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Draft

Transportation Impact Analysis

International Park of Commerce – Phase 2

Prepared for:
Prologis
San Joaquin County

DRAFT

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Prepared for:
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September 2024

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Executive Summary

Study Purpose

This study summarizes the transportation analysis prepared for the International Park of Commerce (IPC) Specific Plan Phase 2 (the "Project"). The scope of the CEQA transportation analysis for the International Park of Commerce (IPC) Specific Plan Phase 2 is based on the need to answer California Environmental Quality Act (CEQA) Appendix G checklist questions for Transportation Impacts. It focuses on the project's impacts to the transportation system based on vehicle miles traveled (VMT). It also evaluates impacts to bicycle/pedestrian facilities, transit facilities and services, emergency vehicle access, and roadway safety-related impacts including nonstandard design features. The VMT assessment evaluates total project VMT and home-based work VMT per employee. Automobile, medium truck, and heavy truck VMT are calculated and reported for use in the project's environmental documentation. The study's assessment of VMT is consistent with the methodology and thresholds established in the *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020).

In addition to responding to CEQA Appendix G checklist questions, an informational non-CEQA level of service intersection congestion analysis has also been prepared. Automobile delay and level of service (LOS) is no longer used as a performance measure to determine the transportation impacts of proposed land developments and transportation projects under CEQA. Despite this, LOS results are presented here to understand how the surrounding roadway system may be affected by the project, to determine needed infrastructure upgrades, and to evaluate consistency with applicable General Plan policies related to LOS. The scope of work for the congestion analysis was developed considering the *San Joaquin County Traffic Impact Study Guidelines,* November 2008.

Project Description

The project is envisioned to be developed with industrial warehouse, distribution, and manufacturing buildings totaling approximately 5.36 million square feet and will include interior site circulation and the required vehicle, truck, and trailer spaces. The Specific Plan Area zoning designation of General Industrial includes permitted uses to include warehouse, distribution, manufacturing and assembly, storage, industrial flex, and distribution related uses. Development flexibility is created through a wide range of permitted and conditionally permitted uses, which anticipate the current and future development market, and development standards which guide the design of buildings to meet the requirements of users with a commitment to sustainability and quality architecture. **Figure 1** shows the regional setting and location of the International Park of Commerce Specific Plan Phase 2 Project. **Figure 2** shows the project site plan. The project would be accessed via several roadways including:

- Schulte Road
- Promontory Parkway
- Pavilion Parkway

Study Overview

This study analyzes project effects at 22 study intersections located on various roadway facilities under the jurisdiction of San Joaquin County, City of Tracy, and Caltrans.

The following scenarios are analyzed in this report:

- Existing Conditions
- Existing Conditions plus Project
- Existing plus Approved Projects
- Existing plus Approved Projects plus Project
- Cumulative (Year 2042) – with Eleventh Street / I-205 Interchange and Pavilion Parkway Overcrossing
- Cumulative plus Project Conditions with Eleventh Street / I-205 Interchange and Pavilion Parkway Overcrossing
- Cumulative (Year 2042) – without Eleventh Street / I-205 Interchange and Pavilion Parkway Overcrossing

Intersections in all jurisdictions are analyzed for weekday AM and PM peak hour conditions, though it is noted that City of Tracy has General Plan policies pertaining to LOS goals both within the Urban Service Boundary and beyond it. In contrast, Caltrans and San Joaquin County are transitioning away from LOS thresholds to identify degraded conditions, instead focusing on more holistic transportation reviews that consider all modes of travel, excess queuing, and other transportation policies (e.g., VMT reduction).

Project Travel Characteristics

The project is estimated to generate about 14,698 daily weekday trips, 1,721 AM peak hour trips, and 1,790 PM peak hour trips using ITE trip generation rates. These estimates include both truck and passenger vehicles. **Table 1** presents the anticipated total project trip generation.

Table 1: Weekday Project Vehicular Trip Generation

AM Peak			PM Peak			Daily Trips
In	Out	Total	In	Out	Total	
1,398	323	1,721	702	1,088	1,790	14,698

Source: Fehr & Peers, 2024; *Trip Generation Manual*, 11th Edition (Institute of Transportation Engineers, 2021).

Vehicle Miles Traveled

The project's effects on vehicle miles traveled (VMT) were assessed using the methodology, thresholds, and criteria described in the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR, 2018) and *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020). The amount of VMT anticipated to be generated by the project on a per capita basis and as a whole was assessed using the San Joaquin Council of Governments (SJCOG) travel demand model, and other off-model data as appropriate.

The project's weekday VMT per employee is forecast to be 41.5, which is above the unincorporated Countywide average of 38.6 and the relevant threshold of 85 percent of the unincorporated Countywide average of 32.8 This is a significant adverse environmental impact per the County's thresholds.

Multimodal Transportation Assessment

As part of the project, improvements will be made to the existing bicycle and pedestrian network throughout the Specific Plan area. The Specific Plan aims to encourage bicycle and pedestrian usage by including Class I bicycle paths on all major circulation streets within the project area, including West Schulte Road, Pavilion Parkway, and Promontory Parkway. Sidewalks would be provided along project frontages and connect to the surrounding public pedestrian network. In addition, large canopy trees will shade the sidewalks and improvements to pedestrian crossings at signalized intersections will be made.

No transit routes currently operate within the Specific Plan area. However, the Specific Plan roadway system will accommodate the implementation of future public transportation service by providing bus pull outs and shelters for passengers offering shade and protection during winter weather. Such improvements shall be implemented through the site approval process required for each phase.

Significant adverse impacts related to the pedestrian, bicycle, or transit networks were not identified.

Intersection Levels of Service

While intersection levels of service are no longer considered relevant within CEQA, they have been assessed in this study to provide information to local decision-makers and help to size the area's roadway network to accommodate future traffic levels. The analysis makes use of the current level of service guidelines of an intersection's governing jurisdiction—San Joaquin County, the City of Tracy, or Caltrans (generally LOS D). The project would result in an operational deficiency at a study intersection if it would degrade operations from an acceptable to unacceptable LOS or increase average delay at an intersection that is operating at an unacceptable LOS.

In the Existing plus Project Conditions scenario, project buildout trips were assigned to study roadways and intersections on the existing roadway system. The project is anticipated to result in deficient intersection operations at the following intersections in this scenario, two of which are currently operating at a deficient level:

- Mountain House Parkway/I-205 WB Ramps
- International Parkway/Schulte Road
- International Parkway/I-580 NB Ramps
- International Parkway/I-580 SB Ramps
- Lammers Road/Byron Road
- Lammers Road/Schulte Road

The Existing with Approved Projects with Project scenario includes traffic associated with all currently approved but not yet developed or occupied development projects as well as approved but not yet constructed roadway network improvements. Lists of approved projects were obtained from the City of Tracy and San Joaquin County. The most impactful approved project would likely be the unconstructed portions of the Cordes Ranch/IPC Phase 1 Project which neighbors the IPC Phase 2 Specific Plan site. Nine intersections would operate at a deficient LOS considered in this scenario. The project would worsen already deficient operations at five intersections and cause an additional four intersections to degrade to deficient conditions.

