	8.9	0.0	12.5	0.0	4.1	0.0	10.3
%ile Storage Ratio (RQ%)	0.00	3.48	0.00	2.27	0.00	1.49	0.00	2.38
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	7.7	0.0	0.0	0.0	3.3
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	621	0	629	0	702	0	765
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	22.6	0.0	29.5	0.0	27.5	0.0	31.8
Cycle Q Clear Time (g_c), s	0.0	22.6	0.0	29.5	0.0	27.5	0.0	31.8
Lane Grp Cap (c), veh/h	0	946	0	661	0	946	0	661
V/C Ratio (X)	0.00	0.66	0.00	0.95	0.00	0.74	0.00	1.16
Avail Cap (c_a), veh/h	0	946	0	661	0	946	0	661
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.1	0.0	28.4	0.0	16.3	0.0	29.1
Incr Delay (d2), s/veh	0.0	3.6	0.0	23.7	0.0	5.2	0.0	87.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.7	0.0	52.1	0.0	21.5	0.0	116.3
1st-Term Q (Q1), veh/ln	0.0	8.2	0.0	12.4	0.0	9.9	0.0	13.3
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	4.4	0.0	1.4	0.0	16.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.54	0.00	1.40	0.00	1.49	0.00	1.43
%ile Back of Q (95%), veh/ln	0.0	14.1	0.0	23.4	0.0	16.8	0.0	42.0
%ile Storage Ratio (RQ%)	0.00	0.49	0.00	0.65	0.00	0.31	0.00	1.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	628	0	155	0	695	0	67
Grp Sat Flow (s), veh/h/ln	0	1789	0	1585	0	1737	0	1585
Q Serve Time (g_s), s	0.0	22.8	0.0	6.3	0.0	28.1	0.0	2.6
Cycle Q Clear Time (g_c), s	0.0	22.8	0.0	6.3	0.0	28.1	0.0	2.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.25	0.00	1.00	0.00	0.43	0.00	1.00
Lane Grp Cap (c), veh/h	0	952	0	560	0	924	0	560
V/C Ratio (X)	0.00	0.66	0.00	0.28	0.00	0.75	0.00	0.12
Avail Cap (c_a), veh/h	0	952	0	560	0	924	0	560
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.2	0.0	20.9	0.0	16.4	0.0	19.6
Incr Delay (d2), s/veh	0.0	3.6	0.0	0.3	0.0	5.6	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.7	0.0	21.1	0.0	22.0	0.0	19.7
1st-Term Q (Q1), veh/ln	0.0	8.3	0.0	2.2	0.0	9.9	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	1.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.54	0.00	1.80	0.00	1.49	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	14.2	0.0	4.1	0.0	16.9	0.0	1.7
%ile Storage Ratio (RQ%)	0.00	0.49	0.00	1.04	0.00	0.31	0.00	0.50
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	69.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	2	44	41	3	77	33	1025	37	77	1445	24
Future Vol, veh/h	32	2	44	41	3	77	33	1025	37	77	1445	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	2	48	45	3	84	36	1114	40	84	1571	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2383	2978	799	2003	2971	577	1597	0	0	1154	0	0
Stage 1	1752	1752	-	1206	1206	-	-	-	-	-	-	-
Stage 2	631	1226	-	797	1765	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	7.14	6.99	6.54	6.94	5.34	-	-	4.14	-	-
Critical Hdwy Stg 1	7.34	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.92	3.67	4.02	3.32	3.12	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 26	14	282	47	14	460	199	-	-	601	-	-
Stage 1	59	138	-	191	255	-	-	-	-	-	-	-
Stage 2	423	249	-	322	136	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 12	10	282	~ 25	10	460	199	-	-	601	-	-
Mov Cap-2 Maneuver	~ 12	10	-	~ 25	10	-	-	-	-	-	-	-
Stage 1	48	119	-	156	209	-	-	-	-	-	-	-
Stage 2	279	204	-	226	117	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 1331.8	$ 752.3	0.8	0.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	199	-	-	26	57	601	-	-
HCM Lane V/C Ratio	0.18	-	-	3.261	2.307	0.139	-	-
HCM Control Delay (s)	27	-	-	$ 1331.8	$ 752.3	12	-	-
HCM Lane LOS	D	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-	10.4	13.1	0.5	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	1051	153	206	1065	305	222	921	219	329	652	164
Future Volume (veh/h)	203	1051	153	206	1065	305	222	921	219	329	652	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	221	1142	166	224	1158	332	241	1001	238	358	709	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	349	3188	1422	510	2453	694	196	995	523	346	732	184
Arrive On Green	0.05	0.90	0.90	0.02	0.30	0.30	0.11	0.28	0.28	0.10	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	1781	2735	773	1781	3554	1585	3456	2814	706
Grp Volume(v), veh/h	221	1142	166	224	747	743	241	1001	238	358	448	439
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1731	1781	1777	1585	1728	1777	1743
Q Serve(g_s), s	0.8	4.9	4.6	0.7	34.4	35.2	11.0	28.0	11.8	10.0	24.9	24.9
Cycle Q Clear(g_c), s	0.8	4.9	4.6	0.7	34.4	35.2	11.0	28.0	11.8	10.0	24.9	24.9
Prop In Lane	1.00		1.00	1.00		0.45	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	349	3188	1422	510	1594	1553	196	995	523	346	462	453
V/C Ratio(X)	0.63	0.36	0.12	0.44	0.47	0.48	1.23	1.01	0.46	1.04	0.97	0.97
Avail Cap(c_a), veh/h	367	3188	1422	563	1594	1553	196	995	523	346	462	453
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	0.8	8.5	0.7	15.7	16.0	44.5	36.0	26.4	45.0	36.6	36.6
Incr Delay (d2), s/veh	3.3	0.3	0.2	0.6	1.0	1.1	139.8	30.0	1.3	58.0	34.0	34.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	0.3	0.4	0.2	22.3	22.3	19.6	22.4	8.0	11.5	21.1	20.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	1.1	8.7	1.3	16.7	17.1	184.3	66.0	27.7	103.0	70.6	71.1
LnGrp LOS	C	A	A	A	B	B	F	F	C	F	E	E
Approach Vol, veh/h		1529			1714			1480			1245	
Approach Delay, s/veh		4.8			14.8			79.1			80.1	
Approach LOS		A			B			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	96.1	14.0	33.0	8.0	96.1	16.0	31.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green Setting (Gmax), s	6.0	40.6	10.0	* 26	8.0	38.6	* 11	* 26
Max Q Clear Time (g_c+I1), s	2.8	37.2	12.0	30.0	2.7	6.9	13.0	26.9
Green Ext Time (p_c), s	0.2	3.1	0.0	0.0	0.3	19.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.8
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	1051	153	206	1065	305	222	921	219	329	652	164
Future Volume (veh/h)	203	1051	153	206	1065	305	222	921	219	329	652	164
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	221	1142	166	224	1158	332	241	1001	238	358	709	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	349	3188	1422	510	2453	694	196	995	523	346	732	184
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.90	0.90	0.02	0.30	0.30	0.11	0.28	0.28	0.10	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	21.1	1.1	8.7	1.3	16.7	17.1	184.3	66.0	27.7	103.0	70.6	71.1
Ln Grp LOS	C	A	A	A	B	B	F	F	C	F	E	E
Approach Vol, veh/h		1529			1714			1480			1245	
Approach Delay, s/veh		4.8			14.8			79.1			80.1	
Approach LOS		A			B			E			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	8.0	96.1	14.0	33.0	8.0	96.1	31.0	16.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	6.0	40.6	10.0	* 26	8.0	38.6	* 26	* 11
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.9	3.8	7.0	6.7	3.8
Max Q Clear (g_c+l1), s	2.8	37.2	12.0	30.0	2.7	6.9	26.9	13.0
Green Ext Time (g_e), s	0.2	3.1	0.0	0.0	0.3	19.1	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.33	0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2735		3554		3554	2814	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		773		1585		1585	706	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	221	0	358	0	224	0	0	241
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	0.8	0.0	10.0	0.0	0.7	0.0	0.0	11.0
Cycle Q Clear Time (g_c), s	0.8	0.0	10.0	0.0	0.7	0.0	0.0	11.0
Perm LT Sat Flow (s_l), veh/h/ln	353	0	0	0	421	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	89.7	0.0	0.0	0.0	89.7	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	53.2	0.0	0.0	0.0	82.9	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	53.2	0.0	0.0	0.0	8.4	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	349	0	346	0	510	0	0	196
V/C Ratio (X)	0.63	0.00	1.04	0.00	0.44	0.00	0.00	1.23
Avail Cap (c_a), veh/h	367	0	346	0	563	0	0	196
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	17.8	0.0	45.0	0.0	0.7	0.0	0.0	44.5
Incr Delay (d2), s/veh	3.3	0.0	58.0	0.0	0.6	0.0	0.0	139.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	21.1	0.0	103.0	0.0	1.3	0.0	0.0	184.3
1st-Term Q (Q1), veh/ln	4.2	0.0	4.2	0.0	0.0	0.0	0.0	4.8
2nd-Term Q (Q2), veh/ln	0.3	0.0	2.8	0.0	0.1	0.0	0.0	7.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.77	0.00	1.64	0.00	1.80	0.00	0.00	1.59
%ile Back of Q (95%), veh/ln	8.0	0.0	11.5	0.0	0.2	0.0	0.0	19.6
%ile Storage Ratio (RQ%)	1.39	0.00	1.46	0.00	0.02	0.00	0.00	5.54
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	3.1	0.0	0.0	0.0	0.0	11.3
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	747	0	1001	0	1142	448	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	34.4	0.0	28.0	0.0	4.9	24.9	0.0
Cycle Q Clear Time (g_c), s	0.0	34.4	0.0	28.0	0.0	4.9	24.9	0.0
Lane Grp Cap (c), veh/h	0	1594	0	995	0	3188	462	0
V/C Ratio (X)	0.00	0.47	0.00	1.01	0.00	0.36	0.97	0.00
Avail Cap (c_a), veh/h	0	1594	0	995	0	3188	462	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	15.7	0.0	36.0	0.0	0.8	36.6	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	30.0	0.0	0.3	34.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.7	0.0	66.0	0.0	1.1	70.6	0.0
1st-Term Q (Q1), veh/ln	0.0	15.4	0.0	11.7	0.0	0.0	10.4	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	4.1	0.0	0.1	4.4	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.41	0.00	1.42	0.00	1.80	1.43	0.00
%ile Back of Q (95%), veh/ln	0.0	22.3	0.0	22.4	0.0	0.3	21.1	0.0
%ile Storage Ratio (RQ%)	0.00	1.01	0.00	0.74	0.00	0.00	1.48	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	743	0	238	0	166	439	0
Grp Sat Flow (s), veh/h/ln	0	1731	0	1585	0	1585	1743	0
Q Serve Time (g_s), s	0.0	35.2	0.0	11.8	0.0	4.6	24.9	0.0
Cycle Q Clear Time (g_c), s	0.0	35.2	0.0	11.8	0.0	4.6	24.9	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.45	0.00	1.00	0.00	1.00	0.41	0.00
Lane Grp Cap (c), veh/h	0	1553	0	523	0	1422	453	0
V/C Ratio (X)	0.00	0.48	0.00	0.46	0.00	0.12	0.97	0.00
Avail Cap (c_a), veh/h	0	1553	0	523	0	1422	453	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	16.0	0.0	26.4	0.0	8.5	36.6	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	1.3	0.0	0.2	34.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.1	0.0	27.7	0.0	8.7	71.1	0.0
1st-Term Q (Q1), veh/ln	0.0	15.4	0.0	4.3	0.0	0.1	10.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.2	0.0	0.1	4.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.41	0.00	1.77	0.00	1.80	1.43	0.00
%ile Back of Q (95%), veh/ln	0.0	22.3	0.0	8.0	0.0	0.4	20.8	0.0
%ile Storage Ratio (RQ%)	0.00	1.01	0.00	2.26	0.00	0.08	1.46	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		41.8						
HCM 6th LOS		D						

Notes

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

Intersection	
Int Delay, s/veh	410.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	1697	30	58	1346	65	5	3	12	59	3	73
Future Vol, veh/h	25	1697	30	58	1346	65	5	3	12	59	3	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1845	33	63	1463	71	5	3	13	64	3	79

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1534	0	0	1878	0	0	2775	3576	939	2603	3557	767
Stage 1	-	-	-	-	-	-	1916	1916	-	1625	1625	-
Stage 2	-	-	-	-	-	-	859	1660	-	978	1932	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	430	-	-	316	-	-	9	5	265	~ 12	6	345
Stage 1	-	-	-	-	-	-	70	114	-	107	159	-
Stage 2	-	-	-	-	-	-	317	153	-	269	112	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	430	-	-	316	-	-	~ 3	4	265	~ 3	5	345
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 3	4	-	~ 3	5	-
Stage 1	-	-	-	-	-	-	66	107	-	100	127	-
Stage 2	-	-	-	-	-	-	190	123	-	232	105	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.8	$ 1677.8	$ 10013.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	8	430	-	-	316	-	-	7
HCM Lane V/C Ratio	2.717	0.063	-	-	0.2	-	-	20.963
HCM Control Delay (s)	$ 1677.8	13.9	-	-	19.2	-	-	$ 10013.5
HCM Lane LOS	F	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	3.8	0.2	-	-	0.7	-	-	20.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	1027	244	28	1106	346	127	208	10	248	162	276
Future Volume (veh/h)	338	1027	244	28	1106	346	127	208	10	248	162	276
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	367	1116	265	30	1202	376	138	226	11	270	176	300
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	508	4184	1866	491	3865	1724	213	389	19	297	683	658
Arrive On Green	0.07	1.00	1.00	1.00	1.00	1.00	0.22	0.22	0.22	0.09	0.37	0.37
Sat Flow, veh/h	1781	3554	1585	392	3554	1585	918	1769	86	3456	1870	1585
Grp Volume(v), veh/h	367	1116	265	30	1202	376	138	0	237	270	176	300
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	392	1777	1585	918	0	1855	1728	1870	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	15.0	0.0	11.4	7.7	6.6	13.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.0	0.0	0.0	21.6	0.0	11.4	7.7	6.6	13.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	508	4184	1866	491	3865	1724	213	0	408	297	683	658
V/C Ratio(X)	0.72	0.27	0.14	0.06	0.31	0.22	0.65	0.00	0.58	0.91	0.26	0.46
Avail Cap(c_a), veh/h	709	4184	1866	491	3865	1724	213	0	408	297	683	658
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	1.4	0.0	0.0	0.0	0.0	0.0	42.1	0.0	34.9	45.3	22.3	21.1
Incr Delay (d2), s/veh	2.2	0.2	0.2	0.2	0.2	0.3	6.6	0.0	2.1	29.9	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.2	0.1	0.1	0.2	0.3	6.8	0.0	9.2	7.9	5.1	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.6	0.2	0.2	0.3	0.2	0.3	48.7	0.0	36.9	75.2	22.5	21.6
LnGrp LOS	A	A	A	A	A	A	D	A	D	E	C	C
Approach Vol, veh/h		1748			1608			375			746	
Approach Delay, s/veh		0.9			0.2			41.3			41.2	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	9.0	115.5		42.4		124.5	14.5	27.9				
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9				
Max Green Setting (Gmax), s	16.3	* 34		34.6		54.6	8.6	* 22				
Max Q Clear Time (g_c+I1), s	2.0	4.0		15.7		2.0	9.7	23.6				
Green Ext Time (p_c), s	1.0	13.2		1.8		12.2	0.0	0.0				

Intersection Summary			
HCM 6th Ctrl Delay			10.8
HCM 6th LOS			B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	1027	244	28	1106	346	127	208	10	248	162	276
Future Volume (veh/h)	338	1027	244	28	1106	346	127	208	10	248	162	276
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	367	1116	265	30	1202	376	138	226	11	270	176	300
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	508	4184	1866	491	3865	1724	213	389	19	297	683	658
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	1.00	1.00	1.00	1.00	1.00	0.22	0.22	0.22	0.09	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh	3.6	0.2	0.2	0.3	0.2	0.3	48.7	0.0	36.9	75.2	22.5	21.6
Ln Grp LOS	A	A	A	A	A	A	D	A	D	E	C	C
Approach Vol, veh/h		1748			1608			375			746	
Approach Delay, s/veh		0.9			0.2			41.3			41.2	
Approach LOS		A			A			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	9.0	115.5		42.4		124.5	27.9	14.5
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	16.3	* 34		34.6		54.6	* 22	8.6
Max Allow Headway (MAH), s	3.8	5.0		4.4		4.9	5.3	3.7
Max Q Clear (g_c+l1), s	2.0	4.0		15.7		2.0	23.6	9.7
Green Ext Time (g_e), s	1.0	13.2		1.8		12.2	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	0.00	0.00		0.00		0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	392					918	3456
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1769	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	86	
Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	367	30	0	0	0	0	138	270
Grp Sat Flow (s), veh/h/ln	1781	392	0	0	0	0	918	1728
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	0.0	15.0	7.7
Cycle Q Clear Time (g_c), s	0.0	2.0	0.0	0.0	0.0	0.0	21.6	7.7
Perm LT Sat Flow (s_l), veh/h/ln	325	392	0	0	0	0	918	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	110.7	108.7	0.0	0.0	0.0	0.0	22.0	0.0
Perm LT Serve Time (g_u), s	106.8	106.8	0.0	0.0	0.0	0.0	15.4	0.0
Perm LT Q Serve Time (g_ps), s	81.0	0.1	0.0	0.0	0.0	0.0	15.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	508	491	0	0	0	0	213	297
V/C Ratio (X)	0.72	0.06	0.00	0.00	0.00	0.00	0.65	0.91
Avail Cap (c_a), veh/h	709	491	0	0	0	0	213	297
Upstream Filter (I)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	1.4	0.0	0.0	0.0	0.0	0.0	42.1	45.3
Incr Delay (d2), s/veh	2.2	0.2	0.0	0.0	0.0	0.0	6.6	29.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	3.6	0.3	0.0	0.0	0.0	0.0	48.7	75.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.2
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.0	0.0	0.0	0.0	0.4	1.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.78
%ile Back of Q (95%), veh/ln	0.6	0.1	0.0	0.0	0.0	0.0	6.8	7.9
%ile Storage Ratio (RQ%)	0.14	0.01	0.00	0.00	0.00	0.00	1.72	0.89
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	1202	0	176	0	1116	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	3865	0	683	0	4184	0	0
V/C Ratio (X)	0.00	0.31	0.00	0.26	0.00	0.27	0.00	0.00
Avail Cap (c_a), veh/h	0	3865	0	683	0	4184	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	22.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.2	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	22.5	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.2	0.0	5.1	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.16	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	376	0	300	0	265	237	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1855	0
Q Serve Time (g_s), s	0.0	0.0	0.0	13.7	0.0	0.0	11.4	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	13.7	0.0	0.0	11.4	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.05	0.00
Lane Grp Cap (c), veh/h	0	1724	0	658	0	1866	408	0
V/C Ratio (X)	0.00	0.22	0.00	0.46	0.00	0.14	0.58	0.00
Avail Cap (c_a), veh/h	0	1724	0	658	0	1866	408	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	21.1	0.0	0.0	34.9	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.5	0.0	0.2	2.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	21.6	0.0	0.2	36.9	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	5.0	0.0	0.0	5.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.73	0.00	1.80	1.71	0.00
%ile Back of Q (95%), veh/ln	0.0	0.3	0.0	8.8	0.0	0.1	9.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	1.00	0.00	0.04	0.83	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		10.8
HCM 6th LOS		B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	778	58	66	522	141	67	655	83	153	579	145
Future Volume (veh/h)	119	778	58	66	522	141	67	655	83	153	579	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	846	63	72	567	153	73	712	90	166	629	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	973	824	156	973	824	206	1160	147	203	1029	258
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	732	1870	1585	614	1870	1585	688	3174	401	678	2814	706
Grp Volume(v), veh/h	129	846	63	72	567	153	73	398	404	166	397	390
Grp Sat Flow(s),veh/h/ln	732	1870	1585	614	1870	1585	688	1777	1798	678	1777	1743
Q Serve(g_s), s	13.3	35.7	1.8	10.5	18.8	4.6	8.7	16.5	16.5	16.4	16.4	16.5
Cycle Q Clear(g_c), s	32.0	35.7	1.8	46.2	18.8	4.6	25.2	16.5	16.5	32.9	16.4	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		0.40
Lane Grp Cap(c), veh/h	308	973	824	156	973	824	206	650	657	203	650	637
V/C Ratio(X)	0.42	0.87	0.08	0.46	0.58	0.19	0.36	0.61	0.61	0.82	0.61	0.61
Avail Cap(c_a), veh/h	308	973	824	156	973	824	206	650	657	203	650	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	18.9	10.8	39.2	14.9	11.5	33.6	23.3	23.4	38.9	23.3	23.3
Incr Delay (d2), s/veh	0.9	8.6	0.0	2.1	0.9	0.1	4.7	4.3	4.3	29.1	4.2	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	22.6	1.1	2.9	12.0	2.8	3.0	11.7	11.9	9.0	11.7	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	27.5	10.8	41.3	15.8	11.6	38.4	27.6	27.6	68.0	27.6	27.7
LnGrp LOS	C	C	B	D	B	B	D	C	C	E	C	C
Approach Vol, veh/h		1038			792			875			953	
Approach Delay, s/veh		26.4			17.3			28.5			34.7	
Approach LOS		C			B			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		38.0		52.0		38.0		52.0				
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2				
Max Green Setting (Gmax), s		32.9		* 47		32.9		* 47				
Max Q Clear Time (g_c+I1), s		34.9		48.2		27.2		37.7				
Green Ext Time (p_c), s		0.0		0.0		2.6		4.7				
Intersection Summary												
HCM 6th Ctrl Delay			27.1									
HCM 6th LOS			C									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	778	58	66	522	141	67	655	83	153	579	145
Future Volume (veh/h)	119	778	58	66	522	141	67	655	83	153	579	145
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	846	63	72	567	153	73	712	90	166	629	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	308	973	824	156	973	824	206	1160	147	203	1029	258
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.37	0.37	0.37	0.37	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh	26.8	27.5	10.8	41.3	15.8	11.6	38.4	27.6	27.6	68.0	27.6	27.7
Ln Grp LOS	C	C	B	D	B	B	D	C	C	E	C	C
Approach Vol, veh/h		1038			792			875			953	
Approach Delay, s/veh		26.4			17.3			28.5			34.7	
Approach LOS		C			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		38.0		52.0		38.0		52.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		32.9		* 47		32.9		* 47
Max Allow Headway (MAH), s		5.4		5.1		5.3		5.2
Max Q Clear (g_c+I1), s		34.9		48.2		27.2		37.7
Green Ext Time (g_e), s		0.0		0.0		2.6		4.7
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		0.68
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		678		614		688		732
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2814		1870		3174		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		706		1585		401		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	166	0	72	0	73	0	129
Grp Sat Flow (s), veh/h/ln	0	678	0	614	0	688	0	732
Q Serve Time (g_s), s	0.0	16.4	0.0	10.5	0.0	8.7	0.0	13.3
Cycle Q Clear Time (g_c), s	0.0	32.9	0.0	46.2	0.0	25.2	0.0	32.0
Perm LT Sat Flow (s_l), veh/h/ln	0	678	0	614	0	688	0	732
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	32.9	0.0	46.8	0.0	32.9	0.0	46.8
Perm LT Serve Time (g_u), s	0.0	16.4	0.0	11.1	0.0	16.4	0.0	28.0
Perm LT Q Serve Time (g_ps), s	0.0	16.4	0.0	10.5	0.0	8.7	0.0	13.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	203	0	156	0	206	0	308
V/C Ratio (X)	0.00	0.82	0.00	0.46	0.00	0.36	0.00	0.42
Avail Cap (c_a), veh/h	0	203	0	156	0	206	0	308
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	38.9	0.0	39.2	0.0	33.6	0.0	25.9
Incr Delay (d2), s/veh	0.0	29.1	0.0	2.1	0.0	4.7	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	68.0	0.0	41.3	0.0	38.4	0.0	26.8
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	1.5	0.0	1.4	0.0	2.2
2nd-Term Q (Q2), veh/ln	0.0	1.6	0.0	0.1	0.0	0.3	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.71	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	9.0	0.0	2.9	0.0	3.0	0.0	4.1
%ile Storage Ratio (RQ%)	0.00	3.53	0.00	0.53	0.00	1.10	0.00	0.95
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	397	0	567	0	398	0	846
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	16.4	0.0	18.8	0.0	16.5	0.0	35.7
Cycle Q Clear Time (g_c), s	0.0	16.4	0.0	18.8	0.0	16.5	0.0	35.7
Lane Grp Cap (c), veh/h	0	650	0	973	0	650	0	973
V/C Ratio (X)	0.00	0.61	0.00	0.58	0.00	0.61	0.00	0.87
Avail Cap (c_a), veh/h	0	650	0	973	0	650	0	973
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	23.3	0.0	14.9	0.0	23.3	0.0	18.9
Incr Delay (d2), s/veh	0.0	4.2	0.0	0.9	0.0	4.3	0.0	8.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.6	0.0	15.8	0.0	27.6	0.0	27.5
1st-Term Q (Q1), veh/ln	0.0	6.5	0.0	7.2	0.0	6.5	0.0	13.7
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.2	0.0	0.8	0.0	2.3