Cumulative (Year 2042) conditions with and without development of the proposed project were evaluated using the refined City of Tracy travel demand model. Two cumulative scenarios were assessed—Cumulative (Year 2042) – with a new Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing, and Cumulative (Year 2042) – without a new Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing. The intent of the second analysis is to model the localized traffic effects if these improvements are not funded and implemented.

In the Cumulative with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing Plus Project scenario 15 intersections would operate deficiently. The project would worsen already deficient operations at 13 intersections and cause two additional intersections to degrade to deficient conditions.

In the Cumulative without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing Plus Project scenario 17 intersections would operate deficiently. The project would worsen already deficient operations at 15 intersections and cause two additional intersections to degrade to deficient conditions.

Recommended Improvements

For locations where deficient operations were identified due to levels of service not meeting local standards, improvement recommendations were developed and assessed. Intersection operational modifications and physical changes were identified for each of the study's four "with project" scenarios. In the Existing plus Project scenario, the following improvements were developed which would allow all study intersections to function at appropriate service levels.

- International Parkway/Schulte Road: Add overlap signal for northbound right-turn movement.
- International Parkway/I-580 NB Ramps: Implement the programmed interchange improvement at the International Parkway/I-580 interchange.

- International Parkway/I-580 SB Ramps: Implement the programmed interchange improvement at the International Parkway/I-580 interchange.
- Lammers Road/Byron Road: Construct eastbound right-turn pocket.
- Lammers Road/Schulte Road: Construct southbound right-turn pocket.

Each of the physical improvements described above would be accompanied by traffic signal timing modifications and optimization to increase intersection capacity. The results of the intersection operations analysis indicate that the remaining study intersections would continue to operate at LOS D or better with the addition of project trips under existing conditions.

In the other three "with project" analysis scenarios that reflect project buildout traffic, improvement measures have been developed for study intersections that are expected to operate deficiently.

Impacts and Mitigations Summary

The project's potential environmental impacts related to transportation were evaluated based on the methodology and criteria of San Joaquin County and the CEQA Appendix G checklist. Potential impacts related to VMT, bicycle facilities, pedestrian facilities, transit facilities, hazards, emergency vehicle access, and cumulative conditions were assessed. For potentially significant adverse impacts, mitigation measures were developed and proposed.

The project was found to have a significant adverse impact relative to VMT. Project VMT was assessed using the SJCOG travel demand model. The project's weekday daily baseline VMT per employee was found to be 41.5, which is approximately 26.5 percent above the relevant threshold of 32.8 (85 percent of the unincorporated countywide average). A mitigation measure was developed which includes the preparation and implementation of a robust Transportation Demand Management (TDM) Plan; however, the mitigation measure was not found to fully mitigate the project's VMT impact. Therefore, the impact associated with VMT is **significant and unavoidable**.

Significant adverse project impacts were also identified relative to transit facilities, emergency vehicle access, and cumulative conditions (VMT). Mitigation measures to reduce the project's impacts related to transit facilities and emergency vehicle access to less than significant levels were identified. The project's cumulative impacts related to VMT were identified as significant and unavoidable. The project was found to have less than significant impact related to bicycle facilities, pedestrian facilities, and hazards.

1. Introduction

This chapter describes the study purpose, provides an overview of the proposed project, presents the study area, analysis scenarios, and methods, and lists applicable transportation-related policies that may pertain to the proposed project.

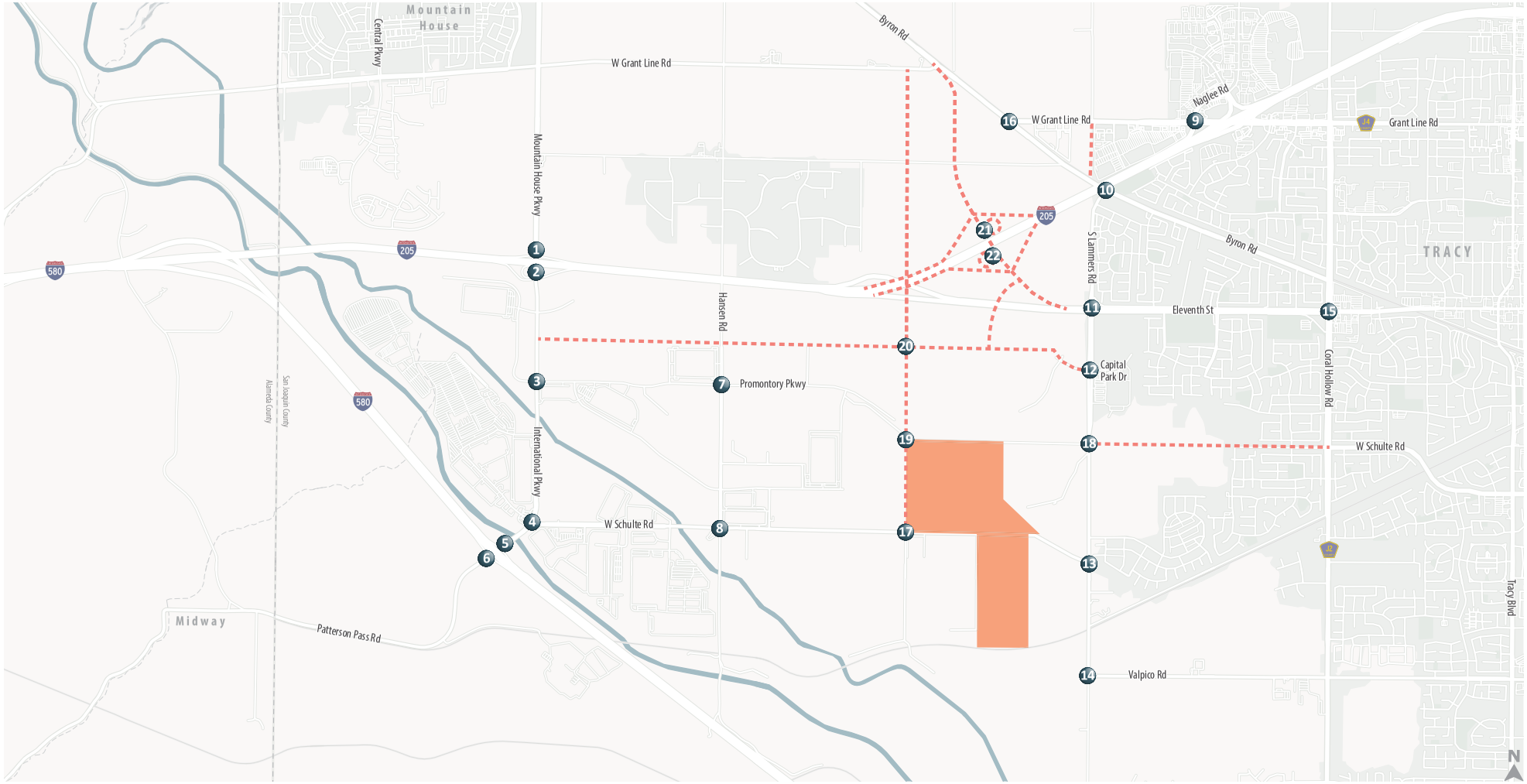
Report Purpose

This study summarizes the transportation analysis prepared for the International Park of Commerce (IPC) Specific Plan Phase 2 (the "Project"). The scope of the CEQA transportation analysis for the International Park of Commerce (IPC) Specific Plan Phase 2 is based on the need to answer CEQA Appendix G checklist questions for Transportation Impacts. It focuses on the project's impacts to the transportation system based on vehicle miles traveled (VMT). It also evaluates impacts to bicycle/pedestrian facilities, transit facilities and services, emergency vehicle access, and roadway safety-related impacts including nonstandard design features. The VMT assessment evaluates total project VMT and home-based work VMT per employee. Automobile, medium truck, and heavy truck VMT are calculated and reported for use in the project's environmental documentation. The study's assessment of VMT is consistent with the methodology and thresholds established in the *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020).