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q Factor (f_B%)	0.00	1.61	0.00	1.60	0.00	1.61	0.00	1.41	
%ile Back of Q (95%), veh/ln	0.0	11.7	0.0	12.0	0.0	11.7	0.0	22.6	
%ile Storage Ratio (RQ%)	0.00	0.41	0.00	0.33	0.00	0.21	0.00	0.62	
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0	
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Right Lane Group Data									
Assigned Mvmt	0	12	0	14	0	16	0	18	
Lane Assignment		T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1	
Grp Vol (v), veh/h	0	390	0	153	0	404	0	63	
Grp Sat Flow (s), veh/h/ln	0	1743	0	1585	0	1798	0	1585	
Q Serve Time (g_s), s	0.0	16.5	0.0	4.6	0.0	16.5	0.0	1.8	
Cycle Q Clear Time (g_c), s	0.0	16.5	0.0	4.6	0.0	16.5	0.0	1.8	
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Prop RT Outside Lane (P_R)	0.00	0.40	0.00	1.00	0.00	0.22	0.00	1.00	
Lane Grp Cap (c), veh/h	0	637	0	824	0	657	0	824	
V/C Ratio (X)	0.00	0.61	0.00	0.19	0.00	0.61	0.00	0.08	
Avail Cap (c_a), veh/h	0	637	0	824	0	657	0	824	
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	
Uniform Delay (d1), s/veh	0.0	23.3	0.0	11.5	0.0	23.4	0.0	10.8	
Incr Delay (d2), s/veh	0.0	4.4	0.0	0.1	0.0	4.3	0.0	0.0	
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	0.0	27.7	0.0	11.6	0.0	27.6	0.0	10.8	
1st-Term Q (Q1), veh/ln	0.0	6.4	0.0	1.5	0.0	6.6	0.0	0.6	
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.8	0.0	0.0	
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q Factor (f_B%)	0.00	1.61	0.00	1.80	0.00	1.60	0.00	1.80	
%ile Back of Q (95%), veh/ln	0.0	11.6	0.0	2.8	0.0	11.9	0.0	1.1	
%ile Storage Ratio (RQ%)	0.00	0.40	0.00	0.70	0.00	0.22	0.00	0.32	
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0	
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Intersection Summary									
HCM 6th Ctrl Delay		27.1							
HCM 6th LOS		C							

Notes

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

Intersection	
Int Delay, s/veh	19

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	5	77	73	7	136	25	565	58	118	601	11
Future Vol, veh/h	38	5	77	73	7	136	25	565	58	118	601	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	5	84	79	8	148	27	614	63	128	653	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1280	1646	333	1220	1621	339	665	0	0	677	0	0
Stage 1	915	915	-	700	700	-	-	-	-	-	-	-
Stage 2	365	731	-	520	921	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	7.14	6.99	6.54	6.94	5.34	-	-	4.14	-	-
Critical Hdwy Stg 1	7.34	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.92	3.67	4.02	3.32	3.12	-	-	2.22	-	-
Pot Cap-1 Maneuver	146	98	566	160	102	657	566	-	-	911	-	-
Stage 1	234	350	-	385	440	-	-	-	-	-	-	-
Stage 2	605	425	-	477	347	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	91	80	566	111	83	657	566	-	-	911	-	-
Mov Cap-2 Maneuver	91	80	-	111	83	-	-	-	-	-	-	-
Stage 1	223	301	-	367	419	-	-	-	-	-	-	-
Stage 2	438	405	-	343	298	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	54.4	113.3	0.5	1.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	566	-	-	195	228	911	-	-
HCM Lane V/C Ratio	0.048	-	-	0.669	1.03	0.141	-	-
HCM Control Delay (s)	11.7	-	-	54.4	113.3	9.6	-	-
HCM Lane LOS	B	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	4	9.8	0.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1009	134	181	705	182	100	329	171	290	396	38
Future Volume (veh/h)	110	1009	134	181	705	182	100	329	171	290	396	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	1097	146	197	766	198	109	358	186	315	430	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	449	1739	776	323	1434	371	139	573	375	346	568	54
Arrive On Green	0.05	0.49	0.49	0.15	1.00	1.00	0.08	0.16	0.16	0.10	0.17	0.17
Sat Flow, veh/h	1781	3554	1585	1781	2795	722	1781	3554	1585	3456	3280	311
Grp Volume(v), veh/h	120	1097	146	197	487	477	109	358	186	315	232	239
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1740	1781	1777	1585	1728	1777	1814
Q Serve(g_s), s	3.3	22.8	3.3	5.5	0.0	0.0	6.0	9.4	10.1	9.0	12.4	12.5
Cycle Q Clear(g_c), s	3.3	22.8	3.3	5.5	0.0	0.0	6.0	9.4	10.1	9.0	12.4	12.5
Prop In Lane	1.00		1.00	1.00		0.42	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	449	1739	776	323	912	893	139	573	375	346	308	314
V/C Ratio(X)	0.27	0.63	0.19	0.61	0.53	0.53	0.79	0.63	0.50	0.91	0.75	0.76
Avail Cap(c_a), veh/h	482	1739	776	349	912	893	196	853	500	346	426	435
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	18.9	6.0	13.7	0.0	0.0	45.3	39.1	33.0	44.6	39.3	39.4
Incr Delay (d2), s/veh	0.3	1.7	0.5	2.7	2.2	2.3	12.8	2.4	2.2	27.4	7.2	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	14.2	3.3	3.5	1.0	1.0	5.6	7.6	7.3	8.8	9.9	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	20.6	6.5	16.4	2.2	2.3	58.1	41.5	35.2	71.9	46.5	46.7
LnGrp LOS	B	C	A	B	A	A	E	D	D	E	D	D
Approach Vol, veh/h		1363			1161			653			786	
Approach Delay, s/veh		18.3			4.7			42.5			56.7	
Approach LOS		B			A			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	56.7	14.0	21.1	10.5	54.3	12.8	22.3
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green Setting (Gmax), s	7.0	41.6	10.0	* 24	9.0	39.6	* 11	* 24
Max Q Clear Time (g_c+I1), s	5.3	2.0	11.0	12.1	7.5	24.8	8.0	14.5
Green Ext Time (p_c), s	0.0	15.2	0.0	4.0	0.1	10.6	0.1	2.8

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1009	134	181	705	182	100	329	171	290	396	38
Future Volume (veh/h)	110	1009	134	181	705	182	100	329	171	290	396	38
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	1097	146	197	766	198	109	358	186	315	430	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	449	1739	776	323	1434	371	139	573	375	346	568	54
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.49	0.49	0.15	1.00	1.00	0.08	0.16	0.16	0.10	0.17	0.17
Unsig. Movement Delay												
Ln Grp Delay, s/veh	11.6	20.6	6.5	16.4	2.2	2.3	58.1	41.5	35.2	71.9	46.5	46.7
Ln Grp LOS	B	C	A	B	A	A	E	D	D	E	D	D
Approach Vol, veh/h		1363			1161			653			786	
Approach Delay, s/veh		18.3			4.7			42.5			56.7	
Approach LOS		B			A			D			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	8.2	56.7	14.0	21.1	10.5	54.3	22.3	12.8
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	7.0	41.6	10.0	* 24	9.0	39.6	* 24	* 11
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.7	3.8	7.0	6.6	3.8
Max Q Clear (g_c+l1), s	5.3	2.0	11.0	12.1	7.5	24.8	14.5	8.0
Green Ext Time (g_e), s	0.0	15.2	0.0	4.0	0.1	10.6	2.8	0.1
Prob of Phs Call (p_c)	0.96	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Prob of Max Out (p_x)	1.00	0.00	1.00	0.46	1.00	0.00	0.61	1.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2795		3554		3554	3280	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		722		1585		1585	311	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	120	0	315	0	197	0	0	109
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	3.3	0.0	9.0	0.0	5.5	0.0	0.0	6.0
Cycle Q Clear Time (g_c), s	3.3	0.0	9.0	0.0	5.5	0.0	0.0	6.0
Perm LT Sat Flow (s_l), veh/h/ln	583	0	0	0	447	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	48.9	0.0	0.0	0.0	50.3	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	48.9	0.0	0.0	0.0	26.1	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	16.4	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	449	0	346	0	323	0	0	139
V/C Ratio (X)	0.27	0.00	0.91	0.00	0.61	0.00	0.00	0.79
Avail Cap (c_a), veh/h	482	0	346	0	349	0	0	196
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	11.3	0.0	44.6	0.0	13.7	0.0	0.0	45.3
Incr Delay (d2), s/veh	0.3	0.0	27.4	0.0	2.7	0.0	0.0	12.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.6	0.0	71.9	0.0	16.4	0.0	0.0	58.1
1st-Term Q (Q1), veh/ln	1.2	0.0	3.8	0.0	1.7	0.0	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.3	0.0	0.2	0.0	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.73	0.00	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	2.3	0.0	8.8	0.0	3.5	0.0	0.0	5.6
%ile Storage Ratio (RQ%)	0.40	0.00	1.12	0.00	0.46	0.00	0.00	1.58
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	487	0	358	0	1097	232	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	0.0	0.0	9.4	0.0	22.8	12.4	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	9.4	0.0	22.8	12.4	0.0
Lane Grp Cap (c), veh/h	0	912	0	573	0	1739	308	0
V/C Ratio (X)	0.00	0.53	0.00	0.63	0.00	0.63	0.75	0.00
Avail Cap (c_a), veh/h	0	912	0	853	0	1739	426	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	39.1	0.0	18.9	39.3	0.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	2.4	0.0	1.7	7.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.2	0.0	41.5	0.0	20.6	46.5	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.0	0.0	8.8	5.3	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.2	0.0	0.4	0.6	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.54	1.67	0.00
%ile Back of Q (95%), veh/ln	0.0	1.0	0.0	7.6	0.0	14.2	9.9	0.0
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.25	0.00	0.27	0.69	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	477	0	186	0	146	239	0
Grp Sat Flow (s), veh/h/ln	0	1740	0	1585	0	1585	1814	0
Q Serve Time (g_s), s	0.0	0.0	0.0	10.1	0.0	3.3	12.5	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	10.1	0.0	3.3	12.5	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.42	0.00	1.00	0.00	1.00	0.17	0.00
Lane Grp Cap (c), veh/h	0	893	0	375	0	776	314	0
V/C Ratio (X)	0.00	0.53	0.00	0.50	0.00	0.19	0.76	0.00
Avail Cap (c_a), veh/h	0	893	0	500	0	776	435	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	33.0	0.0	6.0	39.4	0.0
Incr Delay (d2), s/veh	0.0	2.3	0.0	2.2	0.0	0.5	7.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.3	0.0	35.2	0.0	6.5	46.7	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.8	0.0	1.7	5.5	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.2	0.0	0.1	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.66	0.00
%ile Back of Q (95%), veh/ln	0.0	1.0	0.0	7.3	0.0	3.3	10.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	2.05	0.00	0.72	0.71	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		25.9
HCM 6th LOS		C

Notes

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

Intersection	
Int Delay, s/veh	174.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	1351	45	74	1009	99	4	3	17	103	4	64
Future Vol, veh/h	31	1351	45	74	1009	99	4	3	17	103	4	64
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	1468	49	80	1097	108	4	3	18	112	4	70

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1205	0	0	1517	0	0	2272	2926	759	2115	2896	603
Stage 1	-	-	-	-	-	-	1561	1561	-	1311	1311	-
Stage 2	-	-	-	-	-	-	711	1365	-	804	1585	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	575	-	-	436	-	-	22	15	349	~ 29	16	442
Stage 1	-	-	-	-	-	-	117	171	-	168	227	-
Stage 2	-	-	-	-	-	-	390	214	-	343	167	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	575	-	-	436	-	-	11	12	349	~ 18	12	442
Mov Cap-2 Maneuver	-	-	-	-	-	-	11	12	-	~ 18	12	-
Stage 1	-	-	-	-	-	-	110	161	-	158	185	-
Stage 2	-	-	-	-	-	-	262	175	-	299	157	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.9	234	$ 2814
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	36	575	-	-	436	-	-	28
HCM Lane V/C Ratio	0.725	0.059	-	-	0.184	-	-	6.638
HCM Control Delay (s)	234	11.7	-	-	15.1	-	-	$ 2814
HCM Lane LOS	F	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	2.6	0.2	-	-	0.7	-	-	22.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	892	100	23	743	160	84	90	8	682	249	464
Future Volume (veh/h)	174	892	100	23	743	160	84	90	8	682	249	464
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	189	970	109	25	808	174	91	98	9	741	271	504
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	396	2185	975	332	1793	800	168	371	34	813	962	926
Arrive On Green	0.09	0.82	0.82	0.50	0.50	0.50	0.22	0.22	0.22	0.24	0.51	0.51
Sat Flow, veh/h	1781	3554	1585	523	3554	1585	696	1687	155	3456	1870	1585
Grp Volume(v), veh/h	189	970	109	25	808	174	91	0	107	741	271	504
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	523	1777	1585	696	0	1842	1728	1870	1585
Q Serve(g_s), s	4.9	7.8	1.4	2.5	14.6	4.8	13.0	0.0	4.8	20.9	8.2	19.4
Cycle Q Clear(g_c), s	4.9	7.8	1.4	3.2	14.6	4.8	21.2	0.0	4.8	20.9	8.2	19.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	396	2185	975	332	1793	800	168	0	405	813	962	926
V/C Ratio(X)	0.48	0.44	0.11	0.08	0.45	0.22	0.54	0.00	0.26	0.91	0.28	0.54
Avail Cap(c_a), veh/h	408	2185	975	332	1793	800	168	0	405	857	962	926
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.2	4.2	3.6	13.3	15.9	8.5	42.8	0.0	32.3	37.2	13.8	12.7
Incr Delay (d2), s/veh	0.9	0.7	0.2	0.4	0.8	0.6	3.5	0.0	0.3	13.4	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	4.0	0.8	0.6	9.7	4.0	4.3	0.0	4.0	15.1	5.9	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.1	4.9	3.9	13.7	16.7	9.1	46.3	0.0	32.6	50.7	14.0	13.3
LnGrp LOS	B	A	A	B	B	A	D	A	C	D	B	B
Approach Vol, veh/h		1268			1007			198			1516	
Approach Delay, s/veh		5.9			15.3			38.9			31.7	
Approach LOS		A			B			D			C	

Timer - Assigned Phs	1	2		4		6	7	8
Phs Duration (G+Y+Rc), s	11.0	56.0		57.3		67.0	29.4	27.9
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9
Max Green Setting (Gmax), s	7.7	* 27		50.8		38.4	24.8	* 22
Max Q Clear Time (g_c+I1), s	6.9	16.6		21.4		9.8	22.9	23.2
Green Ext Time (p_c), s	0.0	4.5		3.5		8.1	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	892	100	23	743	160	84	90	8	682	249	464
Future Volume (veh/h)	174	892	100	23	743	160	84	90	8	682	249	464
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	189	970	109	25	808	174	91	98	9	741	271	504
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	396	2185	975	332	1793	800	168	371	34	813	962	926
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.82	0.82	0.50	0.50	0.50	0.22	0.22	0.22	0.24	0.51	0.51
Unsig. Movement Delay												
Ln Grp Delay, s/veh	12.1	4.9	3.9	13.7	16.7	9.1	46.3	0.0	32.6	50.7	14.0	13.3
Ln Grp LOS	B	A	A	B	B	A	D	A	C	D	B	B
Approach Vol, veh/h		1268			1007			198			1516	
Approach Delay, s/veh		5.9			15.3			38.9			31.7	
Approach LOS		A			B			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	11.0	56.0		57.3		67.0	27.9	29.4
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	7.7	* 27		50.8		38.4	* 22	24.8
Max Allow Headway (MAH), s	3.8	5.0		4.3		5.0	5.9	3.7
Max Q Clear (g_c+I1), s	6.9	16.6		21.4		9.8	23.2	22.9
Green Ext Time (g_e), s	0.0	4.5		3.5		8.1	0.0	0.6
Prob of Phs Call (p_c)	0.99	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00		0.00		0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	523					696	3456
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1687	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	155	
Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	189	25	0	0	0	0	91	741
Grp Sat Flow (s), veh/h/ln	1781	523	0	0	0	0	696	1728
Q Serve Time (g_s), s	4.9	2.5	0.0	0.0	0.0	0.0	13.0	20.9
Cycle Q Clear Time (g_c), s	4.9	3.2	0.0	0.0	0.0	0.0	21.2	20.9
Perm LT Sat Flow (s_l), veh/h/ln	573	523	0	0	0	0	696	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	52.5	50.5	0.0	0.0	0.0	0.0	22.0	0.0
Perm LT Serve Time (g_u), s	34.8	49.8	0.0	0.0	0.0	0.0	13.8	0.0
Perm LT Q Serve Time (g_ps), s	8.4	2.5	0.0	0.0	0.0	0.0	13.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	396	332	0	0	0	0	168	813
V/C Ratio (X)	0.48	0.08	0.00	0.00	0.00	0.00	0.54	0.91
Avail Cap (c_a), veh/h	408	332	0	0	0	0	168	857
Upstream Filter (I)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	11.2	13.3	0.0	0.0	0.0	0.0	42.8	37.2
Incr Delay (d2), s/veh	0.9	0.4	0.0	0.0	0.0	0.0	3.5	13.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.1	13.7	0.0	0.0	0.0	0.0	46.3	50.7
1st-Term Q (Q1), veh/ln	1.7	0.3	0.0	0.0	0.0	0.0	2.2	8.4
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.52
%ile Back of Q (95%), veh/ln	3.2	0.6	0.0	0.0	0.0	0.0	4.3	15.1
%ile Storage Ratio (RQ%)	0.81	0.10	0.00	0.00	0.00	0.00	1.09	1.71
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	808	0	271	0	970	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	14.6	0.0	8.2	0.0	7.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	14.6	0.0	8.2	0.0	7.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	1793	0	962	0	2185	0	0
V/C Ratio (X)	0.00	0.45	0.00	0.28	0.00	0.44	0.00	0.00
Avail Cap (c_a), veh/h	0	1793	0	962	0	2185	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.9	0.0	13.8	0.0	4.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.2	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.7	0.0	14.0	0.0	4.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	3.2	0.0	2.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.68	0.00	1.80	0.00	1.80	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	9.7	0.0	5.9	0.0	4.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.26	0.00	0.18	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	174	0	504	0	109	107	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1842	0
Q Serve Time (g_s), s	0.0	4.8	0.0	19.4	0.0	1.4	4.8	0.0
Cycle Q Clear Time (g_c), s	0.0	4.8	0.0	19.4	0.0	1.4	4.8	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.08	0.00
Lane Grp Cap (c), veh/h	0	800	0	926	0	975	405	0
V/C Ratio (X)	0.00	0.22	0.00	0.54	0.00	0.11	0.26	0.00
Avail Cap (c_a), veh/h	0	800	0	926	0	975	405	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	8.5	0.0	12.7	0.0	3.6	32.3	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.7	0.0	0.2	0.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.1	0.0	13.3	0.0	3.9	32.6	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	6.5	0.0	0.4	2.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.63	0.00	1.80	1.80	0.00
%ile Back of Q (95%), veh/ln	0.0	4.0	0.0	11.0	0.0	0.8	4.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.02	0.00	1.24	0.00	0.21	0.35	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 6th Ctrl Delay		19.7						
HCM 6th LOS		B						

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	704	78	110	579	143	99	1040	277	133	1050	146
Future Volume (veh/h)	102	704	78	110	579	143	99	1040	277	133	1050	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	765	85	120	629	155	108	1130	301	145	1141	159
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	661	560	80	661	560	192	1480	390	157	1668	232
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	690	1870	1585	649	1870	1585	424	2782	734	374	3133	435
Grp Volume(v), veh/h	111	765	85	120	629	155	108	718	713	145	646	654
Grp Sat Flow(s),veh/h/ln	690	1870	1585	649	1870	1585	424	1777	1738	374	1777	1792
Q Serve(g_s), s	2.3	31.8	3.3	0.0	29.5	6.3	22.7	28.5	29.3	18.6	24.0	24.2
Cycle Q Clear(g_c), s	31.8	31.8	3.3	31.8	29.5	6.3	46.9	28.5	29.3	47.9	24.0	24.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		0.24
Lane Grp Cap(c), veh/h	98	661	560	80	661	560	192	946	925	157	946	954
V/C Ratio(X)	1.14	1.16	0.15	1.50	0.95	0.28	0.56	0.76	0.77	0.92	0.68	0.69
Avail Cap(c_a), veh/h	98	661	560	80	661	560	192	946	925	157	946	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	29.1	19.9	45.0	28.4	20.9	32.8	16.5	16.7	40.0	15.5	15.5
Incr Delay (d2), s/veh	132.4	87.2	0.1	279.4	23.7	0.3	11.5	5.7	6.2	53.5	4.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.3	42.0	2.1	14.3	23.4	4.1	5.1	17.5	17.6	9.4	14.9	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	177.2	116.3	20.0	324.4	52.1	21.1	44.3	22.2	22.9	93.6	19.5	19.5
LnGrp LOS	F	F	C	F	D	C	D	C	C	F	B	B
Approach Vol, veh/h		961			904			1539			1445	
Approach Delay, s/veh		114.8			82.9			24.1			26.9	
Approach LOS		F			F			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0				
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2				
Max Green Setting (Gmax), s		47.9		* 32		47.9		* 32				
Max Q Clear Time (g_c+I1), s		49.9		33.8		48.9		33.8				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			53.9
HCM 6th LOS			D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	704	78	110	579	143	99	1040	277	133	1050	146
Future Volume (veh/h)	102	704	78	110	579	143	99	1040	277	133	1050	146
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	765	85	120	629	155	108	1130	301	145	1141	159
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	98	661	560	80	661	560	192	1480	390	157	1668	232
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.53	0.53	0.53	0.53	0.53	0.53
Unsig. Movement Delay												
Ln Grp Delay, s/veh	177.2	116.3	20.0	324.4	52.1	21.1	44.3	22.2	22.9	93.6	19.5	19.5
Ln Grp LOS	F	F	C	F	D	C	D	C	C	F	B	B
Approach Vol, veh/h		961			904			1539			1445	
Approach Delay, s/veh		114.8			82.9			24.1			26.9	
Approach LOS		F			F			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		6.0		5.0
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		5.1		* 5.2		5.1		* 5.2
Max Green (Gmax), s		47.9		* 32		47.9		* 32
Max Allow Headway (MAH), s		5.7		5.1		5.5		5.2
Max Q Clear (g_c+I1), s		49.9		33.8		48.9		33.8
Green Ext Time (g_e), s		0.0		0.0		0.0		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		1.00		0.00		1.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		374		649		424		690
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3133		1870		2782		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		435		1585		734		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	145	0	120	0	108	0	111
Grp Sat Flow (s), veh/h/ln	0	374	0	649	0	424	0	690
Q Serve Time (g_s), s	0.0	18.6	0.0	0.0	0.0	22.7	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	47.9	0.0	31.8	0.0	46.9	0.0	31.8
Perm LT Sat Flow (s_l), veh/h/ln	0	374	0	649	0	424	0	690
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	47.9	0.0	31.8	0.0	47.9	0.0	31.8
Perm LT Serve Time (g_u), s	0.0	18.6	0.0	0.0	0.0	23.7	0.0	2.3
Perm LT Q Serve Time (g_ps), s	0.0	18.6	0.0	0.0	0.0	22.7	0.0	2.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	157	0	80	0	192	0	98
V/C Ratio (X)	0.00	0.92	0.00	1.50	0.00	0.56	0.00	1.14
Avail Cap (c_a), veh/h	0	157	0	80	0	192	0	98
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	40.0	0.0	45.0	0.0	32.8	0.0	44.8
Incr Delay (d2), s/veh	0.0	53.5	0.0	279.4	0.0	11.5	0.0	132.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	93.6	0.0	324.4	0.0	44.3	0.0	177.2
1st-Term Q (Q1), veh/ln	0.0	3.2	0.0	1.7	0.0	2.2	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	2.3	0.0	6.2	0.0	0.6	0.0	3.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.70	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	9.4	0.0	14.3	0.0	5.1	0.0	10.3
%ile Storage Ratio (RQ%)	0.00	3.66	0.00	2.60	0.00	1.85	0.00	2.38
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	10.0	0.0	0.0	0.0	3.3
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	646	0	629	0	718	0	765
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	24.0	0.0	29.5	0.0	28.5	0.0	31.8
Cycle Q Clear Time (g_c), s	0.0	24.0	0.0	29.5	0.0	28.5	0.0	31.8
Lane Grp Cap (c), veh/h	0	946	0	661	0	946	0	661
V/C Ratio (X)	0.00	0.68	0.00	0.95	0.00	0.76	0.00	1.16
Avail Cap (c_a), veh/h	0	946	0	661	0	946	0	661
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.5	0.0	28.4	0.0	16.5	0.0	29.1
Incr Delay (d2), s/veh	0.0	4.0	0.0	23.7	0.0	5.7	0.0	87.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.5	0.0	52.1	0.0	22.2	0.0	116.3
1st-Term Q (Q1), veh/ln	0.0	8.7	0.0	12.4	0.0	10.3	0.0	13.3
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	4.4	0.0	1.5	0.0	16.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.53	0.00	1.40	0.00	1.48	0.00	1.43
%ile Back of Q (95%), veh/ln	0.0	14.9	0.0	23.4	0.0	17.5	0.0	42.0
%ile Storage Ratio (RQ%)	0.00	0.52	0.00	0.65	0.00	0.32	0.00	1.14
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	654	0	155	0	713	0	85
Grp Sat Flow (s), veh/h/ln	0	1792	0	1585	0	1738	0	1585
Q Serve Time (g_s), s	0.0	24.2	0.0	6.3	0.0	29.3	0.0	3.3
Cycle Q Clear Time (g_c), s	0.0	24.2	0.0	6.3	0.0	29.3	0.0	3.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.24	0.00	1.00	0.00	0.42	0.00	1.00
Lane Grp Cap (c), veh/h	0	954	0	560	0	925	0	560
V/C Ratio (X)	0.00	0.69	0.00	0.28	0.00	0.77	0.00	0.15
Avail Cap (c_a), veh/h	0	954	0	560	0	925	0	560
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.5	0.0	20.9	0.0	16.7	0.0	19.9
Incr Delay (d2), s/veh	0.0	4.0	0.0	0.3	0.0	6.2	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.5	0.0	21.1	0.0	22.9	0.0	20.0
1st-Term Q (Q1), veh/ln	0.0	8.8	0.0	2.2	0.0	10.4	0.0	1.2
2nd-Term Q (Q2), veh/ln	0.0	1.1	0.0	0.0	0.0	1.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.52	0.00	1.80	0.00	1.47	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	15.1	0.0	4.1	0.0	17.6	0.0	2.1
%ile Storage Ratio (RQ%)	0.00	0.52	0.00	1.04	0.00	0.32	0.00	0.64
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.9
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	7	44	80	7	149	33	1029	85	176	1453	24
Future Vol, veh/h	32	7	44	80	7	149	33	1029	85	176	1453	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	90	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	8	48	87	8	162	36	1118	92	191	1579	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2609	3256	803	2254	3223	605	1605	0	0	1210	0	0
Stage 1	1974	1974	-	1236	1236	-	-	-	-	-	-	-
Stage 2	635	1282	-	1018	1987	-	-	-	-	-	-	-
Critical Hdwy	6.99	6.54	7.14	6.99	6.54	6.94	5.34	-	-	4.14	-	-
Critical Hdwy Stg 1	7.34	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.67	4.02	3.92	3.67	4.02	3.32	3.12	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 18	9	280	~ 31	9	441	198	-	-	572	-	-
Stage 1	41	106	-	183	246	-	-	-	-	-	-	-
Stage 2	420	234	-	234	105	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 5	280	-	~ 5	441	198	-	-	572	-	-
Mov Cap-2 Maneuver	-	~ 5	-	-	~ 5	-	-	-	-	-	-	-
Stage 1	~ 34	71	-	150	201	-	-	-	-	-	-	-
Stage 2	209	191	-	115	70	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.8	1.5
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	198	-	-	-	-	572	-	-
HCM Lane V/C Ratio	0.181	-	-	-	-	0.334	-	-
HCM Control Delay (s)	27.2	-	-	-	-	14.4	-	-
HCM Lane LOS	D	-	-	-	-	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-	-	-	1.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1058	153	206	1069	326	222	929	219	349	656	168
Future Volume (veh/h)	210	1058	153	206	1069	326	222	929	219	349	656	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	228	1150	166	224	1162	354	241	1010	238	379	713	183
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	343	3203	1429	509	2428	728	196	995	523	346	728	187
Arrive On Green	0.05	0.90	0.90	0.02	0.30	0.30	0.11	0.28	0.28	0.10	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	1781	2694	808	1781	3554	1585	3456	2800	718
Grp Volume(v), veh/h	228	1150	166	224	760	756	241	1010	238	379	452	444
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1725	1781	1777	1585	1728	1777	1741
Q Serve(g_s), s	0.7	4.7	4.6	0.7	35.0	36.0	11.0	28.0	11.8	10.0	25.3	25.3
Cycle Q Clear(g_c), s	0.7	4.7	4.6	0.7	35.0	36.0	11.0	28.0	11.8	10.0	25.3	25.3
Prop In Lane	1.00		1.00	1.00		0.47	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	343	3203	1429	509	1602	1555	196	995	523	346	462	453
V/C Ratio(X)	0.66	0.36	0.12	0.44	0.47	0.49	1.23	1.02	0.46	1.10	0.98	0.98
Avail Cap(c_a), veh/h	361	3203	1429	563	1602	1555	196	995	523	346	462	453
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	0.7	8.5	0.7	15.8	16.1	44.5	36.0	26.4	45.0	36.7	36.7
Incr Delay (d2), s/veh	4.3	0.3	0.2	0.6	1.0	1.1	139.8	32.3	1.3	76.9	36.5	37.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.1	0.3	0.4	0.2	22.3	22.3	19.6	22.9	8.0	12.9	21.7	21.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	1.0	8.7	1.3	16.8	17.2	184.3	68.3	27.7	121.9	73.3	73.8
LnGrp LOS	C	A	A	A	B	B	F	F	C	F	E	E
Approach Vol, veh/h		1544			1740			1489			1275	
Approach Delay, s/veh		5.2			15.0			80.6			87.9	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	96.5	14.0	33.0	8.0	96.5	16.0	31.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green Setting (Gmax), s	6.0	40.6	10.0	* 26	8.0	38.6	* 11	* 26
Max Q Clear Time (g_c+I1), s	2.7	38.0	12.0	30.0	2.7	6.7	13.0	27.3
Green Ext Time (p_c), s	0.2	2.4	0.0	0.0	0.3	19.3	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		44.0
HCM 6th LOS		D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1058	153	206	1069	326	222	929	219	349	656	168
Future Volume (veh/h)	210	1058	153	206	1069	326	222	929	219	349	656	168
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	228	1150	166	224	1162	354	241	1010	238	379	713	183
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	343	3203	1429	509	2428	728	196	995	523	346	728	187
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.90	0.90	0.02	0.30	0.30	0.11	0.28	0.28	0.10	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	24.0	1.0	8.7	1.3	16.8	17.2	184.3	68.3	27.7	121.9	73.3	73.8
Ln Grp LOS	C	A	A	A	B	B	F	F	C	F	E	E
Approach Vol, veh/h		1544			1740			1489			1275	
Approach Delay, s/veh		5.2			15.0			80.6			87.9	
Approach LOS		A			B			F			F	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	8	7
Case No	1.1	4.0	2.0	3.0	1.1	3.0	4.0	2.0
Phs Duration (G+Y+Rc), s	8.0	96.5	14.0	33.0	8.0	96.5	31.0	16.0
Change Period (Y+Rc), s	3.0	5.4	4.0	* 5	3.0	5.4	* 5	* 5
Max Green (Gmax), s	6.0	40.6	10.0	* 26	8.0	38.6	* 26	* 11
Max Allow Headway (MAH), s	3.8	7.2	3.8	6.9	3.8	7.0	6.7	3.8
Max Q Clear (g_c+l1), s	2.7	38.0	12.0	30.0	2.7	6.7	27.3	13.0
Green Ext Time (g_e), s	0.2	2.4	0.0	0.0	0.3	19.3	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	0.00	1.00	1.00	0.31	0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1		3		5			7
Mvmt Sat Flow, veh/h	1781		3456		1781			1781
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		2694		3554		3554	2800	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		808		1585		1585	718	
Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	0	7
Lane Assignment	L (Pr/Pm)		L (Prot)		L (Pr/Pm)			L (Prot)

Lanes in Grp	1	0	2	0	1	0	0	1
Grp Vol (v), veh/h	228	0	379	0	224	0	0	241
Grp Sat Flow (s), veh/h/ln	1781	0	1728	0	1781	0	0	1781
Q Serve Time (g_s), s	0.7	0.0	10.0	0.0	0.7	0.0	0.0	11.0
Cycle Q Clear Time (g_c), s	0.7	0.0	10.0	0.0	0.7	0.0	0.0	11.0
Perm LT Sat Flow (s_l), veh/h/ln	345	0	0	0	417	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	90.1	0.0	0.0	0.0	90.1	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	52.8	0.0	0.0	0.0	83.5	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	52.8	0.0	0.0	0.0	8.3	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	343	0	346	0	509	0	0	196
V/C Ratio (X)	0.66	0.00	1.10	0.00	0.44	0.00	0.00	1.23
Avail Cap (c_a), veh/h	361	0	346	0	563	0	0	196
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	19.7	0.0	45.0	0.0	0.7	0.0	0.0	44.5
Incr Delay (d2), s/veh	4.3	0.0	76.9	0.0	0.6	0.0	0.0	139.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	24.0	0.0	121.9	0.0	1.3	0.0	0.0	184.3
1st-Term Q (Q1), veh/ln	4.9	0.0	4.2	0.0	0.0	0.0	0.0	4.8
2nd-Term Q (Q2), veh/ln	0.4	0.0	3.7	0.0	0.1	0.0	0.0	7.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.71	0.00	1.64	0.00	1.80	0.00	0.00	1.59
%ile Back of Q (95%), veh/ln	9.1	0.0	12.9	0.0	0.2	0.0	0.0	19.6
%ile Storage Ratio (RQ%)	1.59	0.00	1.64	0.00	0.02	0.00	0.00	5.54
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	8.4	0.0	0.0	0.0	0.0	11.3
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T	T	
Lanes in Grp	0	1	0	2	0	2	1	0
Grp Vol (v), veh/h	0	760	0	1010	0	1150	452	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1777	0	1777	1777	0
Q Serve Time (g_s), s	0.0	35.0	0.0	28.0	0.0	4.7	25.3	0.0
Cycle Q Clear Time (g_c), s	0.0	35.0	0.0	28.0	0.0	4.7	25.3	0.0
Lane Grp Cap (c), veh/h	0	1602	0	995	0	3203	462	0
V/C Ratio (X)	0.00	0.47	0.00	1.02	0.00	0.36	0.98	0.00
Avail Cap (c_a), veh/h	0	1602	0	995	0	3203	462	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	15.8	0.0	36.0	0.0	0.7	36.7	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	32.3	0.0	0.3	36.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.8	0.0	68.3	0.0	1.0	73.3	0.0
1st-Term Q (Q1), veh/ln	0.0	15.4	0.0	11.7	0.0	0.0	10.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	4.5	0.0	0.1	4.7	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.41	0.00	1.42	0.00	1.80	1.42	0.00
%ile Back of Q (95%), veh/ln	0.0	22.3	0.0	22.9	0.0	0.3	21.7	0.0
%ile Storage Ratio (RQ%)	0.00	1.01	0.00	0.75	0.00	0.00	1.52	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		T+R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	756	0	238	0	166	444	0
Grp Sat Flow (s), veh/h/ln	0	1725	0	1585	0	1585	1741	0
Q Serve Time (g_s), s	0.0	36.0	0.0	11.8	0.0	4.6	25.3	0.0
Cycle Q Clear Time (g_c), s	0.0	36.0	0.0	11.8	0.0	4.6	25.3	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.47	0.00	1.00	0.00	1.00	0.41	0.00
Lane Grp Cap (c), veh/h	0	1555	0	523	0	1429	453	0
V/C Ratio (X)	0.00	0.49	0.00	0.46	0.00	0.12	0.98	0.00
Avail Cap (c_a), veh/h	0	1555	0	523	0	1429	453	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	16.1	0.0	26.4	0.0	8.5	36.7	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	1.3	0.0	0.2	37.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.2	0.0	27.7	0.0	8.7	73.8	0.0
1st-Term Q (Q1), veh/ln	0.0	15.4	0.0	4.3	0.0	0.1	10.4	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.2	0.0	0.1	4.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.41	0.00	1.77	0.00	1.80	1.42	0.00
%ile Back of Q (95%), veh/ln	0.0	22.3	0.0	8.0	0.0	0.4	21.4	0.0
%ile Storage Ratio (RQ%)	0.00	1.01	0.00	2.26	0.00	0.08	1.50	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.0
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	1709	30	58	1362	142	5	6	12	111	5	90
Future Vol, veh/h	48	1709	30	58	1362	142	5	6	12	111	5	90
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	1858	33	63	1480	154	5	7	13	121	5	98