In addition to responding to CEQA Appendix G checklist questions, an informational non-CEQA level of service intersection congestion analysis has also been prepared. Automobile delay and level of service (LOS) is no longer used as a performance measure to determine the transportation impacts of proposed land developments and transportation projects under CEQA. Despite this, LOS results are presented here to understand how the surrounding roadway system may be affected by the project, to determine needed infrastructure upgrades, and to evaluate consistency with applicable General Plan policies related to LOS. The scope of work for the congestion analysis was developed considering the *San Joaquin County Traffic Impact Study Guidelines,* November 2008.

Project Overview

The International Park of Commerce Specific Plan Phase 2 Project ("Project") would be situated on approximately 277.6 acres northeast of Interstate 580 (I-580) and south of Interstate 205 (I-205) in unincorporated San Joaquin County. **Figure 1** shows the location of the project and study intersections; **Figure 2** illustrates the project site plan.



Project Site

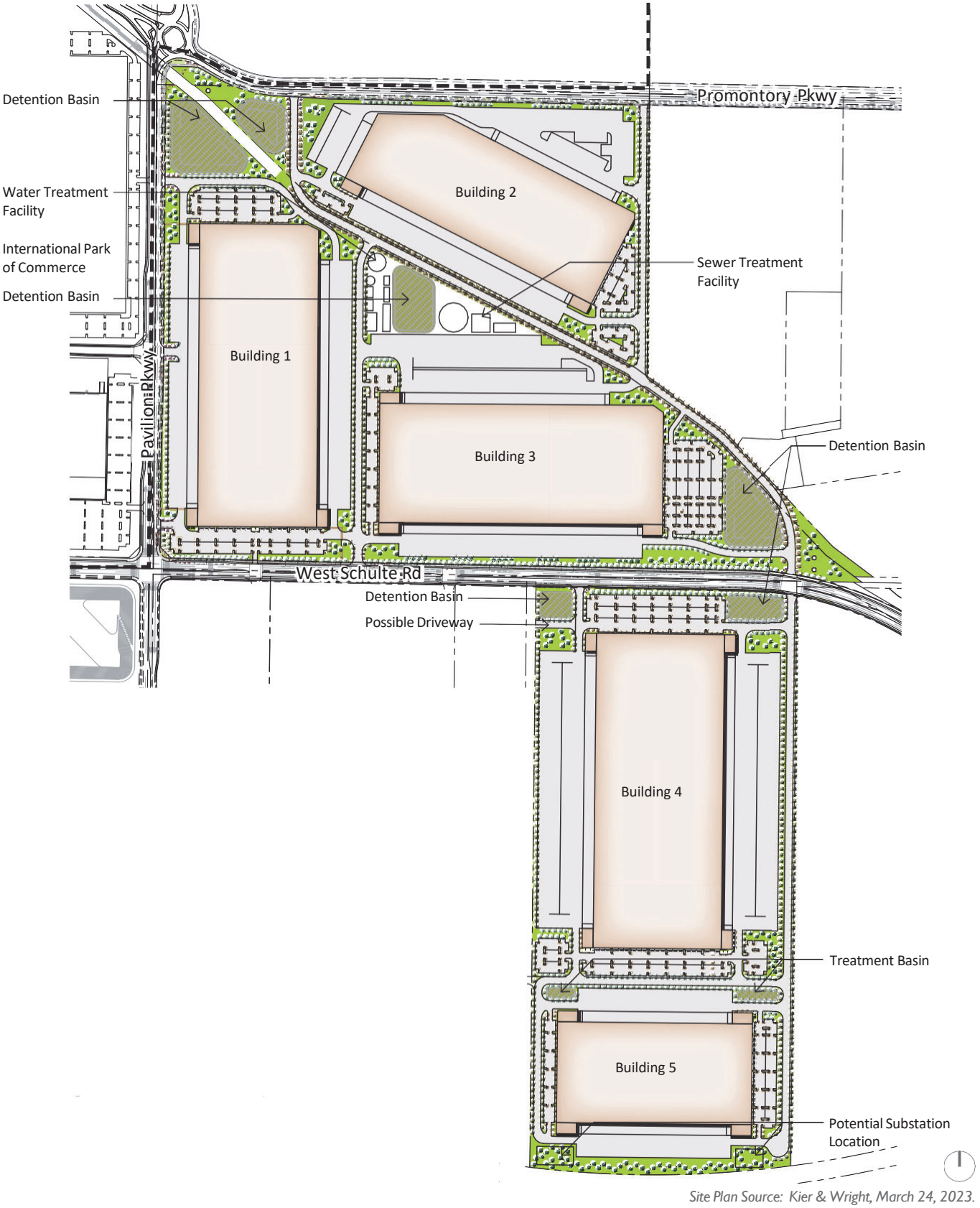
Study Intersection

Planned Roadways

Figure 1

Project Site Vicinity and Study Locations

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Site Plan Source: Kier & Wright, March 24, 2023.

Figure 2

Conceptual Project Site Plan

Applicable Transportation-Related Policies

This section presents applicable federal, state, regional, and local regulatory requirements applicable to the project.

Pursuant to Senate Bill (SB) 743, Public Resources Code (PRC) Section 21099, and California Code of Regulations (CCR) Section 15064.3, VMT has replaced congestion as the metric for determining transportation impacts under CEQA. Section 15064.3 of the CEQA Guidelines states that VMT is the "most appropriate measure of transportation impacts" and mandates analysis of VMT impacts effective July 1, 2020. A project's effect on automobile delay is no longer a consideration when identifying a significant impact; therefore, the impact of the project on delay-based traffic operations is not addressed in this EIR.

Federal

Depending on the types of off-site improvements needed, policies of the Federal Highway Administration (FHWA) may be applicable. This is particularly the case for interstate freeways such as I-5 and I-580.

State

The State of California has enacted several pieces of legislation that outline the state's commitment to encourage land use and transportation planning decisions and investments that reduce VMT and contribute to reductions in greenhouse gas (GHG) emissions in line with state climate goals. Other recent state policies pertain to roadway safety.