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1634	0	0	1891	0	0	2848	3739	946	2720	3678	817
Stage 1	-	-	-	-	-	-	1979	1979	-	1683	1683	-
Stage 2	-	-	-	-	-	-	869	1760	-	1037	1995	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	393	-	-	312	-	-	8	~ 4	262	~ 10	~ 5	320
Stage 1	-	-	-	-	-	-	64	106	-	~ 98	149	-
Stage 2	-	-	-	-	-	-	313	136	-	247	104	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	393	-	-	312	-	-	-	~ 3	262	-	~ 3	320
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 3	-	-	~ 3	-
Stage 1	-	-	-	-	-	-	56	92	-	~ 85	119	-
Stage 2	-	-	-	-	-	-	166	109	-	189	90	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.7		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	393	-	-	312	-	-	-
HCM Lane V/C Ratio	-	0.133	-	-	0.202	-	-	-
HCM Control Delay (s)	-	15.6	-	-	19.4	-	-	-
HCM Lane LOS	-	C	-	-	C	-	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-	0.7	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1059	246	28	1160	346	130	208	10	248	162	284
Future Volume (veh/h)	342	1059	246	28	1160	346	130	208	10	248	162	284
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	372	1151	267	30	1261	376	141	226	11	270	176	309
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	492	4222	1883	480	3902	1740	212	389	19	276	671	648
Arrive On Green	0.07	1.00	1.00	1.00	1.00	1.00	0.22	0.22	0.22	0.08	0.36	0.36
Sat Flow, veh/h	1781	3554	1585	379	3554	1585	911	1769	86	3456	1870	1585
Grp Volume(v), veh/h	372	1151	267	30	1261	376	141	0	237	270	176	309
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	379	1777	1585	911	0	1855	1728	1870	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	15.3	0.0	11.4	7.8	6.7	14.3
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.1	0.0	0.0	22.0	0.0	11.4	7.8	6.7	14.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	492	4222	1883	480	3902	1740	212	0	408	276	671	648
V/C Ratio(X)	0.76	0.27	0.14	0.06	0.32	0.22	0.67	0.00	0.58	0.98	0.26	0.48
Avail Cap(c_a), veh/h	670	4222	1883	480	3902	1740	212	0	408	276	671	648
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.3	0.0	0.0	0.0	0.0	0.0	42.4	0.0	34.9	45.9	22.7	21.7
Incr Delay (d2), s/veh	3.3	0.2	0.2	0.2	0.2	0.3	7.7	0.0	2.1	47.5	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.2	0.1	0.1	0.2	0.2	7.1	0.0	9.2	8.8	5.1	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	0.2	0.2	0.3	0.2	0.3	50.1	0.0	36.9	93.4	22.9	22.2
LnGrp LOS	A	A	A	A	A	A	D	A	D	F	C	C
Approach Vol, veh/h		1790			1667			378			755	
Approach Delay, s/veh		1.7			0.2			41.8			47.8	
Approach LOS		A			A			D			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	9.0	116.6		41.8		125.6	13.9	27.9				
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	5.9	* 5.9				
Max Green Setting (Gmax), s	15.0	* 36		34.0		55.2	8.0	* 22				
Max Q Clear Time (g_c+I1), s	2.0	4.1		16.3		2.0	9.8	24.0				
Green Ext Time (p_c), s	0.9	14.3		1.8		12.8	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			12.1									
HCM 6th LOS			B									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1059	246	28	1160	346	130	208	10	248	162	284
Future Volume (veh/h)	342	1059	246	28	1160	346	130	208	10	248	162	284
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	372	1151	267	30	1261	376	141	226	11	270	176	309
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	492	4222	1883	480	3902	1740	212	389	19	276	671	648
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	1.00	1.00	1.00	1.00	1.00	0.22	0.22	0.22	0.08	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	7.6	0.2	0.2	0.3	0.2	0.3	50.1	0.0	36.9	93.4	22.9	22.2
Ln Grp LOS	A	A	A	A	A	A	D	A	D	F	C	C
Approach Vol, veh/h		1790			1667			378			755	
Approach Delay, s/veh		1.7			0.2			41.8			47.8	
Approach LOS		A			A			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6	8	7
Case No	1.2	5.3		3.0		3.0	6.4	2.0
Phs Duration (G+Y+Rc), s	9.0	116.6		41.8		125.6	27.9	13.9
Change Period (Y+Rc), s	4.0	* 4.9		5.9		4.9	* 5.9	5.9
Max Green (Gmax), s	15.0	* 36		34.0		55.2	* 22	8.0
Max Allow Headway (MAH), s	3.8	5.0		4.3		4.9	5.3	3.7
Max Q Clear (g_c+I1), s	2.0	4.1		16.3		2.0	24.0	9.8
Green Ext Time (g_e), s	0.9	14.3		1.8		12.8	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00		1.00		1.00	1.00	1.00
Prob of Max Out (p_x)	0.01	0.00		0.01		0.00	1.00	1.00
Left-Turn Movement Data								
Assigned Mvmt	1	5					3	7
Mvmt Sat Flow, veh/h	1781	379					911	3456
Through Movement Data								
Assigned Mvmt		2		4		6	8	
Mvmt Sat Flow, veh/h		3554		1870		3554	1769	
Right-Turn Movement Data								
Assigned Mvmt		12		14		16	18	
Mvmt Sat Flow, veh/h		1585		1585		1585	86	
Left Lane Group Data								
Assigned Mvmt	1	5	0	0	0	0	3	7
Lane Assignment	L (Pr/Pm)	L					L	L (Prot)

Lanes in Grp	1	1	0	0	0	0	1	2
Grp Vol (v), veh/h	372	30	0	0	0	0	141	270
Grp Sat Flow (s), veh/h/ln	1781	379	0	0	0	0	911	1728
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	0.0	15.3	7.8
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	0.0	0.0	0.0	22.0	7.8
Perm LT Sat Flow (s_l), veh/h/ln	307	379	0	0	0	0	911	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	111.8	109.8	0.0	0.0	0.0	0.0	22.0	0.0
Perm LT Serve Time (g_u), s	107.8	107.9	0.0	0.0	0.0	0.0	15.3	0.0
Perm LT Q Serve Time (g_ps), s	107.8	0.1	0.0	0.0	0.0	0.0	15.3	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Lane Grp Cap (c), veh/h	492	480	0	0	0	0	212	276
V/C Ratio (X)	0.76	0.06	0.00	0.00	0.00	0.00	0.67	0.98
Avail Cap (c_a), veh/h	670	480	0	0	0	0	212	276
Upstream Filter (I)	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	4.3	0.0	0.0	0.0	0.0	0.0	42.4	45.9
Incr Delay (d2), s/veh	3.3	0.2	0.0	0.0	0.0	0.0	7.7	47.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	7.6	0.3	0.0	0.0	0.0	0.0	50.1	93.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.3
2nd-Term Q (Q2), veh/ln	0.5	0.0	0.0	0.0	0.0	0.0	0.5	1.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	0.00	0.00	0.00	0.00	1.80	1.73
%ile Back of Q (95%), veh/ln	0.8	0.1	0.0	0.0	0.0	0.0	7.1	8.8
%ile Storage Ratio (RQ%)	0.21	0.01	0.00	0.00	0.00	0.00	1.80	0.99
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	8	0
Lane Assignment		T		T		T		
Lanes in Grp	0	2	0	1	0	2	0	0
Grp Vol (v), veh/h	0	1261	0	176	0	1151	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	3902	0	671	0	4222	0	0
V/C Ratio (X)	0.00	0.32	0.00	0.26	0.00	0.27	0.00	0.00
Avail Cap (c_a), veh/h	0	3902	0	671	0	4222	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	22.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.2	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.2	0.0	22.9	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	1.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.2	0.0	5.1	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.16	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	18	0
Lane Assignment		R		R		R	T+R	
Lanes in Grp	0	1	0	1	0	1	1	0
Grp Vol (v), veh/h	0	376	0	309	0	267	237	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	1855	0
Q Serve Time (g_s), s	0.0	0.0	0.0	14.3	0.0	0.0	11.4	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	14.3	0.0	0.0	11.4	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1585.1	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.05	0.00
Lane Grp Cap (c), veh/h	0	1740	0	648	0	1883	408	0
V/C Ratio (X)	0.00	0.22	0.00	0.48	0.00	0.14	0.58	0.00
Avail Cap (c_a), veh/h	0	1740	0	648	0	1883	408	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	21.7	0.0	0.0	34.9	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.5	0.0	0.2	2.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	22.2	0.0	0.2	36.9	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	5.3	0.0	0.0	5.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.71	0.00	1.80	1.71	0.00
%ile Back of Q (95%), veh/ln	0.0	0.2	0.0	9.2	0.0	0.1	9.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	1.03	0.00	0.04	0.83	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.1
HCM 6th LOS	B

Notes

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

Appendix F

Traffic Signal Warrants

SR#

Traffic Signal Warrants Worksheet

DATE 8/30/21 PREPARER GTC REVIEWER ________

MAJOR ST: Coldwater Canyon Avenue

MINOR ST: Valleyheart Drive

Critical Approach Speed: MPH ____ *or* Speed Limit: MPH 35

Speed limit or critical speed on major street traffic > 40 mph………….………. ☐
or
In built up area of isolated community of < 10,000 population……….…………. ☐

RURAL (R) ☒ URBAN (U)

Eight-Hour Vehicular Volume — WARRANT 1

N/A ☒

SATISFIED YES ☐ NO ☐

⋆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ⋆

a. Condition A or Condition B or combination of 80% of both parts A and B must be satisfied.

b. A 6-hour Manual Count may be used in a determination that this warrant is not met. However, supplement manual counts should be taken during separate hours for a determination that this warrant is met.

c. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Figure 4C-103(CA) should be used for new intersections, significantly reconstructed intersections, where near-term land development will result in increased volumes, or where it is not reasonable to use current traffic volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one -lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

Eight-Hour Vehicular Volume WARRANT 1 (continued)

⭑ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ⭑

Condition A

Minimum Vehicle Volume

SATISFIED	YES	NO
100%	❑	❑
80%	❑	❑

RIGHT TURN REDUCTION ❑
APPLICATION *MINOR STREET* ❑
(If Yes, fill in percentage) ____%

	MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)				Hours							
	U	~~R~~	U	~~R~~								
APPROACH LANES	1		2 or More ✓		17:00							
Both Approach Major Street	500 (400)	350 (280)	600 (480)	420 (336)	1378							
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	216							

Condition B

Interruption of Continuous Traffic

SATISFIED	YES	NO
100%	❑	❑
80%	❑	❑

RIGHT TURN REDUCTION ❑
APPLICATION *MINOR STREET* ❑
(If Yes, fill in percentage) ____%

	MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)				Hours							
	U	~~R~~	U	~~R~~								
APPROACH LANES	1		2 or More		17:00							
Both Approach Major Street	750 (600)	525 (420)	900 (720)	630 (504)	1378							
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	216							

COMBINATION OF A & B

SATISFIED	YES	NO
	❑	❑

REQUIREMENT	CONDITION	✓	FULFILLED YES	FULFILLED NO
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME AND B. INTERRUPTION OF CONTINUOUS TRAFFIC		❑	❑
AND AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCOVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			❑	❑

Eight-Hour Vehicular Volume WARRANT 1 *(continued)*

☆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ☆

Projected Volumes

	N/A	☒
SATISFIED	YES	NO
	☐	☐

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)
Based on Estimated Average Daily Traffic - see *Note**

URBAN ☐	RURAL ☐	Minimum Requirements Estimated Average Daily Traffic			
CONDITION A - Minimum Vehicular Volume Satisfied ☐ Not Satisfied ☐		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1………	1………	8,000	5,600	2,400	1,680
2 or More………	1………	9,600	6,720	2,400	1,680
2 or More………	2 or More………	9,600	6,720	3,200	2,240
1………	2 or More………	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic Satisfied ☐ Not Satisfied ☐		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Minor Street	Minor Street				
1………	1………	12,000	8,400	1,200	850
2 or More………	1………	14,400	10,080	1,200	850
2 or More………	2 or More………	14,400	10,080	1,600	1,120
1………	2 or More………	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B Satisfied ☐ Not Satisfied ☐ No one condition satisfied, but following conditions fulfilled 80% or more…… ____ A ____ B		2 CONDITIONS 80%		2 CONDITIONS 80%	

* ***Note:*** *To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes*

Four-Hour Vehicular Volume — WARRANT 2

N/A	☒
SATISFIED YES	☐
NO	☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Record hourly vehicle volumes for the highest four hours of an average day.

b. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

c. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

d. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

e. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left -turn traffic.

APPROACH LANES	One	2 or More	Hours			
Both Approaches - Major Street		✓				
Higher Approach - Minor Street	✓					

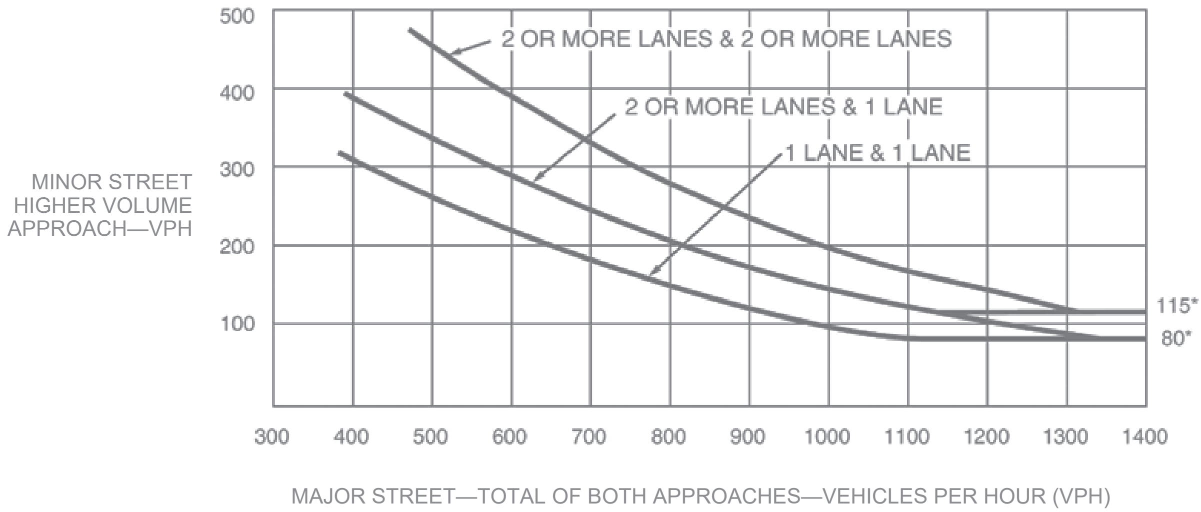
	YES	NO
RIGHT TURN REDUCTION APPLICATION *MINOR STREET*	☐	☐
(If Yes, fill in percentage)	______%	

	YES	NO
* All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS) OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	☐	☐

Four-Hour Vehicular Volume WARRANT 2 *(continued)*

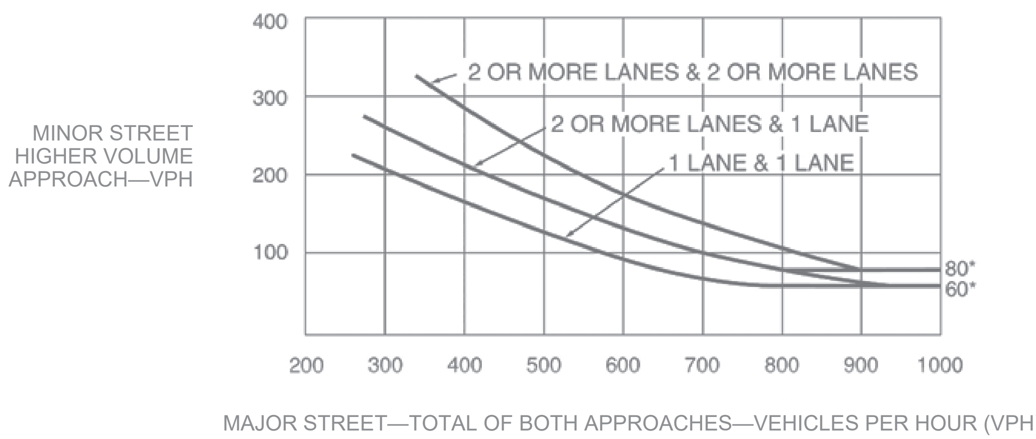
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

URBAN
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



**Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.*

RURAL
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)



**Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.*

Peak Hour — WARRANT 3

	N/A	☐
SATISFIED	YES	☒
	NO	☐

☆ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ☆

a. Part A or Part B must be satisfied.

b. This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

c. In applying each condition, the major street and minor street volumes shall be for the same hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Estimated Peak Hour Volumes may be used for new intersections, significantly reconstructed intersections, or where near-term land development will result in increased volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

Unusual facility per Note b. YES ☐ NO ☒

Name ~~1378~~

PART A

All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

SATISFIED: YES ☐ NO ☒

	YES	NO	N/A
1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	☐	☐	☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	☒	☐	☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	☒	☐	☐

PART B

SATISFIED: YES ☒ NO ☐

APPROACH LANES	One	2 or More	Hour 17:00
Both Approaches - Major Street		✓	1378
Higher Approach - Minor Street	✓		216

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* YES ☐ NO ☒

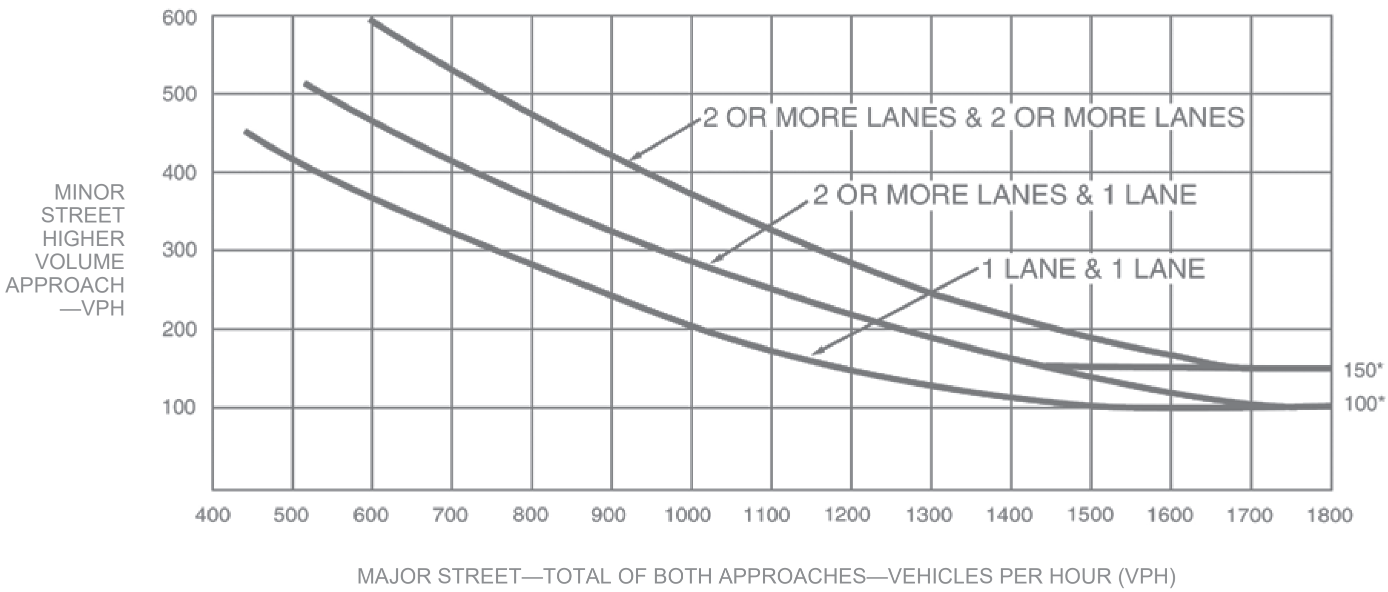
(If Yes, fill in percentage) ~~1378~~ %

	YES	NO
The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS) OR, The plotted point falls above the applicable curve in ~~Figure 4C-4. (RURAL AREAS)~~	☒	☐

Peak Hour WARRANT 3 *(continued)*

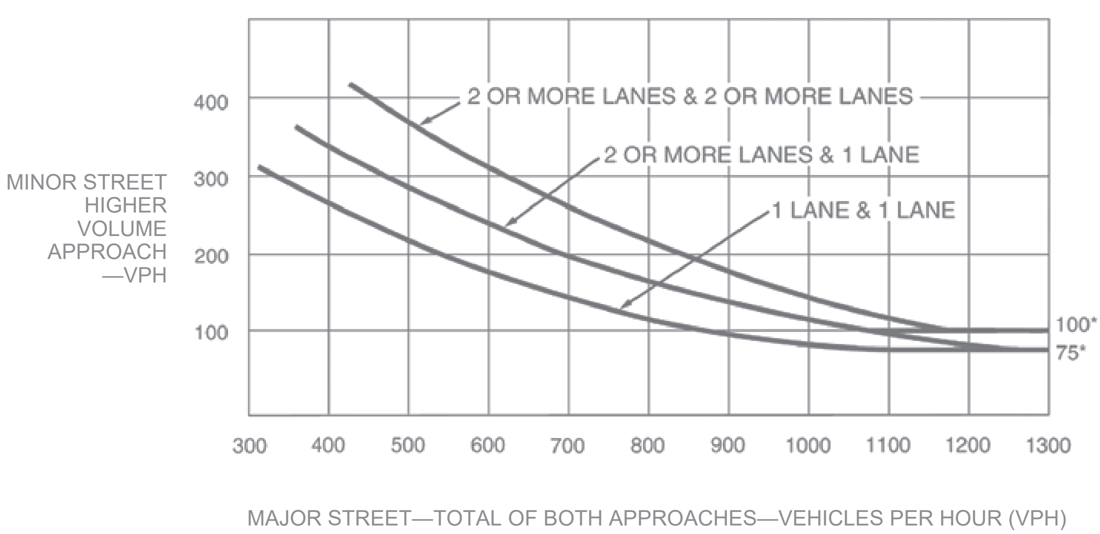
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

URBAN
Figure 4C-3. Warrant 3, Peak Hour



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.*

RURAL
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



** 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 approach with one lane.*

Pedestrian Volume — WARRANT 4

N/A	☒
SATISFIED YES	☐
NO	☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Parts 1 and 2 shall be satisfied.

b. The pedestrian volume criterion may be reduced by as much as 50% if the 15th percentile speed of the pedestrians is less than 3.5 feet/second.

c. Estimated pedestrian volumes may be used where nearby, near-term land use development has been approved for construction.

d. In applying each condition, the total vehicles per hour on the major street (on both approaches) and the total pedestrians per hour crossing the major street shall be for the same hours.

e. The Pedestrian Volume signal warrants shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

f. Traffic control signal may not be needed at the study location if adjacent coordinated traffic control signals consistently provide gaps of adequate length for pedestrians to cross the street.

g. If it is considered at a non-intersection crossing, the traffic control signal should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs. If the traffic control signal is installed at a non-intersection crossing, at least one of the signal faces should be over the traveled way for each approach, parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the crosswalk or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance, and the installation should include suitable standard signs and pavement markings.

h. Bicycles may be counted as pedestrians.

i. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART 1 (A or B must be satisfied)

SATISFIED	YES	NO
	☐	☐

A. FOUR-HOUR PEDESTRIAN VOLUMES

	Hours			
Vehicles per hour on major street for 4 hours				
Pedestrians crossing major street per hour for highest 4 hours				

(FIGURE 4C-5 OR 4C-6 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐
15% WALKING RATE	____ *fps*	

B. ONE HOUR PEDESTRIAN VOLUMES

	Hour
Vehicles per hour on major street for 1 hour	
Pedestrians crossing major street per hour for highest 1 hour	*0*

(FIGURE 4C-7 or 4C-8 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐
15% WALKING RATE	____ *fps*	