Senate Bill 743

SB 743, passed in 2013, required the California Governor's Office of Planning and Research (OPR) to develop new guidelines that address transportation metrics under CEQA. Enacted as part of SB 743 (2013), PRC section 21099, subdivision (b)(1), directed the OPR to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."

Subdivision (b)(2) of PRC section 21099 further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to [CEQA], except in locations specifically identified in the guidelines, if any."

OPR published its proposal for the comprehensive updates to the CEQA Guidelines in November 2017 which included proposed updates related to analyzing transportation impacts pursuant to SB 743. The

updated CEQA Guidelines were adopted on December 28, 2018; and according to the new CEQA Guidelines Section 15064.3, VMT replaced congestion as the metric for determining transportation impacts. The guidelines state that "lead agencies may elect to be governed by these provisions of this section immediately. Beginning July 1, 2020, the provisions of this section shall apply statewide."

To provide guidance to agencies implementing the new CEQA requirements, OPR published the *Technical Advisory on Evaluating Transportation Impacts in CEQA* ("Technical Advisory") in December 2018.

Technical Advisory on Evaluating Transportation Impacts in CEQA

The *Technical Advisory* provides advice and recommendations to CEQA lead agencies on how to implement SB 743 changes. This includes technical recommendations regarding the assessment of VMT, thresholds of significance, VMT mitigation measures, and screening thresholds for certain land use projects. Lead agencies may consider and use these recommendations at their discretion and with the provision of substantial evidence to support alternative approaches. The *Technical Advisory* describes considerations agencies may use in selecting VMT metrics, calculation methodologies, and significance thresholds. The *Technical Advisory* does not mandate the use of specific metrics, methodologies, or significance thresholds, because agencies have discretion to select those that are appropriate for the local land use and transportation context.

The *Technical Advisory* identifies "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The *Technical Advisory* suggests that projects meeting one or more of the following criteria should be expected to have a less-than-significant impact on VMT.

- Small projects – projects consistent with Sustainable Communities Strategies (SCS) and local general plans that generate or attract fewer than 110 trips per day.
- Projects near major transit stops – certain projects (residential, retail, office, or a mix of these uses) proposed within one half-mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
- Affordable residential development – a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.
- Local-serving retail – local-serving retail development tends to shorten trips and reduce VMT. The *Technical Advisory* encourages lead agencies to decide when a project will likely be local-serving, but generally acknowledges that retail development including stores larger than 50,000 square feet might be considered regional-serving. The *Technical Advisory* suggests lead agencies analyze whether regional-serving retail would increase or decrease VMT (i.e., not presume a less-than-significant outcome).
- Projects in low VMT areas – residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.

The *Technical Advisory* also identifies recommended numeric VMT thresholds for office and retail projects.



- Office projects that would generate vehicle travel exceeding 15 percent below (i.e., greater than 85 percent of) existing regional VMT per employee may indicate a significant transportation impact.
- Retail projects (and other non-residential/non-office projects) that result in a net increase in total VMT may indicate a significant transportation impact.

The *Technical Advisory* offers guidance regarding the above project types because "they tend to have the greatest influence on VMT" (OPR 2018: 17). The document recommends that local agencies develop their own specific thresholds for other land use types, while keeping Public Resource Code 21099 in mind.

The *Technical Advisory* also provides guidance on impacts to transit. Specifically, the *Technical Advisory* suggests that lead agencies generally should not treat the addition of new transit users as an adverse impact. As an example, the *Technical Advisory* suggests that "an infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network." (OPR 2018).

Regarding trucks, the *Technical Advisory* points out that CEQA Section 15064 refers to automobiles when referencing VMT. The document then offers a definition that automobiles consist of on-road passenger vehicles, including cars and light duty trucks. It further states that "Heavy-duty truck VMT could be included for modeling convenience and ease of calculation." No further guidance is provided relating to how to address travel impacts of trucks, though Appendix 1 (Considerations about which VMT to Count) and Appendix 2 (Induced Travel: Mechanisms, Research, and Additional Assessment Approaches) repeatedly refer to automobiles (and do not mention trucks) when describing these topics.

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Any improvements or modifications to the SHS within the study area would need to be approved by Caltrans. The following Caltrans planning documents emphasize the State of California's focus on transportation infrastructure that supports mobility choice through multimodal options, smart growth, and efficient development:

- Smart Mobility Framework (Caltrans 2010),
- Complete Streets Implementation Action Plan (Caltrans 2010),
- California Transportation Plan 2040 (Caltrans 2016),
- Strategic Management Plan 2015-2020 – 2019 Update (Caltrans 2019),
- State Highway System Management Plan (Caltrans 2019),
- VMT-Focused Transportation Impact Study Guide (Caltrans 2020), and
- *Caltrans 2020–2024 Strategic Plan* (Caltrans 2021).

Among these various reports, the following three documents are particularly applicable to the project.

VMT-Focused Transportation Impact Study Guide (2020)

On May 20, 2020, Caltrans adopted the *VMT-Focused Transportation Impact Study Guide (TISG)*. The TISG provides guidance on how Caltrans will review land use projects, with a focus on VMT analysis and supporting state land use goals, state planning priorities, and GHG emission reduction goals; as well as identifying land use projects' possible transportation impacts to the State Highway System and potential non-capacity increasing mitigation measures. The *TISG* indicates that Caltrans intends to "transition away from requesting LOS or other vehicle operations analyses of land use projects," instead placing the focus on VMT and safety.

The TISG emphasizes that VMT analysis is Caltrans' primary review focus and references the OPR *Technical Advisory* as a basis for the guidance in the TISG. Notably, the TISG recommends the use of the recommended thresholds in the *Technical Advisory* for land use projects. The TISG also references the *Technical Advisory* for screening thresholds that would identify projects and areas presumed to have a less-than-significant transportation impact. Caltrans supports streamlining for projects that meet these screening thresholds because they help achieve VMT reduction and mode shift goals.

Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance (2020)

In December 2020, Caltrans released the *Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance (202b)*. The purpose of the guidance is to provide instructions for conducting safety impact analysis for proposed land use projects and plans in compliance with CEQA. The guidance is focused on potential safety impacts affecting the State Highway System and sets expectations for Caltrans staff and lead agencies about what information and factors to consider in safety impact analysis. Caltrans recommends lead agencies use a similar approach, specifically local roadway safety plans (LRSPs) and systemic safety analysis reports (SSARs), as a model for safety analysis of the local transportation network. This guidance supports implementation of SB 743 and complements the current TISG. The new guidance has two main parts:

- Reactive: a review by Caltrans of its safety monitoring program data to see what known safety issues may be affected by the project; and
- Systemic: a review of LRSPs, SSARs, and other available plans and assessments to see what safety patterns and improvements may be applicable to Caltrans facilities in the study area.