PART 2

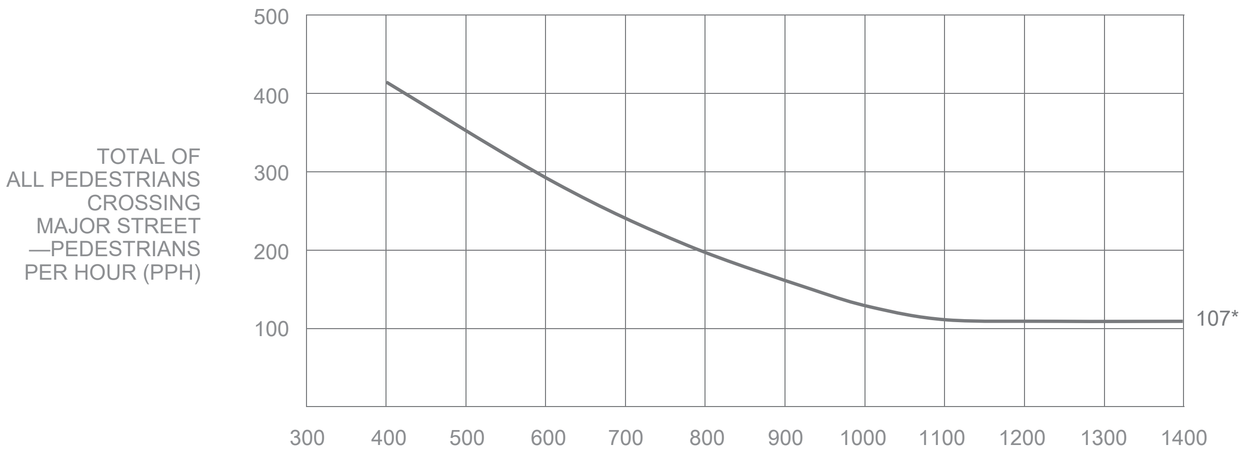
SATISFIED	YES	NO
	☐	☐

	YES	NO
AND, The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street	☐	☐

Pedestrian Volume WARRANT 4 *(continued)*

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

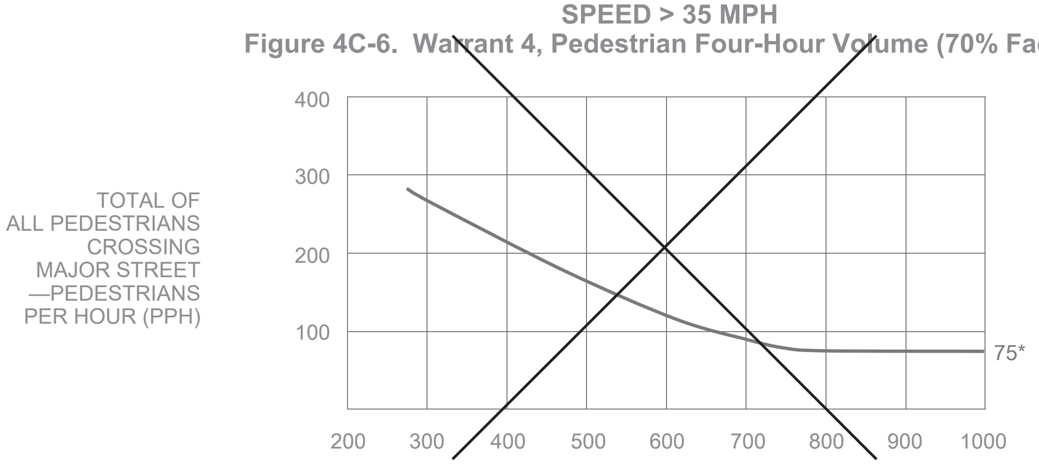
SPEED ≤ 35 MPH
Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



MAJOR STREET—TOTAL OF BOTH APPROACHES—VEHICLES PER HOUR (VPH)

** Note: 107 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



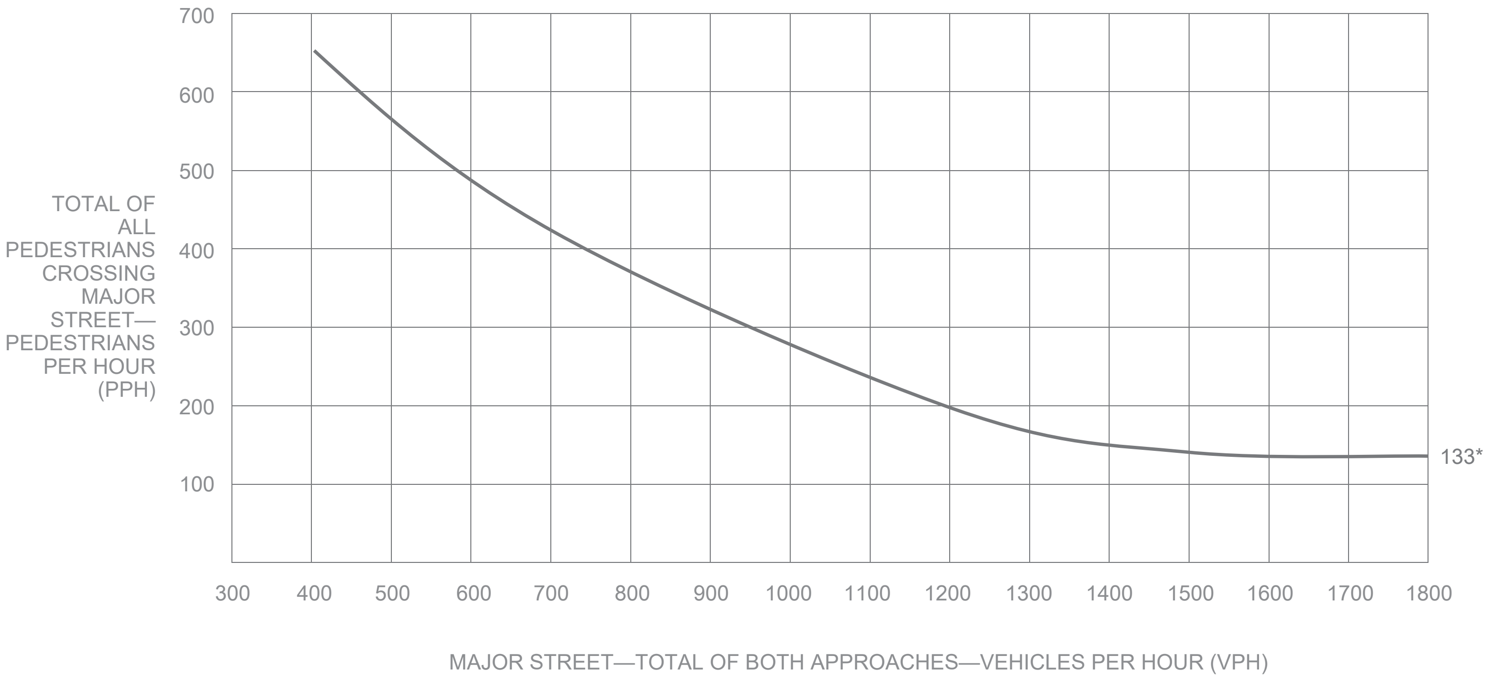
MAJOR STREET—TOTAL OF BOTH APPROACHES—VEHICLES PER HOUR (VPH)

** Note: 75 pph applies as the lower threshold volume*

Pedestrian Volume WARRANT 4 *(continued)*

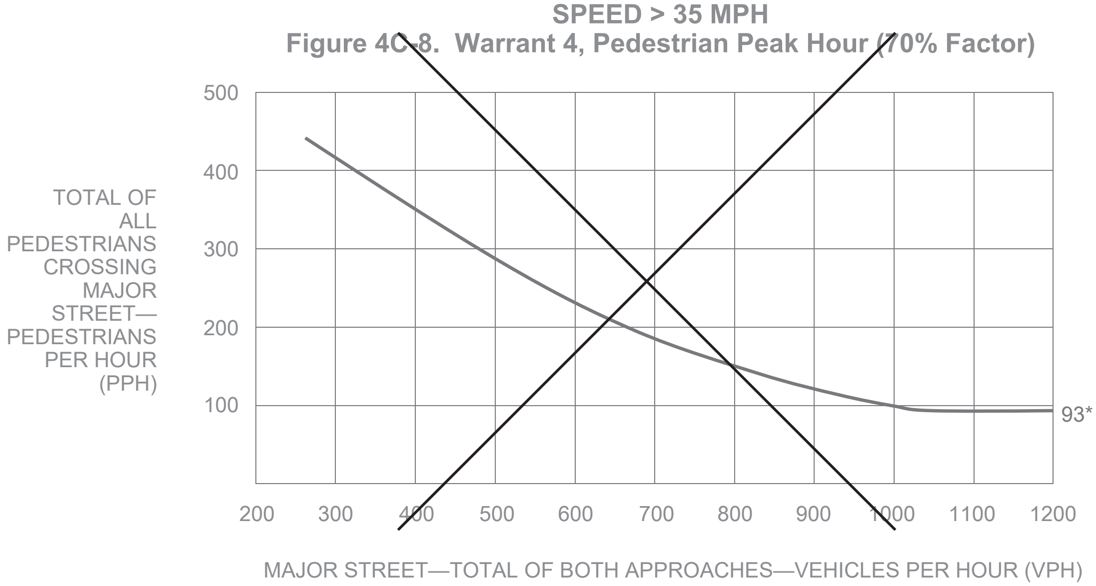
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

SPEED ≤ 35 MPH
Figure 4C-7. Warrant 4, Pedestrian Peak Hour



** Note: 133 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



** Note: 93 pph applies as the lower threshold volume*

School Crossing — WARRANT 5

N/A ☒
SATISFIED YES ☐ NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Part A and Part B shall be satisfied.
b. For purposes of this warrant, schoolchildren include elementary through high school students.
c. Estimated schoolchildren volumes may be used where a new school or expanded school has been approved for construction.
d. The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of schoolchildren at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period and there are a minimum of 20 schoolchildren during the highest crossing hour.
e. The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
f. Non-intersectional schoolchildren crosswalk locations may be signalized when justified.
g. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART A

SATISFIED YES ☐ NO ☐

Gap / Minutes and # of Children

		Hour
Gaps vs Minutes	Minutes Children Using Crossing	
	Number of Adequate Gaps	
School Age Pedestrians Crossing Street / hr		

	YES	NO
Gaps < Minutes	☐	☐
AND Children ≥ 20/hr	☐	☐
AND, Consideration has been given to less restrictive remedial measures	☐	☐

PART B

SATISFIED YES ☐ NO ☐

	YES	NO
The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive movement of traffic	☐	☐

Coordinated Signal System — WARRANT 6

N/A ☒
SATISFIED YES ☐ NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. The Coordinated Signal System signal warrant should not be applied where the resultant spacing of traffic control signals would be less than 1,000 feet.
b. All Parts must be satisfied.

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	YES	NO
≥ 1000 ft	N ________ ft, S ________ ft, E ________ ft, W ________ ft	☐	☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. **OR**, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		☐	☐

Crash Experience Warrant — WARRANT 7

N/A ☒
SATISFIED YES ☐
NO ☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. All Parts must be satisfied.
b. For locations that involve other agencies, crash data from other involved jurisdictions should be obtained.

			YES	NO
Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency			☐	☐
REQUIREMENTS	Number of crashes reported within a 12-month period susceptible to correction by a traffic signal:		☐	☐
5 OR MORE	*Indicate Date(s):*			
REQUIREMENTS	**CONDITIONS**	✓		
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		☐	☐
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic			
	OR, Warrant 4, Pedestrian Volume Condition - Ped Vol ≥ 80% for ped volumes per Figures 4C-5 to 4C-8			

Roadway Network — WARRANT 8

N/A ☒
SATISFIED YES ☐
NO ☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. Existing traffic volumes with an ambient growth rate of 1% (or other LADOT approved ambient growth rate) may be used if projected volumes are not available.
b. All Parts must be satisfied.

MINIMUM VOLUME REQUIREMENTS	**ENTERING VOLUMES - ALL APPROACHES**	✓	**FULLFILLED** YES	NO
1000 Veh / Hr	During Typical Weekday Peak Hour _________________ Veh/Hr **AND** has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday.		☐	☐
	OR During Each of Any 5 Hrs. of a Saturday or Sunday _________ Veh / Hr			

CHARACTERISTICS OF MAJOR ROUTES	**MAJOR ROUTE A**	**MAJOR ROUTE B**		
Highway System Serving as Principal Network for Through Traffic				
Rural or Suburban Highway Outside Of, Entering, or Traversing a City				
Appears as Major Route on an Official Plan			YES	NO
Any Major Route Characteristics Met, Both Streets			☐	☐

Intersection Near a Grade Crossing — WARRANT 9

	N/A	☒
SATISFIED	YES	☐
	NO	☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Both Parts A and B shall be satisfied.

b. This Warrant shall only be applied after review and approval by the LADOT Railroad Crossing and Safety Section (RCOSS), subject to CPUC General Order approval.

c. This Warrant does not apply for Pre-Signals and/or Queue-Cutter signals, as an alternative application of Pre-Signals (See 2012 CA MUTCD, Sec 8C.09). Pre-Signals shall only be applied after review and approval by RCOSS, subject to CPUC General Order approval.

	FULFILLED YES	FULFILLED NO
PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line ________ ft	☐	☐
PART B **There is one minor street approach lane at the track crossing** - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH **OR, There are two or more minor street approach lanes at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH	☐	☐

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C-10.

1. Number of Rail Traffic per Day ____________________ Adjustment factor from Table 4C-2 _____
2. Percentage of High-Occupancy Buses on Minor Street Approach ______ Adjustment factor from Table 4C-3 _____
3. Percentage of Tractor-Trailer Trucks on Minor Street Approach _______ Adjustment factor from Table 4C-4 _____

NOTE: If no data is available or known, then use AF = 1 (no adjustment)

Table 4C-2. Warrant 9, Adjustment Factor for Daily Frequency of Rail Traffic

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

Table 4C-3. Warrant 9, Adjustment Factor for Percentage of High-Occupancy Buses

% of High-Occupancy Buses * on Minor-Street Approach	Adjustment Factor
0 %	1.00
2 %	1.09
4 %	1.19
6 % or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people

Intersection Near a Grade Crossing WARRANT 9 (continued)

⭑ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ⭑

Table 4C-4. Warrant 9, Adjustment Factor for Percentage of Tractor-Trailer Trucks

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing (One Approach Lane at the Track Crossing)

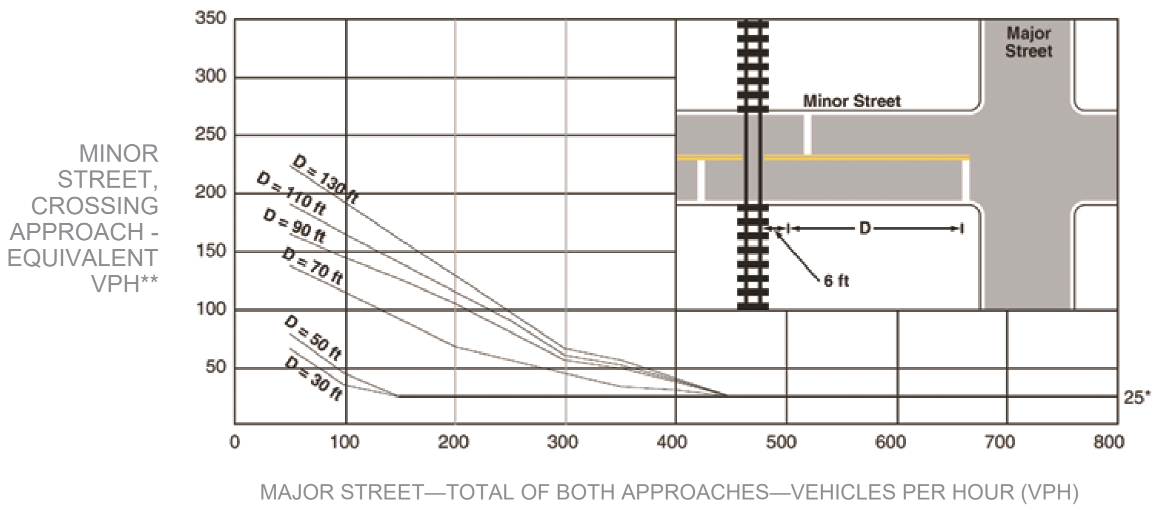
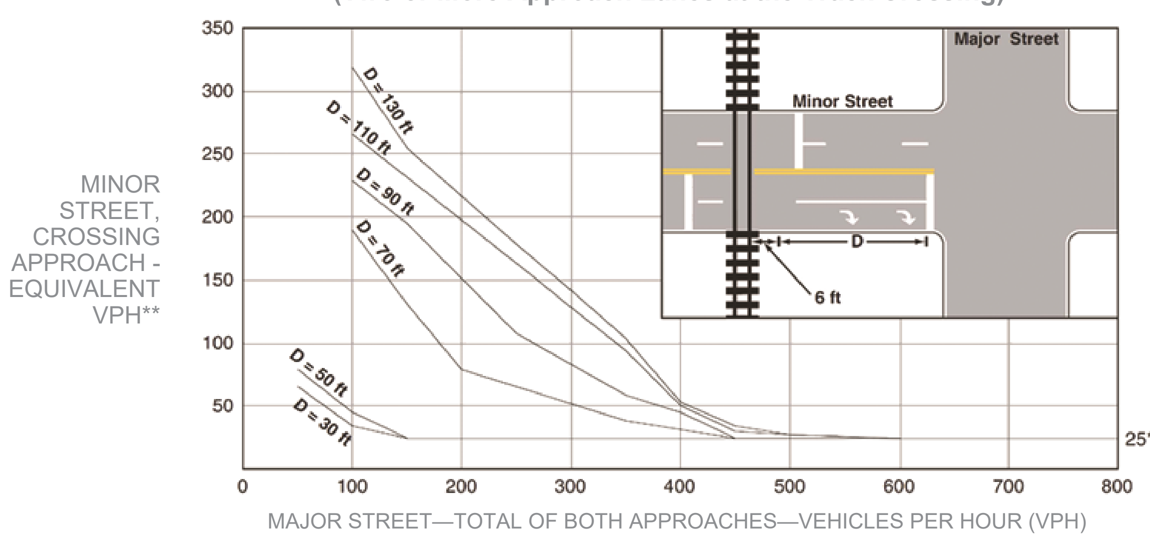


Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing (Two or More Approach Lanes at the Track Crossing)



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

The next two warrants are not included in the MUTCD (CA) standard warrants, but are added as optional warrants that an engineer may use with discretion to justify a traffic signal for special conditions where other traffic control devices could be considered, but where a traffic signal might be more appropriate

Bicycles WARRANT 10

N/A		☒
SATISFIED	YES	☐
	NO	☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Part A and Part B shall be satisfied
b. Per MUTCD (CA) Section 4C.01.15: "For signal warrant analysis, bicyclists may be counted as either vehicles or pedestrians."
c. When performing a signal warrant analysis, bicyclists riding in the street with other vehicular traffic are usually counted as vehicles, and bicyclists who are clearly using pedestrian facilities are usually counted as pedestrians; however for this bicycle specific warrant, bicyclists are counted as bicyclists, regardless of where they are riding.
d. Bicycle signal faces should be considered for use when this warrant is satisfied, with the final determination made during the signal design process. Refer to MUTCD (CA) Section 4D.104 (CA).
e. Estimated peak hour bicycle volumes may be used for new intersections, significantly reconstructed intersections, or where new bicycle facilities or near-term land development are proposed which will result in increased bicycle volumes.

PART A and B must be satisfied

SATISFIED	YES	NO
	☐	☐

PART A (*1 or 2 below must be satisfied)*

	SATISFIED YES	NO
1. Location meets the Department's guidelines for a marked crosswalk with Pedestrian Hybrid Beacons, where pedestrian units are replaced with bicyclists; **AND** the minor street is designated as part of the Neighborhood Enhanced Network in the Mobility Plan 2035 Element of the City's General Plan.	☐	☐
2. The intersection features a two-way bicycle or pedestrian path or trail within the median or alongside one of the roadways.	☐	☐

PART B (*1, 2, or 3 below must be satisfied)*

	SATISFIED YES	NO
1. Signal would be part of a corridor or area project to improve bicycle connectivity.*	☐	☐
2. Signal is associated with a development project.*	☐	☐
3. There have been at least 3 correctable collisions involving bicyclists in the last 1 year, 2 per year for the last 2 years, or 5 in the last 3 years of available data.	☐	☐

Specify dates of correctable bicycle collisions:

	Period Dates	Dates of Correctable Bicycle Collisions
1 year		
2 year		
3 year		

**The authority for a traffic signal justified using Part B.1 or B.2 shall be automatically rescinded three years after the date of approval if funding for construction of the traffic signal is not secured or project plans are not actively being reviewed for approval.*

Pedestrian Activated Yellow Flashing Beacons

WARRANT 11

N/A ☒

SATISFIED YES ☐

NO ☐

✮ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✮

a. All Parts shall be satisfied.
b. This warrant should be applied when Pedestrian Activated Yellow Flashing Beacons are recommended within 600 feet BOTH upstream and downstream of existing traffic signals.