Caltrans 2020–2024 Strategic Plan

The *Caltrans 2020–2024 Strategic Plan* lists "Safety First" as its top goal through 2024 (Caltrans 2021). The 2020 Caltrans Annual Accomplishments Report describes the *Four Pillars of Traffic Safety*, which will help guide the department toward the ultimate goal of zero deaths or severe injuries on California roads by 2050. The Four Pillars of Traffic Study include the following:

- Double Down on What Works
- Accelerate Advanced Technology

- Lead Safety Culture Change
- Integrate Equity

Regional

San Joaquin Council of Governments (SJCOG) 2022 RTP/SCS

The San Joaquin Council of Governments (SJCOG) is comprised of the County of San Joaquin and the cities of Stockton, Lodi, Manteca, Tracy, Ripon, Escalon, and Lathrop. SJCOG serves as the regional transportation planning agency and as a technical and informational resource for these jurisdictions.

In August 2022, the SJCOG Board voted to adopt the *2022 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) ("2022 RTP/SCS)*. This document serves as the region's long-range transportation plan and provides guidance for decisions about transportation spending priorities. It includes a list of planned and funded transportation improvements utilized in this report. Chapter 3 includes several policies and strategies that may be relevant to this study including the following:

Policy: Enhance the Environment for Existing and Future Generations and Conserve Energy

- Strategy No. 4: Improve air quality by reducing transportation-related emissions.

Policy: Maximize Mobility and Accessibility

- Strategy No. 5: Optimize the public transportation system to provide efficient and convenient access for users of all income levels.
- Strategy No. 7: Provide transportation improvements to facilitate nonmotorized travel, including incorporation of complete streets elements as appropriate.
- Strategy No. 8: Improve freight access to key strategic economic centers.
- Strategy No. 9: Promote safe and efficient strategies to improve the movement of goods by air, water, rail, and roadway.

Policy: Increase Safety and Security

- Strategy No. 10: Facilitate projects that reduce the number and severity of traffic incidents.
- Strategy No. 11: Support local and state efforts for transportation network resiliency, reliability, and climate adaptation.

Policy: Preserve the Efficiency of the Existing Transportation System

- Strategy No. 12: Prioritize projects that make more efficient use of the existing road network.
- Strategy No. 13: Support the continued maintenance and preservation of the existing transportation system.
- Strategy No. 14: Promote electric power, alternative fuels and autonomous technologies for freight and agriculture.

- Strategy No. 15: Manage the adoption of electric vehicles and private connected and autonomous vehicles.
- Strategy No. 16: Promote electric power, alternative fuels, and autonomous technologies for public transit.

Policy: Support Economic Vitality

- Strategy No. 17: Support transportation improvements that improve economic competitiveness, revitalize commercial corridors and strategic economic centers, and enhance travel and tourism opportunities.

Policy: Promote Interagency Coordination and Public Participation for Transportation Decision-Making and Planning Efforts

- Strategy No. 21: Provide equitable access to transportation planning.

Policy: Maximize Cost-Effectiveness

- Strategy No. 25: Support the use of state and federal grants to supplement local funding and pursue discretionary grant funding opportunities from outside the region.
- Strategy No. 27: Maximize funding of existing transportation options.

Policy: Improve the Quality of Life for Residents

- Strategy No. 30: Enhance public health through active transportation projects.

Chapter 5 of the *2022 RTP/SCS* establishes a VMT per capita (i.e., resident) target for the SJCOG region. However, metrics related to VMT per employee were not provided. Appendix M1 indicates that SJCOG region employees had an average travel distance to work of 11.86 miles.

Per the *2022 RTP/SCS Draft Programmatic Environmental Impact Report* (Rincon Consultants, 2022), a baseline VMT per capita of 23.2 miles is reported. That value is derived by dividing the region's daily VMT (17 million) by its 732,000 residents. The region's VMT estimate was derived from the SJCOG travel demand model and per page 4.14-20, considers automobile and light duty truck travel (heavy trucks are excluded).

San Joaquin County Regional Congestion Management Program (RCMP)

The Federal Congestion Management Process requires metropolitan planning organizations such as SJCOG to develop and implement a Regional Congestion Management Program (RCMP) to fulfill its requirements as a metropolitan area with a population exceeding 200,000. In addition, there is an opportunity to integrate performance-based planning and programming (PBPP) performance metrics and provide information of interest to our jurisdictions. Its focus is on reducing single occupant vehicle (SOV) travel while minimizing the need for increasing roadway capacity. It also provides additional resources for the development and deployment of new congestion management technologies.



The *SJCOG Regional Congestion Management Program 2022 Monitoring Report* (Kimley Horn, 2023) measures regional congestion and multimodal performance measures through ongoing systematic monitoring. Performance measures serve to gauge system performance and track progress toward achieving congestion management objectives. However, the CMP no longer includes roadway or intersection operations targets such as LOS C. Instead, it focuses on multimodal performance metrics for bicycling, walking, and transit as well as VMT, travel reliability, pavement management, and safety.

San Joaquin Valley Air Pollution Control District (SJVAPD) Rule 9410

San Joaquin Valley Air Pollution Control District (SJVAPD) Rule 9410 requires major employers (with 100 or more employees) in the region to develop and implement TDM strategies. Adopted in 2009, the Employer Trip Reduction Implementation Plan (eTRIP) encourages employees to reduce single-occupancy vehicle trips, thus reducing pollutant emissions associated with work commutes. These strategies can include employee shuttles, staggered work hours, telecommuting options, transit subsidies, carpool/vanpool programs, and many other strategies. More information on this program can be found at 4681 thru 4802 (valleyair.org).

Measure K Sales Tax

Measure K is a ½ cent sales tax that helps fund transportation improvements in San Joaquin County. The program is operated by SJCOG. Measure K was originally approved by voters in 1990. It was renewed by a 2006 vote, which will extend the sales tax through 2041. Major improvements target San Joaquin County freeways, streets and roads, public transit networks, pedestrian, and bicycle friendly programs. According to the Measure K interactive project map,[1] a passenger rail station (to support expansion of ACE service) is to be built near the Linne Road/Tracy Boulevard intersection. In addition, the program includes the construction of four lane extension of Schulte Road between west of Corral Hollow Road and Lammers Road, including median and sidewalk.

SJCOG Regional Bicycle, Pedestrian, and Safe Routes to School Master Plan (2012)

The *SJCOG Regional Bicycle, Pedestrian, and Safe Routes to School Master Plan* (Alta, 2012) was developed to identify bikeways and pedestrian projects of regional significance to prioritize funding and facilitate project implementation. The plan's vision is to the meet the needs for people of all ages and abilities in San Joaquin County by improving and enhancing the existing bicycle and pedestrian network. Its goals are to increase bicycle and pedestrian travel throughout the county, improve bicycle, pedestrian, and school access safety, and increase education and awareness of bicycling and walking in San Joaquin County. Its objectives are to increase the mileage of bicycle and pedestrian facilities in San Joaquin County by 20 percent between 2012 and 2022 and increase the competitiveness of local jurisdictions for grant funding for bicycle, pedestrian, and Safe Routes to School improvements.