PART A

PART A	YES	NO
Location meets the guidelines for the installation of Pedestrian Activated Yellow Flashing Beacons as described in the LADOT Marked Crosswalk Guidelines.	☐	☐

PART B

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNALS	YES	NO
≤ 600 ft	N ________ ft, S ________ ft, E ________ ft, W ________ft	☐	☐

SR#

Traffic Signal Warrants Worksheet

DATE 8/30/21 PREPARER GTC REVIEWER ________

MAJOR ST: Ventura Boulevard

MINOR ST: Goodland Avenue

Critical Approach Speed: MPH ____ *or* Speed Limit: MPH 35

Speed limit or critical speed on major street traffic > 40 mph…………………… ☐
or } RURAL (R) ☒ URBAN (U)
In built up area of isolated community of < 10,000 population…………………… ☐

Eight-Hour Vehicular Volume — WARRANT 1

N/A ☒

SATISFIED YES ☐

NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Condition A or Condition B or combination of 80% of both parts A and B must be satisfied.

b. A 6-hour Manual Count may be used in a determination that this warrant is not met. However, supplement manual counts should be taken during separate hours for a determination that this warrant is met.

c. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Figure 4C-103(CA) should be used for new intersections, significantly reconstructed intersections, where near-term land development will result in increased volumes, or where it is not reasonable to use current traffic volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one -lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

Eight-Hour Vehicular Volume WARRANT 1 (continued)

☆ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ☆

Condition A

Minimum Vehicle Volume

SATISFIED	YES	NO
100%	❑	❑
80%	❑	❑

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* ❑
(If Yes, fill in percentage) ❑ ____%

	MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)				Hours								
	U	~~R~~	U	~~R~~									
APPROACH LANES	1		2 or More ✓		17:00								
Both Approach Major Street	500 (400)	350 (280)	600 (480)	420 (336)	2609								
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	171								

Condition B

Interruption of Continuous Traffic

SATISFIED	YES	NO
100%	❑	❑
80%	❑	❑

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* ❑
(If Yes, fill in percentage) ❑ ____%

	MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)				Hours								
	U	~~R~~	U	~~R~~									
APPROACH LANES	1		2 or More		17:00								
Both Approach Major Street	750 (600)	525 (420)	900 (720)	630 (504)	2609								
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	171								

COMBINATION OF A & B

SATISFIED	YES	NO
	❑	❑

REQUIREMENT	CONDITION	✓	FULFILLED YES	FULFILLED NO
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME AND B. INTERRUPTION OF CONTINUOUS TRAFFIC		❑	❑
AND AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCOVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			❑	❑

Eight-Hour Vehicular Volume WARRANT 1 (continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

Projected Volumes

N/A ☒

SATISFIED	YES	NO
	☐	☐

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)
Based on Estimated Average Daily Traffic - see *Note***

URBAN ☐	RURAL ☐	Minimum Requirements Estimated Average Daily Traffic			
CONDITION A - Minimum Vehicular Volume Satisfied ☐ Not Satisfied ☐		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1……………………….	1……………………….	8,000	5,600	2,400	1,680
2 or More……………..	1……………………….	9,600	6,720	2,400	1,680
2 or More……………..	2 or More……………..	9,600	6,720	3,200	2,240
1……………………….	2 or More……………..	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic Satisfied ☐ Not Satisfied ☐		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Minor Street	Minor Street				
1……………………….	1……………………….	12,000	8,400	1,200	850
2 or More……………..	1……………………….	14,400	10,080	1,200	850
2 or More……………..	2 or More……………..	14,400	10,080	1,600	1,120
1……………………….	2 or More……………..	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B Satisfied ☐ Not Satisfied ☐ No one condition satisfied, but following conditions fulfilled 80% or more…… ____ A ____ B		2 CONDITIONS 80%		2 CONDITIONS 80%	

* ***Note:** To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes*

Four-Hour Vehicular Volume

WARRANT 2

N/A ☒
SATISFIED YES ☐
NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Record hourly vehicle volumes for the highest four hours of an average day.

b. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

c. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

d. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

e. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left -turn traffic.

APPROACH LANES	One	2 or More	Hours			
Both Approaches - Major Street		✓				
Higher Approach - Minor Street	✓					

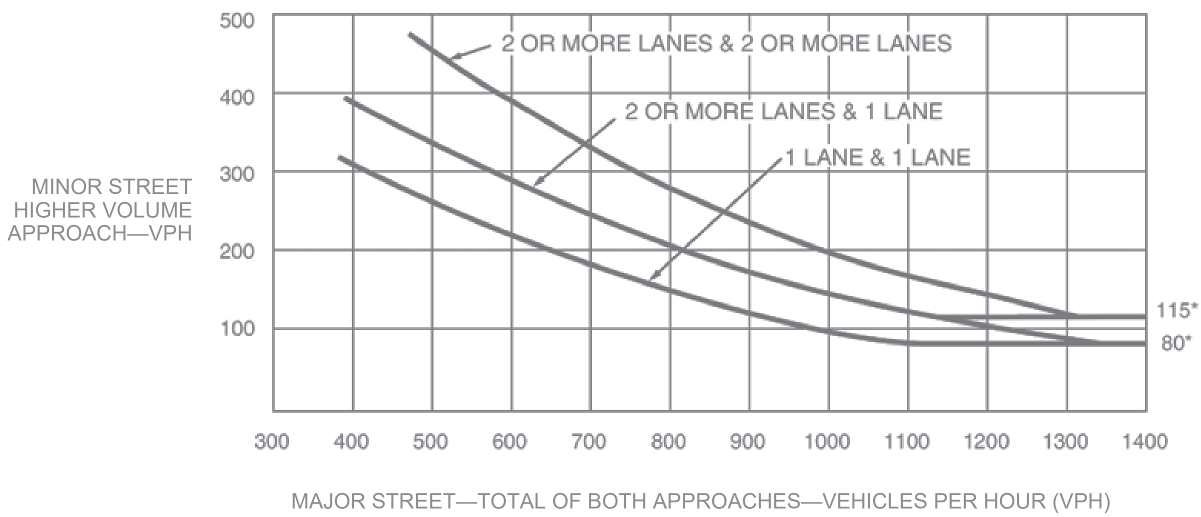
	YES	NO
RIGHT TURN REDUCTION APPLICATION *MINOR STREET* *(If Yes, fill in percentage)*	☐ ______%	☐
* All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS) OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	☐	☐

Four-Hour Vehicular Volume WARRANT 2 *(continued)*

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

URBAN

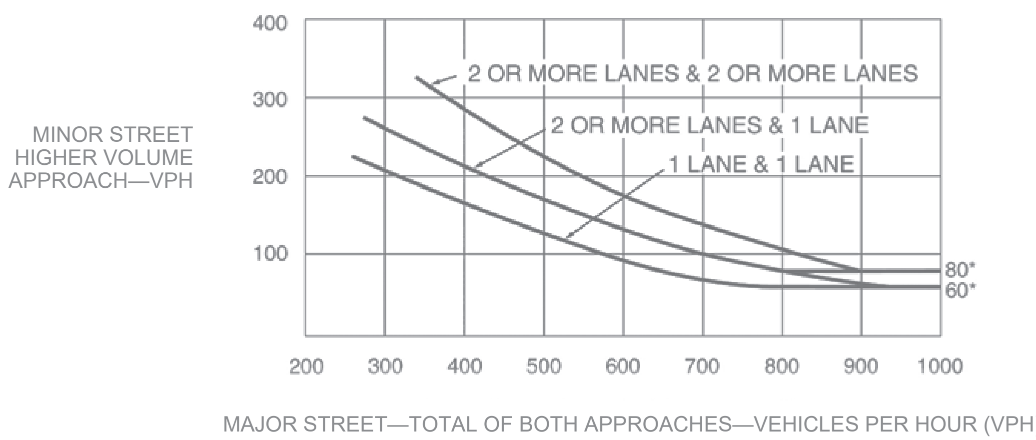
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



**Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.*

RURAL

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)



**Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.*

Peak Hour WARRANT 3

N/A	☐
SATISFIED YES	☒
NO	☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. Part A or Part B must be satisfied.

b. This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

c. In applying each condition, the major street and minor street volumes shall be for the same hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Estimated Peak Hour Volumes may be used for new intersections, significantly reconstructed intersections, or where near-term land development will result in increased volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

	YES	NO
Unusual facility per Note b.	☐	☒

Name ~~2609~~

PART A

All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

SATISFIED YES ☐ NO ☒

	YES	NO	N/A
1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; <u>AND</u>	☐	☐	☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; <u>AND</u>	☒	☐	☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	☒	☐	☐

PART B

SATISFIED YES ☒ NO ☐

APPROACH LANES	One	2 or More	Hour 17:00
Both Approaches - Major Street		✓	2609
Higher Approach - Minor Street	✓		171

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* YES ☐ NO ☒

(If Yes, fill in percentage) ~~2609~~ %

	YES	NO
The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS) <u>OR</u>, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	☒	☐

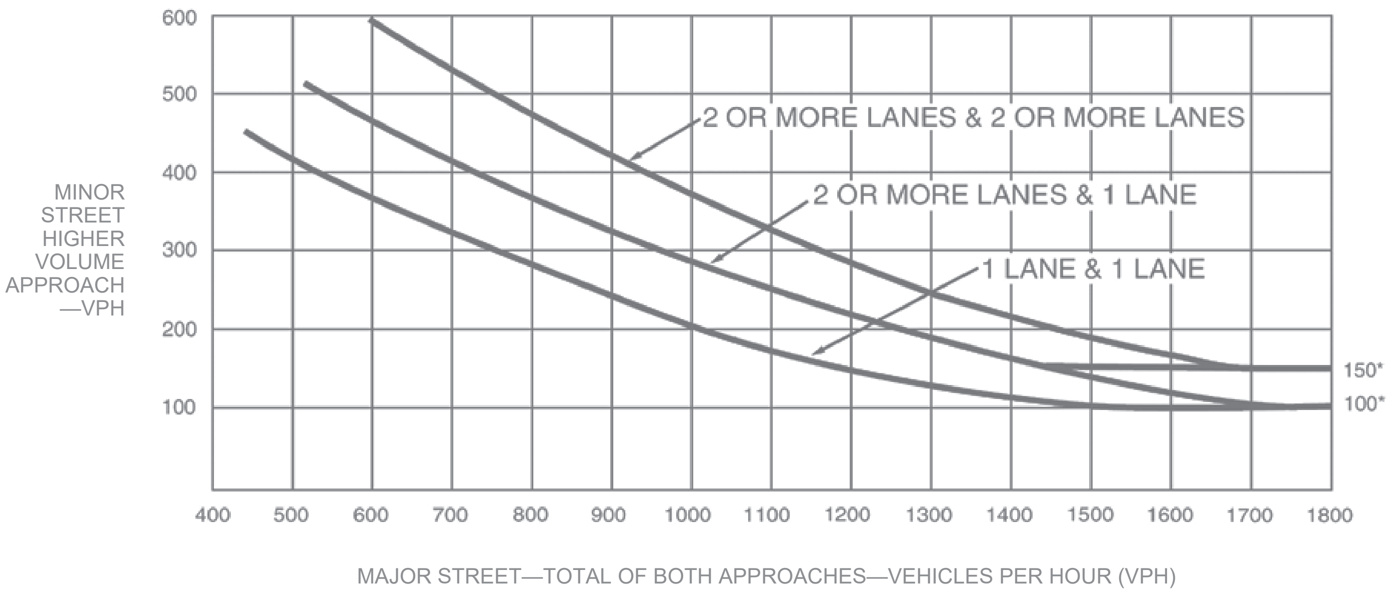
(rev. 8-10-2020)

Ventura Boulevard @ Goodland Avenue *8/30/21*

Peak Hour WARRANT 3 (continued)

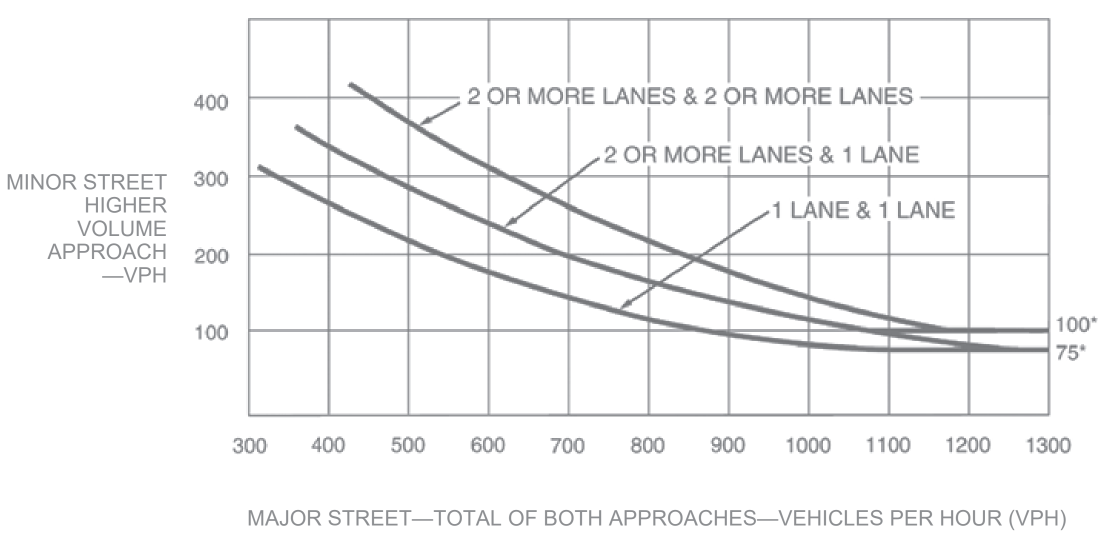
✯ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ✯

URBAN
Figure 4C-3. Warrant 3, Peak Hour



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.*

RURAL
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(Community Less Than 10,000 Population or Above 40 MPH on Major Street)



** 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 approach with one lane.*

Pedestrian Volume — WARRANT 4

N/A ☒

SATISFIED YES ☐ NO ☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. Parts 1 and 2 shall be satisfied.

b. The pedestrian volume criterion may be reduced by as much as 50% if the 15th percentile speed of the pedestrians is less than 3.5 feet/second.

c. Estimated pedestrian volumes may be used where nearby, near-term land use development has been approved for construction.

d. In applying each condition, the total vehicles per hour on the major street (on both approaches) and the total pedestrians per hour crossing the major street shall be for the same hours.

e. The Pedestrian Volume signal warrants shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

f. Traffic control signal may not be needed at the study location if adjacent coordinated traffic control signals consistently provide gaps of adequate length for pedestrians to cross the street.

g. If it is considered at a non-intersection crossing, the traffic control signal should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs. If the traffic control signal is installed at a non-intersection crossing, at least one of the signal faces should be over the traveled way for each approach, parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the crosswalk or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance, and the installation should include suitable standard signs and pavement markings.

h. Bicycles may be counted as pedestrians.

i. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART 1 (A or B must be satisfied)

SATISFIED YES ☐ NO ☐

A. FOUR-HOUR PEDESTRIAN VOLUMES

	Hours			
Vehicles per hour on major street for 4 hours				
Pedestrians crossing major street per hour for highest 4 hours				

(FIGURE 4C-5 OR 4C-6 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐

15% WALKING RATE ______ *fps*

B. ONE HOUR PEDESTRIAN VOLUMES

	Hour
Vehicles per hour on major street for 1 hour	
Pedestrians crossing major street per hour for highest 1 hour	0

(FIGURE 4C-7 or 4C-8 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐

15% WALKING RATE ______ *fps*

PART 2

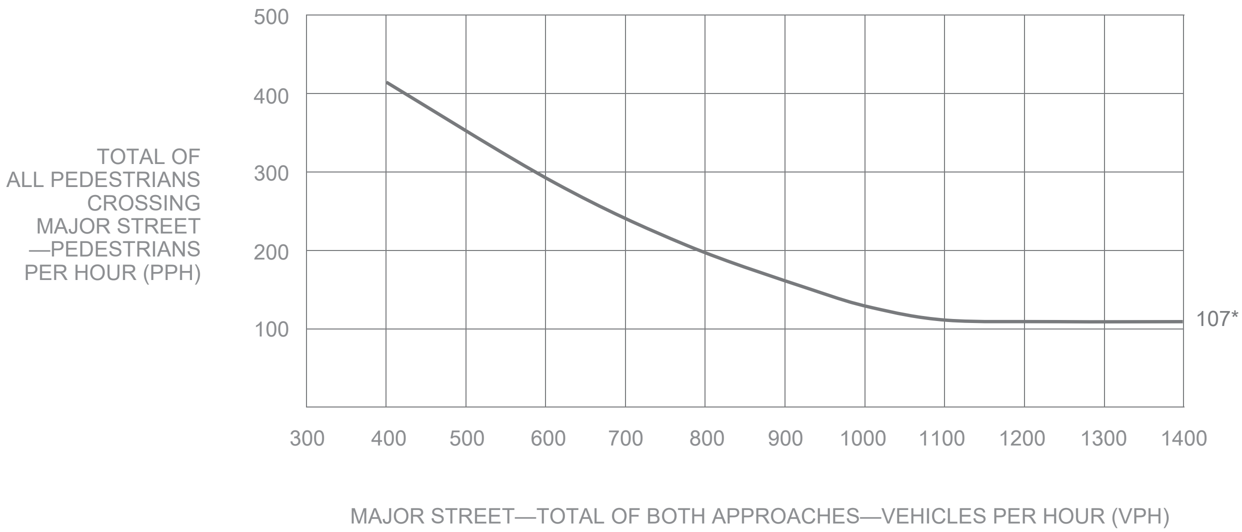
SATISFIED YES ☐ NO ☐

	YES	NO
AND, The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street	☐	☐

Pedestrian Volume WARRANT 4 *(continued)*

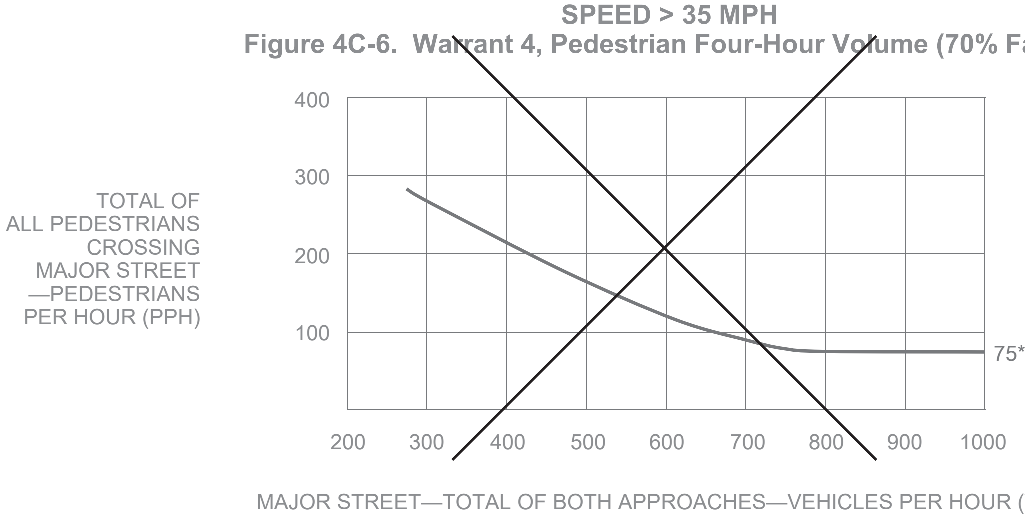
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

SPEED ≤ 35 MPH
Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



** Note: 107 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)

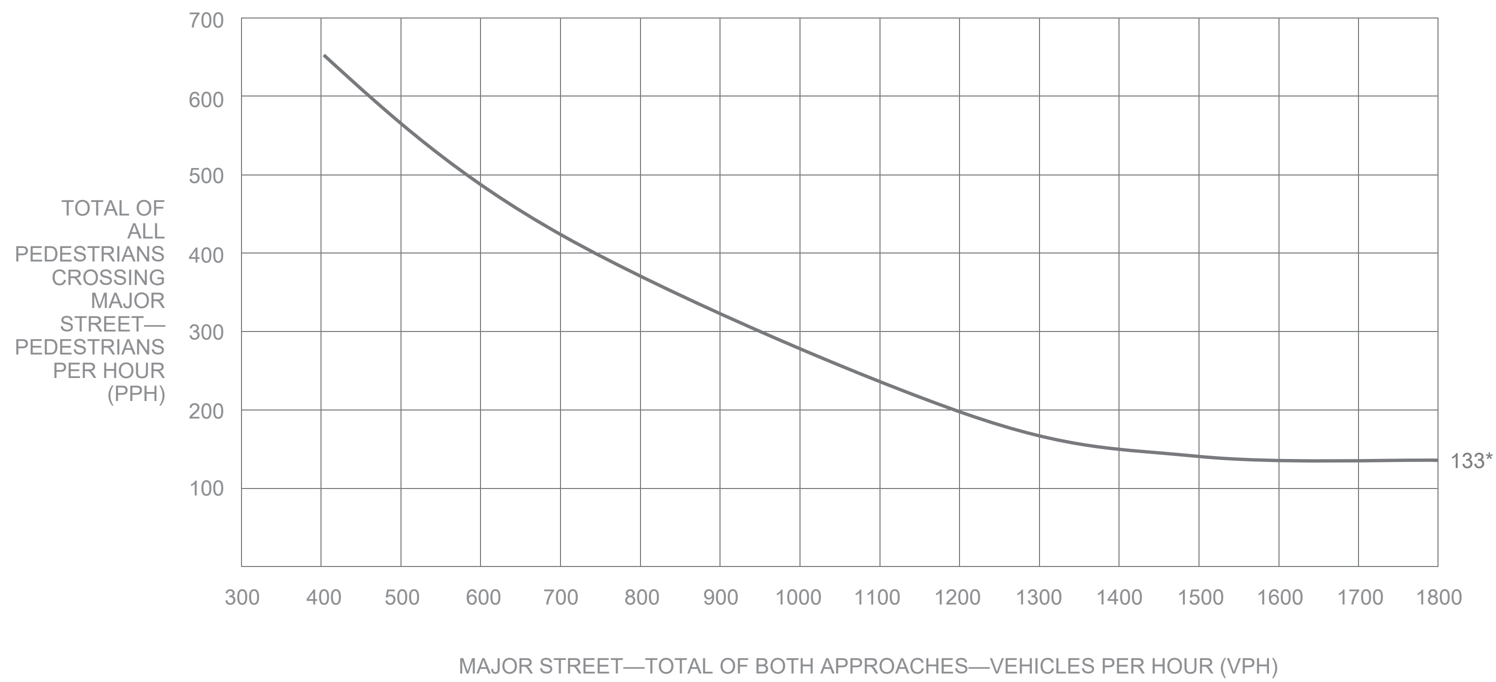


** Note: 75 pph applies as the lower threshold volume*

Pedestrian Volume WARRANT 4 *(continued)*

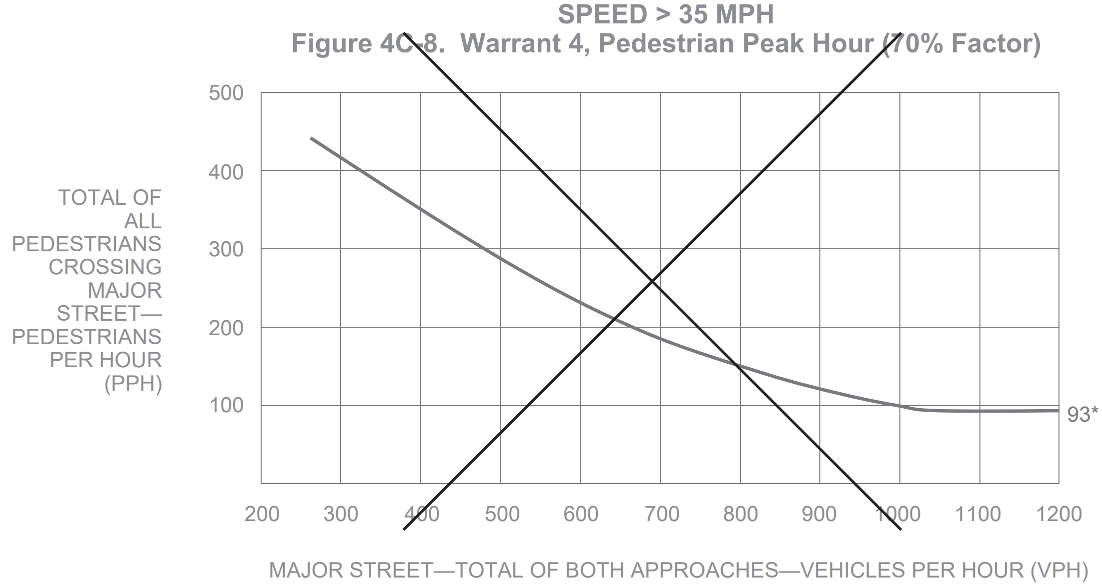
☆ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ☆