[1] Interactive project Map | San Joaquin Council of Governments, CA (sjcog.org)

San Joaquin County Regional Transportation Impact Fee

For the purpose of creating a countywide, multi-jurisdictional multimodal capital improvement funding program for San Joaquin County, SJCOG, as the agency responsible for regional planning and programming, established the Regional Transportation Impact Fee (RTIF) program in October 2005. In April 2006, SJCOG entered into the RTIF Operating Agreement with its eight member jurisdictions to administer the RTIF program. The first full fiscal year of the RTIF program was 2006-2007. A revised Operating Agreement was adopted April 2015 and fully executed during the 2015-2016 fiscal-year.

The RTIF program's objective is to generate funding from new development projects that impact the Regional Transportation Network and integrate these funds with federal, state, and other local funding to make transportation improvements identified in the RTIF Program. Since its inception, approximately $51 million of RTIF funding has been generated. After all expenditures and fund allocations, the cumulative net retained RTIF funds is approximately $35.1 million as of fiscal-year 2015-2016.

Every five years, per Section 66001(d)(1) of the Mitigation Fee Act (MFA), impact fee programs are required to undergo a comprehensive review to ensure the nexus analysis and fee schedule reflect current assumptions for growth projections, analysis tools, transportation system impacts, project costs, and anticipated funding sources. The RTIF program completed its 10th year of implementation as of June 30, 2016. The RTIF capital project list contained on RTD's website does not show any planned, fully funded transportation improvements within the study area. Partial funding is included for the following projects within the study area:

- I-205 Widening/HOV (I-580 to Eleventh Street)
- I-205 at Lammers/Eleventh Street
- I-205 at Grant Line Road
- I-205 at Mountain House Parkway
- I-580 at International Parkway/Patterson Pass Road
- Eleventh Street (Tracy City Limits to I-5)

San Joaquin Regional Transit District Short-Range Transit Plan

The *San Joaquin Regional Transit District Short-Range Transit Plan (SRTP)* for fiscal years (FY) 2018-2019 to 2027-2028 serves as a guide for the development of the goals, objectives, and policies for future transit services in the Stockton Metropolitan Area (SMA) and unincorporated San Joaquin County over the next 10 years. Official RTD boundaries do not include the incorporated San Joaquin County cities of Lodi, Lathrop, Manteca, Escalon, Ripon, and Tracy. The SRTP proposes strategies that will guide transit development while containing costs within available revenues. Stakeholder discussions helped shape the design and strategies contained in the SRTP, which aims to accomplish the following:

- Develop strategic services and capital programs to provide transit services in a manner that balances the diverse needs of the traveling public, meets the community's transit needs, and competes effectively with single-occupant vehicles.

- Maintain sound financial management by implementing system efficiency standards and diversifying RTD's revenue streams.
- Coordinate with local agencies at all levels to ensure transit competes as a viable mode and that all transportation system investments are strategic and socially and economically equitable.
- Help reduce traffic congestion and air pollution in the San Joaquin Valley in order to meet regional air quality goals.

The SRTP outlines over $20 million in operating improvements and an additional $200 million in capital improvements to benefit San Joaquin County and its citizens. It identifies various service objectives to "provide the highest level of transit service to the greatest number of people within RTD's financial means." That includes enhanced service within the Stockton area, improved mobility for persons with disabilities, improved quality of intercity commuter service, and coordination with local jurisdictions and developers to incorporate transit services and amenities within land use planning to establish transit-oriented development. The SRTP does not explicitly cite any planned transit system improvements within the project vicinity.

Local

Goals, policies, and objectives from various planning documents published by San Joaquin County are relevant to the project. After this information is presented, planning documents and potentially applicable policies of the City of Tracy are presented given its proximity to the project site.

San Joaquin County General Plan (2016)

The Community Design component of Chapter 3.1 (Community Development Element) of the *San Joaquin County General Plan* (2016) includes the following goals and policies:

- Goal LU-3: Preserve and enhance the character and scale of San Joaquin County's communities and rural areas, including their architectural heritage and historic character.
- Policy LU-3.4 [Walkable and Bikeable Streets]: The County shall encourage new streets within Urban and Rural Communities and City Fringe Areas to be designed and constructed to not only accommodate auto and truck traffic, but also serve as comfortable pedestrian and cyclist environments and reflect public health goals by encouraging physical activity. These should include, but not be limited to:
    - Street tree planting adjacent to curbs and between the street and sidewalk to provide a buffer between pedestrians and automobiles, where appropriate,
    - Minimize curb cuts along streets, sidewalks on both sides of streets, and
    - Bike lanes and walking paths, where feasible on collectors and arterials, and traffic calming devices such as roundabouts, bulb-outs at intersections, and traffic tables. (RDR/PSP).
- Goal LU-5: Promote the development of regional and locally serving commercial uses in communities and other areas of the unincorporated County.

- Policy LU-5.5 [Bicycle Access and Parking]: The County shall require new commercial development within Urban Communities and City Fringe areas to include bicycle access and secure parking racks. (RDR).

The Transportation and Mobility component of Chapter 3.2 (Public Facilities and Services Element) of the *San Joaquin County General Plan* (2016) includes the following goals and policies:

- Goal TM-1: To maintain a comprehensive and coordinated multimodal transportation system that enhances the mobility of people, improves the environment, and is safe, efficient, and cost effective.
- Policy TM-1.1 [Transportation System Safety]: The County shall manage the transportation system to ensure safe operating conditions. (PSP).
- Policy TM-1.3 [Multimodal System]: The County shall encourage, where appropriate, development of an integrated multimodal transportation system that offers attractive choices among modes including pedestrian ways, public transportation, roadways, bikeways, rail, waterways, and aviation, and reduces air pollution and greenhouse gas emissions. (RDR/PSP).
- Policy TM-1.4 [Regional Transportation Facilities]: The County shall work with Caltrans, SJCOG, and the cities in the County where appropriate to plan, develop, and maintain regional transportation facilities, and to identify existing and future transportation corridors that should be linked across jurisdictional boundaries so that sufficient right-of-way may be preserved. (PSP/IGC).
- Policy TM-1.5 [Regional Transportation Plan Development]; The County shall provide input into the development of the San Joaquin Council of Governments Regional Transportation Plan as appropriate to ensure County roads and facilities are adequately addressed. (PSP/IGC).
- Policy TM-1.6 [Automobile Dependency Alternatives]: The County shall support public and private efforts where appropriate to provide alternative choices to single occupant driving. (IGC/JP).
- Policy TM-1.7 [Energy Conservation]: The County shall develop the transportation system to reduce vehicle miles traveled, conserve energy resources, minimize air pollution, and reduce greenhouse gas emissions. (RDR/PSP).
- Policy TM-1.8 [Multimodal Congestion Management]: The County shall support, as appropriate, SJCOG efforts to monitor multimodal corridors within the County as part of the Regional Congestion Management Program. The County shall also encourage the consideration of additional multimodal corridors, where appropriate, as part of future updates to the Regional Congestion Management Program. (PSP/IGC).
- Policy TM-1.10 [Eliminate Gaps]: The County shall strive to eliminate "gaps" in roadways, bikeways, and pedestrian networks by planning and seeking funding to construct grade-separated crossings of rail lines, canals, creeks, and other barriers to improve connectivity and encourage construction of new bikeways and pedestrian-ways in and between existing communities where appropriate. (RDR/PSP/FB).
- Policy TM-1.11 [Transportation System Improvements]: The County shall require new development to provide transportation system improvements necessary to serve the development. (RDR/FB).