SPEED ≤ 35 MPH
Figure 4C-7. Warrant 4, Pedestrian Peak Hour



** Note: 133 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



** Note: 93 pph applies as the lower threshold volume*

School Crossing — WARRANT 5

N/A ☒
SATISFIED YES ☐ NO ☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. Part A and Part B shall be satisfied.
b. For purposes of this warrant, schoolchildren include elementary through high school students.
c. Estimated schoolchildren volumes may be used where a new school or expanded school has been approved for construction.
d. The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of schoolchildren at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period and there are a minimum of 20 schoolchildren during the highest crossing hour.
e. The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
f. Non-intersectional schoolchildren crosswalk locations may be signalized when justified.
g. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART A

SATISFIED YES ☐ NO ☐

Gap / Minutes and # of Children

		Hour
Gaps vs Minutes	Minutes Children Using Crossing	
	Number of Adequate Gaps	
School Age Pedestrians Crossing Street / hr		

	YES	NO
Gaps < Minutes	☐	☐
AND Children ≥ 20/hr	☐	☐
AND, Consideration has been given to less restrictive remedial measures	☐	☐

PART B

SATISFIED YES ☐ NO ☐

	YES	NO
The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive movement of traffic	☐	☐

Coordinated Signal System — WARRANT 6

N/A ☒
SATISFIED YES ☐ NO ☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. The Coordinated Signal System signal warrant should not be applied where the resultant spacing of traffic control signals would be less than 1,000 feet.
b. All Parts must be satisfied.

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	YES	NO
≥ 1000 ft	N ________ ft, S ________ ft, E ________ ft, W ________ ft	☐	☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. **OR**, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		☐	☐

Crash Experience Warrant — WARRANT 7

N/A ☒
SATISFIED YES ☐
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. All Parts must be satisfied.
b. For locations that involve other agencies, crash data from other involved jurisdictions should be obtained.

<table>
<tr><th colspan="3"></th><th>YES</th><th>NO</th></tr>
<tr><td colspan="3">Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency</td><td>☐</td><td>☐</td></tr>
<tr><td>REQUIREMENTS</td><td colspan="2">Number of crashes reported within a 12-month period susceptible to correction by a traffic signal:</td><td rowspan="2">☐</td><td rowspan="2">☐</td></tr>
<tr><td>5 OR MORE</td><td colspan="2">Indicate Date(s):</td></tr>
<tr><td>REQUIREMENTS</td><td>CONDITIONS</td><td>✓</td><td rowspan="4">☐</td><td rowspan="4">☐</td></tr>
<tr><td rowspan="3">ONE CONDITION SATISFIED 80%</td><td>Warrant 1, Condition A - Minimum Vehicular Volume</td><td></td></tr>
<tr><td><u>OR</u>, Warrant 1, Condition B - Interruption of Continuous Traffic</td><td></td></tr>
<tr><td><u>OR</u>, Warrant 4, Pedestrian Volume Condition - Ped Vol ≥ 80% for ped volumes per Figures 4C-5 to 4C-8</td><td></td></tr>
</table>

Roadway Network — WARRANT 8

N/A ☒
SATISFIED YES ☐
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Existing traffic volumes with an ambient growth rate of 1% (or other LADOT approved ambient growth rate) may be used if projected volumes are not available.
b. All Parts must be satisfied.

<table>
<tr><th rowspan="2">MINIMUM VOLUME REQUIREMENTS</th><th rowspan="2" colspan="3">ENTERING VOLUMES - ALL APPROACHES</th><th rowspan="2">✓</th><th colspan="2">FULLFILLED</th></tr>
<tr><th>YES</th><th>NO</th></tr>
<tr><td rowspan="2">1000 Veh / Hr</td><td colspan="3">During Typical Weekday Peak Hour ________________ Veh/Hr AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday.</td><td></td><td rowspan="2">☐</td><td rowspan="2">☐</td></tr>
<tr><td colspan="3"><u>OR</u>
During Each of Any 5 Hrs. of a Saturday or Sunday ________ Veh / Hr</td><td></td></tr>
<tr><td colspan="2">CHARACTERISTICS OF MAJOR ROUTES</td><td>MAJOR ROUTE A</td><td>MAJOR ROUTE B</td><td colspan="3" rowspan="4">

YES NO</td></tr>
<tr><td colspan="2">Highway System Serving as Principal Network for Through Traffic</td><td></td><td></td></tr>
<tr><td colspan="2">Rural or
Suburban Highway Outside Of, Entering, or Traversing a City</td><td></td><td></td></tr>
<tr><td colspan="2">Appears as Major Route on an Official Plan</td><td></td><td></td></tr>
<tr><td colspan="4">Any Major Route Characteristics Met, Both Streets</td><td></td><td>☐</td><td>☐</td></tr>
</table>

Intersection Near a Grade Crossing — WARRANT 9

SATISFIED: N/A ☒ YES ☐ NO ☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. Both Parts A and B shall be satisfied.

b. This Warrant shall only be applied after review and approval by the LADOT Railroad Crossing and Safety Section (RCOSS), subject to CPUC General Order approval.

c. This Warrant does not apply for Pre-Signals and/or Queue-Cutter signals, as an alternative application of Pre-Signals (See 2012 CA MUTCD, Sec 8C.09). Pre-Signals shall only be applied after review and approval by RCOSS, subject to CPUC General Order approval.

	FULFILLED YES	FULFILLED NO
PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line ________ ft	☐	☐
PART B **There is one minor street approach lane at the track crossing** - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH **OR, There are two or more minor street approach lanes at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH	☐	☐

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C-10.

1. Number of Rail Traffic per Day ________________ Adjustment factor from Table 4C-2 _____
2. Percentage of High-Occupancy Buses on Minor Street Approach ______ Adjustment factor from Table 4C-3 _____
3. Percentage of Tractor-Trailer Trucks on Minor Street Approach _______ Adjustment factor from Table 4C-4 _____

NOTE: If no data is available or known, then use AF = 1 (no adjustment)

Table 4C-2. Warrant 9, Adjustment Factor for Daily Frequency of Rail Traffic

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

Table 4C-3. Warrant 9, Adjustment Factor for Percentage of High-Occupancy Buses

% of High-Occupancy Buses * on Minor-Street Approach	Adjustment Factor
0 %	1.00
2 %	1.09
4 %	1.19
6 % or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people

Intersection Near a Grade Crossing WARRANT 9 (continued)

☆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ☆

Table 4C-4. Warrant 9,
Adjustment Factor for Percentage of Tractor-Trailer Trucks

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing (One Approach Lane at the Track Crossing)

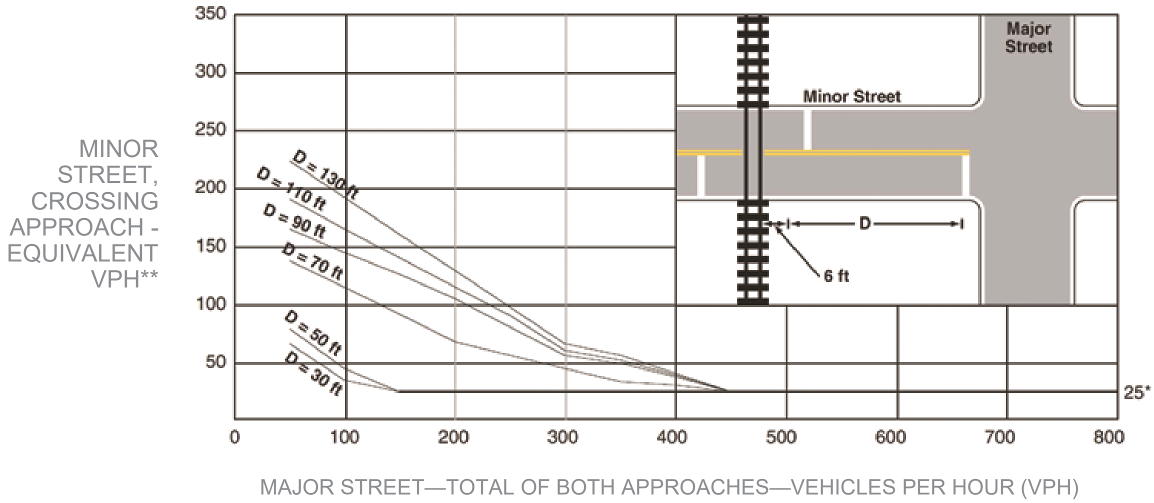
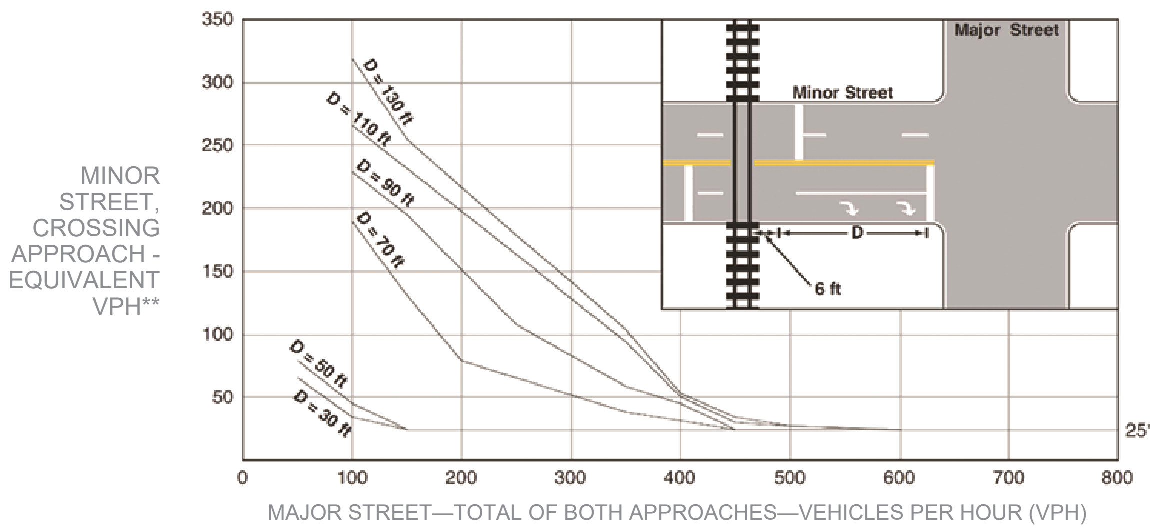


Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing (Two or More Approach Lanes at the Track Crossing)



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

The next two warrants are not included in the MUTCD (CA) standard warrants, but are added as optional warrants that an engineer may use with discretion to justify a traffic signal for special conditions where other traffic control devices could be considered, but where a traffic signal might be more appropriate

Bicycles WARRANT 10

N/A ☒
SATISFIED YES ☐
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Part A and Part B shall be satisfied
b. Per MUTCD (CA) Section 4C.01.15: "For signal warrant analysis, bicyclists may be counted as either vehicles or pedestrians."
c. When performing a signal warrant analysis, bicyclists riding in the street with other vehicular traffic are usually counted as vehicles, and bicyclists who are clearly using pedestrian facilities are usually counted as pedestrians; however for this bicycle specific warrant, bicyclists are counted as bicyclists, regardless of where they are riding.
d. Bicycle signal faces should be considered for use when this warrant is satisfied, with the final determination made during the signal design process. Refer to MUTCD (CA) Section 4D.104 (CA).
e. Estimated peak hour bicycle volumes may be used for new intersections, significantly reconstructed intersections, or where new bicycle facilities or near-term land development are proposed which will result in increased bicycle volumes.

PART A and B must be satisfied

SATISFIED	YES	NO
	☐	☐

PART A (*1 or 2 below must be satisfied)*

PART A	SATISFIED YES	NO
1. Location meets the Department's guidelines for a marked crosswalk with Pedestrian Hybrid Beacons, where pedestrian units are replaced with bicyclists; **AND** the minor street is designated as part of the Neighborhood Enhanced Network in the Mobility Plan 2035 Element of the City's General Plan.	☐	☐
2. The intersection features a two-way bicycle or pedestrian path or trail within the median or alongside one of the roadways.	☐	☐

PART B (*1, 2, or 3 below must be satisfied)*

PART B	SATISFIED YES	NO
1. Signal would be part of a corridor or area project to improve bicycle connectivity.*	☐	☐
2. Signal is associated with a development project.*	☐	☐
3. There have been at least 3 correctable collisions involving bicyclists in the last 1 year, 2 per year for the last 2 years, or 5 in the last 3 years of available data.	☐	☐

Specify dates of correctable bicycle collisions:

	Period Dates	Dates of Correctable Bicycle Collisions
1 year		
2 year		
3 year		

**The authority for a traffic signal justified using Part B.1 or B.2 shall be automatically rescinded three years after the date of approval if funding for construction of the traffic signal is not secured or project plans are not actively being reviewed for approval.*

Pedestrian Activated Yellow Flashing Beacons

WARRANT 11

N/A ☒
SATISFIED YES ☐
NO ☐

☆ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ☆

a. All Parts shall be satisfied.
b. This warrant should be applied when Pedestrian Activated Yellow Flashing Beacons are recommended within 600 feet BOTH upstream and downstream of existing traffic signals.

PART A	YES	NO
Location meets the guidelines for the installation of Pedestrian Activated Yellow Flashing Beacons as described in the LADOT Marked Crosswalk Guidelines.	☐	☐

PART B

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNALS	YES	NO
≤ 600 ft	N ________ ft, S ________ ft, E ________ ft, W ________ft	☐	☐

Appendix L.2

Los Angeles Department of Transportation
Approval Letter

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

12825 W. Ventura Bl
LADOT Case No. VEN21-110828

Date: May 20, 2022

To: Susan Jimenez, Administrative Clerk
Department of City Planning

Vicente Cordero

From: Vicente Cordero, Transportation Engineer
Department of Transportation

Subject: **TRANSPORTATION IMPACT ASSESSMENT FOR THE RESIDENCES AT SPORTSMEN'S LODGE MIXED-USE PROJECT AT 12825 WEST VENTURA BOULEVARD (CPC-2021-7012-DB-MCUP-WDI-SPP-SPR-VHCA/ENV-2021-7013-EAF)**

The Department of Transportation (LADOT) has reviewed the transportation assessment prepared by Gibson Transportation Consulting, Inc., dated March 2022, for the proposed mixed-use development located at 12825 West Ventura Boulevard in the Sherman Oaks - Studio City - Toluca Lake - Cahuenga Pass Community Planning Area of the City of Los Angeles. On July 30, 2019, pursuant to Senate Bill (SB) 743 and the recent changes to Section 15064.3 of the State's California Environmental Quality Act (CEQA) Guidelines, the City of Los Angeles adopted vehicle miles traveled (VMT) as the criteria by which to determine transportation impacts under CEQA. Based on the VMT thresholds established in LADOT's Transportation Assessment Guidelines (TAG), the proposed project with mitigation would not result in a significant transportation impact on VMT as described below.

DISCUSSION AND FINDINGS

A. Project Description

The Project proposes to construct 442 market-rate apartment units, 78 affordable apartment units, 27,926 square feet of retail space, and 18,019 square feet of restaurant space in one seven-story building and one three-story building with three levels of subterranean parking provided on-site. The existing 200-room hotel would be demolished and replaced as part of the Project design. The project would provide a total of 939 automobile parking spaces and 313 bicycle parking spaces. Access to the Project would be provided via one full-access existing driveway on Coldwater Canyon Avenue and one full-access existing driveway on Ventura Boulevard. A passenger loading area is being proposed on Ventura Boulevard adjacent to the southern boundary of the Project site, which would eliminate a third existing driveway and widen the street by 10 feet. Additional sidewalk width would be provided on-site to connect the passenger pick-up/drop-off lane to the Project and to provide a continuous 10-foot wide sidewalk. A pedestrian paseo connecting the public right-of-way on Ventura Boulevard to the Project and the Los Angeles river path north of the Project site would also be constructed as part of the Project. The Project is anticipated to be complete in the Year 2027.

B. <u>Freeway Safety Analysis</u>
Per the Interim Guidance for Freeway Safety Analysis memorandum issued by LADOT on May 1, 2020 to address Caltrans safety concerns on freeways, the study addresses the project's effects on vehicle queuing on freeway off-ramps. Such an evaluation measures the project's potential to lengthen a forecasted off-ramp queue and create speed differentials between vehicles exiting the freeway off-ramps and vehicles operating on the freeway mainline. The evaluation identified the number of project trips expected to be added to nearby freeway off-ramps serving the project site. It was determined that project traffic at any freeway off-ramp will not exceed 25 peak hour trips. Therefore, a freeway ramp analysis is not required. Furthermore, the Project would not result in a significant safety impact and no corrective measures at any freeway off-ramps would be required.

C. <u>CEQA Screening Threshold</u>
Prior to accounting for trip reductions resulting from the application of Transportation Demand Management (TDM) Strategies, a trip generation analysis was conducted to determine if the project would exceed the net 250 daily vehicle trips screening threshold. Using the City of Los Angeles VMT Calculator tool Version 1.3, which draws upon trip rate estimates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition as well as applying trip generation adjustments when applicable. This trip generation adjustment is based on sociodemographic data and the built environment factors of the project's surroundings, it was determined that the project <u>does</u> exceed the net 250 daily vehicle trips threshold. A copy of the VMT Calculator summary report is provided in **Attachment A**. Additionally, the analysis included further discussion of the CEQA transportation impact thresholds:

1. **Threshold T-1: Conflicting with Plans, Programs, Ordinances, or Policies**
   The transportation assessment evaluated the proposed project for conformance with the adopted City's transportation plans and policies for all travel modes. According to the analysis, the Project does not obstruct or conflict with the City's development policies and standards for the transportation system. Therefore, no Project or cumulative significant transportation impact was identified for this threshold.

2. **Threshold T-2.1: Causing Substantial Vehicle Miles Traveled**
   Using the VMT Calculator, the assessment determined that the project would generate a 4,335 net increase in DVT and a 39,729 net increase in daily VMT, therefore further analysis was required. The analysis concluded that the project would not result in a significant VMT impact as discussed below under Section C, CEQA Transportation Analysis.

3. **Threshold T-3: Substantially Increasing Hazards Due To a Geometric Design Feature or Incompatible Use**
   The project does not involve any design features that are unusual for the area or any incompatible use.

D. <u>CEQA Transportation Analysis</u>
The new LADOT Transportation Assessment Guidelines (TAG) provide instructions on preparing transportation assessments for land use proposals and define the significant impact thresholds. The LADOT VMT Calculator tool measures project impact in terms of Household VMT per Capita, and Work VMT per Employee. LADOT identified distinct thresholds for significant VMT impacts

for each of the seven Area Planning Commission (APC) areas in the City. For the South Valley APC area, in which the project is located, the following threshold has been established:

- Daily Household VMT per Capita: 9.4
- Daily Work VMT per Employee: 11.6

As cited in the VMT analysis report prepared by Gibson Transportation Consulting, Inc., the VMT generated by the project with proposed mitigation results in 8.3 Household VMT per Capita, Work VMT per Employee is not applicable because retail uses under 50,000 square feet are considered local serving. These results are acceptable for the South Valley APC; therefore, it is concluded that the implementation of the proposed project with mitigation measures will **not** result in a significant VMT impact.

E. Access and Circulation

During preparation of the new CEQA guidelines, the State's Office of Planning and Research stressed that lead agencies can continue to apply traditional operational analysis requirements to inform land use decisions provided that such analyses were outside of the CEQA process. The authority for requiring non-CEQA transportation analysis and requiring improvements to address potential circulation deficiencies, lies in the City of Los Angeles' Site Plan Review authority as established in Section 16.05 of the LAMC. Therefore, LADOT continues to require and review a project's site access, circulation, and operational plan to determine if any access enhancements, transit amenities, intersection improvements, traffic signal upgrades, neighborhood traffic calming, or other improvements are needed.

In accordance with this authority, the project has completed a circulation analysis using a "level of service" screening methodology that indicates that the trips generated by the proposed development will not likely result in adverse circulation conditions at several locations. The access and circulation analysis included a delay study of the following intersections using the Highway Capacity Manual (HCM) methodology, which calculates the amount of delay per vehicle, based on the intersection traffic volumes, lane configurations, and signal timing:

- Coldwater Canyon Avenue and Moorpark Street
- Coldwater Canyon Avenue and Valleyheart Drive/Driveway (unsignalized)
- Coldwater Canyon Avenue and Ventura Boulevard
- Goodland Avenue/Driveway and Ventura Boulevard (unsignalized)
- Whitsett Avenue and Ventura Boulevard

LADOT has reviewed this analysis and determined that it adequately discloses operational concerns. A copy of the tables for Delay and Level of Service analysis that summarizes these potential deficiencies is provided as **Attachment B** to this report.

PROJECT REQUIREMENTS

A. <u>TDM Project Design Features</u>

The following Transportation Demand Management (TDM) strategies are proposed as part of the project in the VMT evaluation:

- Bike Parking per LAMC - The project will provide bicycle parking spaces on-site. Providing bicycle parking supports safe and comfortable bicycle travel to the project. The project must design the project to ensure a bicycle, transit, and pedestrian-friendly environment with convenient access points, and secure bicycle facilities with lockers and showers.

- Reduce Parking Supply - Reduce parking supply below the generalized citywide parking baseline, using parking reduction mechanisms, including, but not limited to, TOC, Density Bonus, Bicycle Parking ordinance, locating in an Enterprise Zone or Specific Plan area, or compliance with zoning regulations that require less parking than the generalized citywide parking baseline.

- Voluntary Travel Behavior Change Program - A multi-faceted program involving two-way communication campaigns and travel feedback that actively engages participants to target individual attitudes, goals, and travel behaviors to alter their travel choices and habits. The program must include the distribution of one Metro TAP card preloaded with a day pass or equivalent value, to each employee or residential unit. This measure requires a coordinator to manage the program, and ensure communication is available to all regular occupants of a site with a special focus on new occupants and/or employees. Must include participation from 20% of the project site's tenants/users.

- Pedestrian Network Improvements - The Project would also enhance pedestrian access along the Project frontage by providing improvements to the sidewalks and landscaping. A pedestrian paseo connecting the public ROW on Ventura Boulevard to the Project and the Los Angeles River path north of the Project Site would also be constructed as part of the Project. In addition, the Project does not propose modifying, removing, or otherwise affecting existing bicycle infrastructure, and will ensure driveways are constructed to provide maximum visibility between drivers, cyclists, and pedestrians. Secured bicycle parking facilities within the Project site would also be provided. These measures would promote active transportation modes such as biking and walking, thereby reducing the Project VMT compared to the average for the area.

- Unbundle Parking - Unbundling parking costs from property costs would require those who wish to purchase parking spaces to do so at an additional cost from the property cost. This removes the burden from those who do not wish to utilize a parking space. An assumption is made that the parking costs are passed through to the vehicle owners/drivers utilizing the parking spaces.

B. <u>Non-CEQA-Related Requirements and Considerations</u>

To comply with transportation and mobility goals and provisions of adopted City plans and ordinances, the applicant should be required to implement the following:

1. Parking Requirements
   The traffic study indicated that the Project would provide a total of 939 automobile parking spaces, 40 short-term bicycle parking spaces, and 273 long-term bicycle parking spaces in one three-level subterranean on-site parking facility that would also include limited surface parking. The applicant should check with the Department of Building and Safety regarding the number of Code-required parking spaces needed for this Project.

2. Highway Dedication and Street Widening Requirement
   Ventura Boulevard is designated a Boulevard II, which requires a 40-foot half-width roadway within a 55-foot half- width right-of-way**.** The north side of Ventura Boulevard currently consists of a 50-foot half right of way with a 35-foot half roadway and a 15-foot sidewalk. The proposed passenger loading zone would widen Ventura Boulevard by 10 feet in order to provide a 10-foot wide sidewalk. The Project is proposing to provide the additional 5 feet required to accommodate the passenger loading zone. **Coldwater Canyon Avenue** is designated Avenue II which requires a 28-foot half-width roadway within 43-foot half-width right-of-way. The east side of Coldwater Canyon Avenue currently consists of a 43-foot half right of way with variable half roadway and sidewalk widths. The applicant should check with the Bureau of Engineering's Land Development Group who will determine if there are any other applicable highway dedication, street widening and/or sidewalk requirements for this project.

3. Project Access and Circulation
   The proposed Project will utilize one full-access existing driveway on Coldwater Canyon Avenue and one full-access existing driveway on Ventura Boulevard. A passenger loading area is proposed on Ventura Boulevard adjacent to the southern boundary of the Project site, which would eliminate a third existing driveway and widen the street by 10 feet. The Project is proposing to provide the additional width required to connect the passenger pick-up/drop-off lane to the Project and to provide a continuous 10-foot wide sidewalk. The passenger pickup/drop-off lane is a voluntary improvement proposed by the applicant pending design and installation approval by LADOT. A copy of the project's conceptual site plan is provided in **Attachment C**. The ultimate design of the driveways, passenger loading zone, and internal circulation will meet the standards of the building code and will be subject to review by LADOT and the Department of Building and Safety. The review of this study does not constitute approval for any new proposed driveway. Review and approval of the driveways should be coordinated with LADOT's Citywide Planning Coordination Section (6262 Van Nuys Boulevard, 3rd Floor, Room 320, (818-374-4699). To minimize and prevent last-minute building design changes, the applicant should contact LADOT for driveway width, passenger loading zone, and internal circulation requirements prior to the commencement of building or parking layout design. The applicant should check with City Planning regarding the project's vehicular access and design.

4. Signal Warrant Analysis
   The Project is proposing new traffic signals at the intersections of Coldwater Canyon Avenue and Valleyheart Drive/Driveway, and Goodland Avenue/Driveway at Ventura Boulevard. The consultant shall provide a traffic signal warrant analysis for each intersection to the LADOT

East Valley District Office for further review and approval for the proposed signals by the applicant.

5. High Injury Network

The City of Los Angeles Vision Zero Identified a strategic plan to reduce traffic deaths to zero by focusing on engineering, enforcement, education, and evaluation. The LADOT identified a High Injury Network (HIN) of city streets. The HIN identifies streets with a high number of traffic-related severe injuries and deaths across all modes of travel with emphasis on those involving pedestrians and cyclists. Ventura Boulevard is included in the High Injury Network. The project access or project-related changes to the public right-of-way will not affect relative proximity to the High Injury Network.

6. Worksite Traffic Control Plan

LADOT recommends that a construction worksite traffic control plan be submitted to LADOT's Citywide Temporary Traffic Control Section or Permit Plan Review Section for review and approval before the start of any construction work. Refer to http://ladot.lacity.org/what-we-do/plan-review to determine which section to coordinate the review of the worksite traffic control plan. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. LADOT also recommends that all construction-related truck traffic be restricted to off-peak hours.

7. TDM Ordinance Requirements

The TDM Ordinance (LAMC 12.26 J) is currently being updated. The updated ordinance, which is currently progressing through the City's approval process, will:

- Expand the reach and application of TDM strategies to more land uses and neighborhoods.
- Rely on a broader range of strategies that can be updated to keep pace with technology.
- Provide flexibility for developments and communities to choose strategies that work best for their neighborhood context.

Although not yet adopted, LADOT recommends that the applicant be subject to the terms of the proposed TDM Ordinance. The updated ordinance is expected to be completed before the anticipated construction of this project.

8. Development Review Fees

Section 19.15 of the LAMC identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

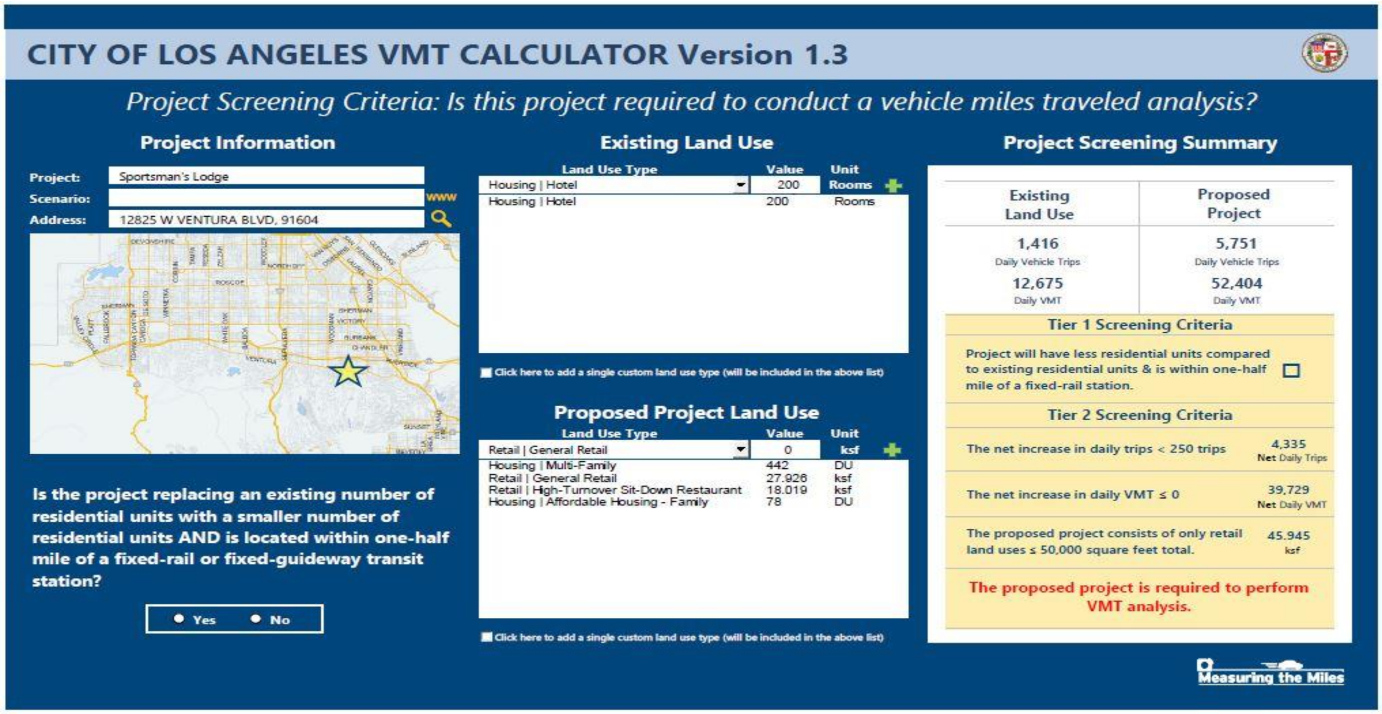
If you have any questions, please contact Brandon Wilson of my staff at brandon.wilson@lacity.org.

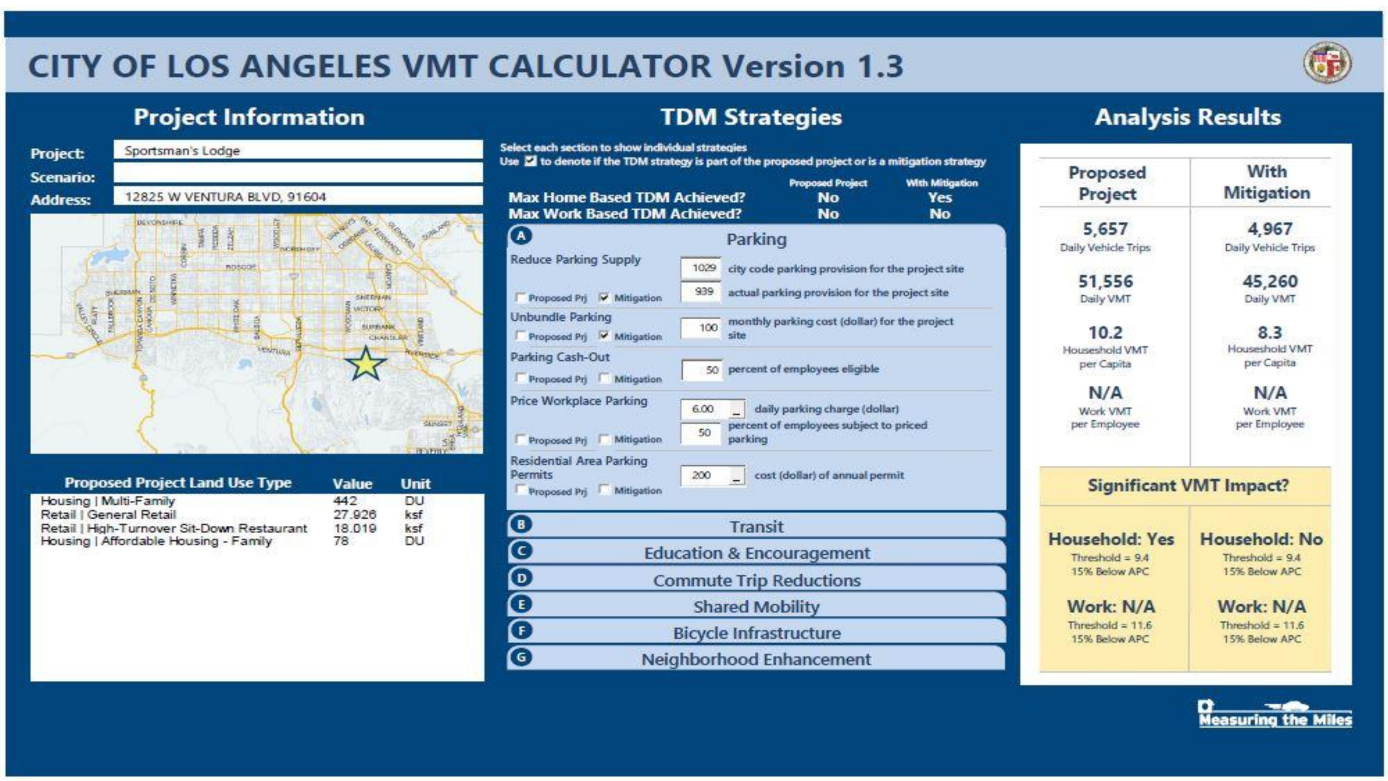
Attachments

J:\Projects\VEN\51047-12825 Ventura Bl

c: Mashael Majid, Council District 4
Claudia Rodriguez, LADCP Valley Planning
Eric Claros, LADCP Valley Planning
Steve Rostam, LADOT East Valley District
Ali Nahass, BOE Valley District
Quyen Phan, BOE Land Development Group
Richard Gibson, Gibson Transportation Consulting, Inc.

Attachment A
City of LA VMT Calculator Results





Attachment B

Summary of Delay and Levels of Service

EXISTING WITH PROJECT CONDITIONS (YEAR 2021)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Exisiting		Existing with Project	
			Delay	LOS	Delay	LOS
1.	Coldwater Canyon Avenue & Moorpark Street	AM PM	23.3 29.5	C C	23.8 30.7	C C
2. [a]	Coldwater Canyon Avenue & Valleyheart Drive/Driveway	AM PM	19.6 Overflow	C N/A	37.2 Overflow	E N/A
3.	Coldwater Canyon Avenue & Ventura Boulevard	AM PM	22.8 39.4	C D	23.3 40.3	C D
4. [a]	Goodland Avenue/Driveway & Ventura Boulevard	AM PM	132.4 Overflow	F N/A	Overflow Overflow	N/A N/A
5.	Whitsett Avenue & Ventura Boulevard	AM PM	29.4 12.3	C B	30.1 10.6	C B

Notes
Delay is measured in seconds per vehicle
LOS = Level of service
Results per Synchro 10 (HCM 6th Edition Methodology)
[a] Unsignalized intersection, shows worst case approach delay

FUTURE WITH PROJECT CONDITIONS (YEAR 2027)
INTERSECTION LEVELS OF SERVICE - UNSIGNALIZED DRIVEWAYS

No	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
1.	Coldwater Canyon Avenue & Moorpark Street	AM PM	26.7 52.2	C D	27.1 53.9	C D
2. [a]	Coldwater Canyon Avenue & Valleyheart Drive/Driveway	AM PM	27.7 Overflow	D N/A	113.3 Overflow	F N/A
3.	Coldwater Canyon Avenue & Ventura Boulevard	AM PM	24.7 41.8	C D	25.9 44.0	C D
4. [a]	Goodland Avenue/Driveway & Ventura Boulevard	AM PM	Overflow Overflow	N/A N/A	Overflow Overflow	N/A N/A
5.	Whitsett Avenue & Ventura Boulevard	AM PM	17.4 10.8	B B	19.7 12.1	B B

Notes
Delay is measured in seconds per vehicle
LOS = Level of service
Results per Synchro 10 (HCM 6th Edition Methodology)
[a] Unsignalized intersection, shows worst case approach delay

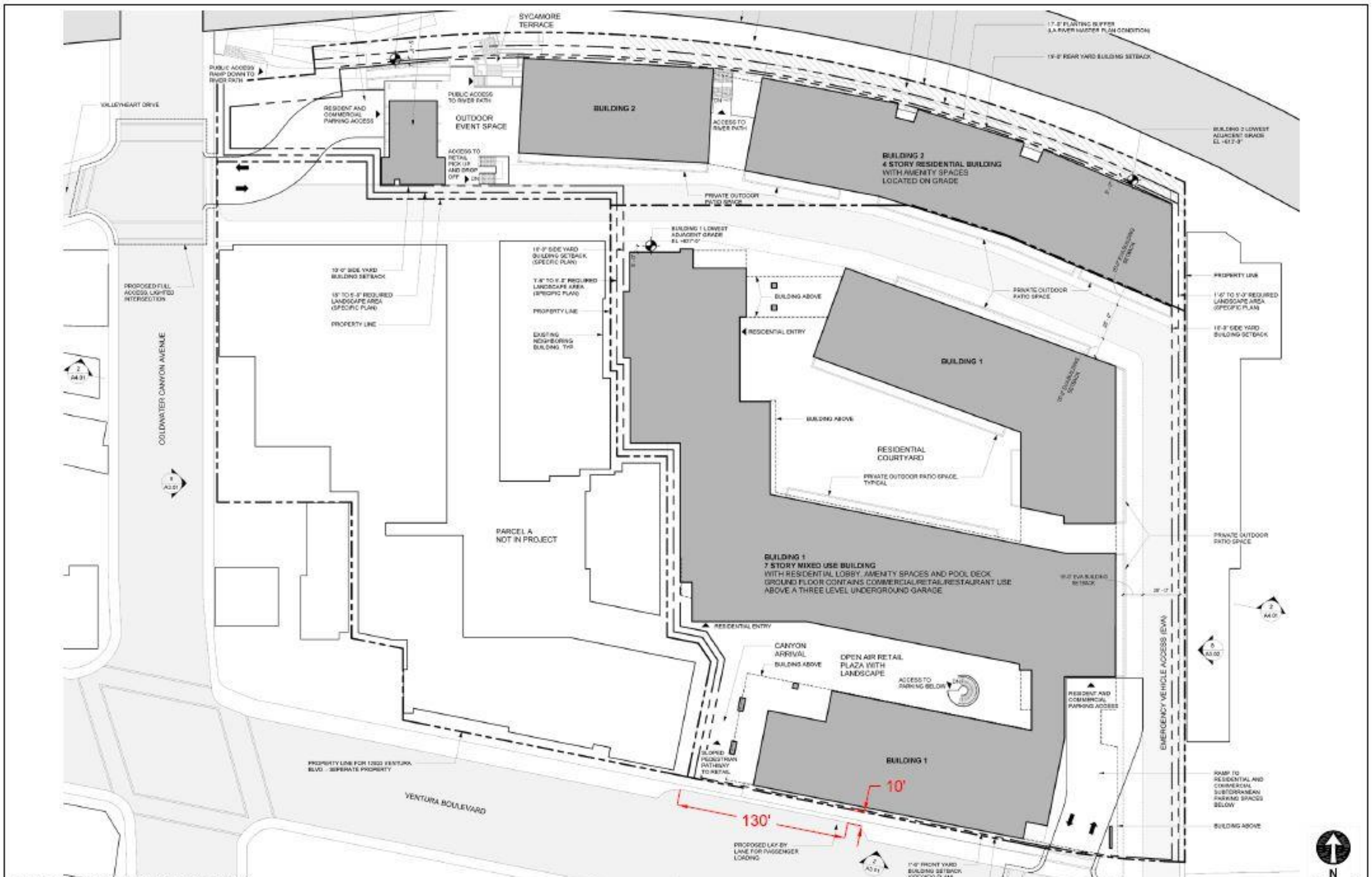
Attachment B (continued)

FUTURE WITH PROJECT CONDITIONS (YEAR 2027)
INTERSECTION LEVELS OF SERVICE - SIGNALIZED DRIVEWAYS

No	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
1.	Coldwater Canyon Avenue & Moorpark Street	AM PM	26.7 44.8	C D	28.7 46.1	C D
2.	Coldwater Canyon Avenue & Valleyheart Drive/Driveway	AM PM	6.7 4.1	A A	9.1 6.5	A A
3.	Coldwater Canyon Avenue & Ventura Boulevard	AM PM	28.5 36.8	C D	29.9 38.7	C D
4.	Goodland Avenue/Driveway & Ventura Boulevard	AM PM	12.2 16.1	B B	12.9 17.0	B B
5.	Whitsett Avenue & Ventura Boulevard	AM PM	17.4 10.6	B B	17.1 11.9	B B

Notes
Delay is measured in seconds per vehicle
LOS = Level of service
Results per Synchro 10 (HCM 6th Edition Methodology)

Attachment C
Project Site Plan



Source: MVE + Partners. November, 2020.