- Policy TM-1.12 [Transportation and Land Use]: The County shall ensure that transportation system investments and improvements support existing and future sustainable land use patterns.
- Policy TM-1.13 [Smart Growth]: The County shall encourage "smart growth" and sustainable planning principles where appropriate, including the development of high-density and commercial development near inter-modal transit facilities. (RDR/PSP).
- Policy TM-1.16 [Transportation Capacity and Development]: The County shall schedule transportation improvements to coordinate with land use development and transportation demand. Transportation investments and service capacity shall be planned to correspond to the development and travel demand identified by plans of local communities. (RDR/PSP).
- Policy TM-1.18 [Capital Improvement Program]: The County shall maintain a Transportation Capital Improvement Program consistent and commensurate with developer fees established as part of the County's AB 1600 compliant traffic impact mitigation fee program. (PSP/FB).
- Goal TM-2: To improve County roadways to include pedestrian, bicycle, and transit facilities to better serve people who use these active transportation modes.
- Policy TM-2.1 [Urban Complete Streets]: The County shall require new streets within Urban Communities to be designed and constructed to serve all users, including pedestrians, bicyclists, and transit passengers, of all ages and abilities. This includes:
    - Creating multimodal street connections in order to establish a comprehensive, integrated, and connected transportation network for all modes of travel;
    - Minimizing curb cuts along non-local streets to improve safety and capacity;
    - Planting street trees adjacent to curbs and between the street and sidewalk to provide a buffer between pedestrians and vehicular traffic, where appropriate;
    - Constructing sidewalks and bike lanes on both sides of streets, where feasible;
    - Including parking options to provide a buffer between pedestrians and vehicular traffic, where appropriate;
    - Coordinating with local jurisdictions and SJCOG to ensure multimodal connections are established and maintained between jurisdictions; and
    - Incorporating traffic-calming devices such as roundabouts, bulb-outs at intersections, and traffic tables into the transportation system where appropriate to improve safety and encourage travel by active transportation modes. (RDR/PSP)
- Policy TM-2.2 [Reconstructed Urban Complete Streets]: The County may require, based on community support and financial feasibility, reconstructed streets in Urban Communities to accommodate pedestrians and bicyclists, except where pedestrian or bicycle facility improvements are not feasible or determined to be cost prohibitive. New and reconstructed streets in Urban Communities shall be designed to create an environment that provides opportunities for pedestrian and bicycle activity and complementary development and land uses. (RDR/PSP).

- Policy TM-2.3 [Land Use Patterns]: The County shall encourage the development of uses in Urban Communities that support the use of public transit, bicycling, walking, and other alternatives to the automobile. (PSP)
- Policy TM-2.4 [Rural Complete Streets]: The County shall strive to serve all users on rural roadways in the County and shall design and construct rural roadways to serve safely bicyclists, transit passengers, and agricultural machinery operators. This includes:
    - Constructing wide shoulders to provide a safe space for bicyclists, and agricultural machinery vehicles;
    - Removing visual barriers along rural roads, particularly near intersections, to improve the visibility of bicyclists; and
    - Coordinating with local jurisdictions and SJCOG to ensure multimodal connections are established and maintained between jurisdictions. (RDR/PSP)
- Policy TM-2.5 [Reconstructed Rural Complete Streets]: The County may require, based on community support and feasibility and the County's Bicycle Master Plan, reconstructed streets in rural areas to accommodate bicyclists and agricultural machinery, except where facility improvements are determined to be cost prohibitive. (RDR/PSP).
- Policy TM-2.6 [Funding for Complete Streets]: The County shall support efforts to fund transit agencies and improvements for public transit systems, bicycle and pedestrian routes, and other alternative modes of transportation (PSP).
- Policy TM-2.7 [New Development]: The County shall require all new developments to provide their fair share of roadway facilities for alternative transportation modes to reduce automobile demand. (RDR).
- Policy TM-2.8 [Private Complete Streets]: The County shall encourage large private developments (e.g., office parks, apartment complexes, retail centers) to provide internal complete streets that connect to the existing roadway system. (RDR).
- Goal TM-3: Maintain a safe, efficient, and cost-effective roadway system for the movement of people and goods.
- Policy TM-3.2 [Urban Roadways]: The County shall require, where feasible, new development in Urban Communities to construct roadways to County standards and complete streets principles, including curb, gutter, and sidewalks. Bike lanes shall be required, where feasible, for improvements identified in the San Joaquin County Bicycle Master Plan. (RDR).
- TM-3.3 [Onsite Circulation Systems]: The County shall require new development to design on-site circulation systems and parking facilities to minimize backup on County roadways. (RDR).
- TM-3.4 [Roadway Plan Coordination]: The County shall coordinate roadway improvements with regional plans, such as the countywide Regional Transportation Plan and Regional Transportation Improvement Plan Program, the Congestion Management Program, and the Measure K Strategic Plan funding program. (PSP/IGC).
- TM-3.5 [Variations in Roadway Alignment]: The County shall consider variations in the alignment of designated roadways to be in conformity with the General Plan if the alignment does not result



in traffic safety problems or reductions in needed capacity; does not constrain the proper development of contiguous properties, and does not conflict with or preempt other General Plan-specificized uses or facilities; or if the alignment is in conformance with an adopted special purpose plan or specific plan. (RDR/PSP).

- TM-3.6 [Right-of-Way Preservation]: The County shall strive to preserve road rights-of-way necessary to implement the circulation system included in the General Plan using Special Purpose Plans or other means, where appropriate. (PSP).
- TM-3.7 [Frontage Standards]: For developments that are located adjacent to a County roadway, the County shall require access onto County roads. (RDR).
- TM-3.10 [Rural Road Traffic]: The County should monitor the use of rural roads by commuters as bypass routes from gridlocked arterials to gather data for use in any future traffic studies or plans designed to reduce the traffic impact on the operation of agricultural machinery. (PSP/PSR).
- TM-3.11 [Rural Traffic Management Areas]: The County shall mitigate excessive commuter diversion traffic through the development and adoption of rural traffic management plans. Where applicable, the County shall prepare a rural traffic management plan when public concerns are raised about excessive traffic or the County identifies issue areas, County Public Works Director confirms that a defined rural area is experiencing excessive commuter traffic due to diversion, and a survey of an area's property owners, with at least 33 percent responding, shows at least 50 percent are in support of a plan. (PSP).
- VM-3.12 [Development Rights-of-Way]: The County shall require dedication and improvement of necessary on and off-site rights-of-way at the time of new development, in accordance with the County's Functional Classification, Standard Drawings, and Level of Service Standards. (RDR).
- TM-3.13 [HOV Lanes and Ramp Metering]: The County shall coordinate with Caltrans to ensure installation of HOV lanes and ramp metering devices along congested commuter corridors, as identified by SJCOG's Northern San Joaquin Valley Regional Ramp Metering and HOV Master Plan, do not negatively impact County roads. (PSP/IGC).
- TM-3.14 [Reduced Parking Requirements]: The County may reduce automobile parking area requirements for new developments in exchange for owner-supplied amenities or facilities (e.g., transit facilities, secure bicycle storage facilities) or in-lieu fee payments for public transit. (RDR).
- Goal TM-4: To maintain and expand a safe, continuous, and convenient bicycle system and pedestrian network.
- TM-4.1 [Pedestrian and Bicycle Network Continuity]: The County shall strive to eliminate gaps in the rural bicycle network by constructing or designating new bike facilities, where appropriate, and in accordance with the San Joaquin County Bicycle Master Plan.
- TM-4.2 [Speed Management Policies]: The County shall strive to implement current CVC codes for uses as speed management policies that support driving speeds on all streets within Urban and Rural Communities and City Fringe Areas that are safe for pedestrians and bicyclist. (RDR).
- TM-4.1 [Pedestrian and Bicycle Network Continuity]: The County shall strive to eliminate gaps in the rural bicycle network by constructing or designating new bike facilities, where appropriate, and in accordance with the San Joaquin County Bicycle Master Plan.



San Joaquin County VMT Thresholds Study (2020)

The *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020) describes how San Joaquin County will implement Senate Bill 743. The report describes how, in large part, the County is endorsing the majority of the recommendations from the *Technical Advisory*. However, it provides a County-specific VMT analysis for screening and threshold setting for average VMT per capita and employee metrics. This report contains the following conclusions that are applicable to this study:

- Employment Projects (Work-based VMT) – Establish baseline VMT and threshold on a per employee basis. When assessing an office or manufacturing project, the project's VMT is divided by the number of employees expected to occupy the project to determine the VMT per employee of the project. "Work" uses include, but are not limited to, offices, office parks, business parks, industrial, warehousing, processing, and manufacturing where the predominant VMT is employee-based.
- Retail Projects (Net VMT) – Measure total change in VMT within the region's boundary (the difference in total VMT in the area affected with and without the project), and determine the threshold based on net change in total VMT. "Retail" uses or projects appropriate for Net VMT analysis include, but are not limited to, supermarkets, restaurants, gas stations, wineries, agriculture tourism, hotels, and religious facilities. Public and recreational uses such as parks, private schools, hospitals, libraries, and public services may also be assessed in this way, if needed. The predominant VMT for these use types is generated by visitors or patrons, rather than employment.
- Truck VMT: Although heavy-duty truck VMT is generally excluded from the *Technical Advisory*, the County may elect to include an assessment of truck VMT if it is reasonable to assume that the project would result in a significant change in the pattern, frequency, or length of truck trips. Truck VMT would be assessed in terms of net change in total truck VMT. This does not preclude the need to assess VMT per employee. This would mainly apply to projects such as industrial, warehousing, processing, and manufacturing uses.
- Specific Plans: Their analysis may employ the same thresholds described above for individual land use types.
- Transportation Projects: Transportation impacts of a transportation project should be calculated based on the net change in total VMT. If a project would likely lead to a substantial or measurable increase in vehicle travel, the County should conduct an analysis to assess the amount of induced travel.

With regard to methodology, the report states the following:

- The Report recommends using the SJCOG model to calculate and establish Baseline VMT. This model was used to estimate trip-based VMT for the region and for the unincorporated areas of the County. The recently updated model has a base year of 2015 and a forecast year of 2045. The model produces trips by different trip purposes and modes, and outputs VMT throughout the County. To estimate trips associated with Work VMT, only Home-Base-Work (HBW) vehicular trips were selected for evaluation.
- The County has elected to use the Unincorporated Regional Average, as its ability to influence land development decisions is directly correlated to this geographic boundary. Using a single unincorporated County average VMT baseline would provide a consistent and streamlined approach for VMT analysis under CEQA. The Unincorporated Regional Average baseline VMT rate is 19.05 VMT per employee.

With regard to screening and projects presumed to have less than significant impacts, the report states the following:

- The report endorses the *Technical Advisory* definition of screening of Small Projects.
- The report endorses the uses of map-based screening for residential and office projects located in low VMT areas,
- The report endorses the *Technical Advisory* definition related to transit proximity.
- The report endorses the *Technical Advisory* definition retailed to local-serving retail (i.e., 50,000 square feet or less).

With regard to significance thresholds, the report states the following:

- The County has decided to utilize a 15% reduction in baseline VMT per employee as the threshold of significance for work projects.
- The County has decided to utilize a no net increase in total VMT for retail projects.
- A general plan, area plan, or community plan may have a significant impact on transportation if proposed new residential, office, or retail land uses would in aggregate exceed the respective thresholds recommended above.

These VMT thresholds are recommended based on the most recent guidance on VMT thresholds from OPR and State of California climate goals. The VMT analysis completed for this study serves as substantial evidence for the validity of the VMT thresholds, and subsequent screening criteria, recommended for the County of San Joaquin. Specifically defining terms and parameters used in the VMT thresholds, such as local-serving retail, ensures that the VMT thresholds remain defensible under CEQA.

This information is used as part of the VMT analysis methodologies and thresholds applied in this study.



San Joaquin County Code of Municipal Ordinances

San Joaquin County has a Transportation Systems Management (TSM) program, the purpose of which is to develop an integrated and cooperative approach between the City and the business community to promote alternative transportation options, reduce traffic congestion, and improve air quality in the San Joaquin County. The TSM program applies to businesses or common work locations (such as office building/complex, commercial/retail center, or industrial building/park) with 50 or more employees. The County's TSM requirements are located in Title 10 of the San Joaquin County Municipal Code.

Typical measures included in a TSM include the provision of bicycle lockers and on-site showering facilities, workplace ride-share programs, and employee education and incentive programs to use alternative transportation.

San Joaquin County Bicycle Master Plan Update (2020)

The Bicycle Master Plan is intended to provide a blueprint for creating a safe, comfortable, and efficient bicycle network and bicycling experience for the County's residents and visitors. The plan presents policies, bicycle infrastructure projects, programs, and action plans to support the improvement and expansion of the County's bicycling network. The Bicycle Master Plan is developed in context of the Public Facilities and Services Element of the County General Plan (GP), which includes goals and policies to develop a balanced transportation system for automobiles, transit, bicycles, and pedestrians.

The 2020 Bicycle Master Plan Update includes recommended modifications to the General Plan Public Facilities and Services Element to reflect recommended changes to policies, programs, and development standards. The overarching bikeway goals of the General Plan, as amended, are listed below:

- Goal TM-4.1: The County shall strive to eliminate gaps in the rural bicycle network by constructing or designating new bike facilities, where appropriate, and in accordance with the San Joaquin County Bicycle Master Plan.
- Goal TM-4.3: The County shall support bicycle safety programs for children and commuters in the County.
- Goal TM-4.6: The County shall encourage bicycle facilities and routes in unincorporated areas to interface with city bicycle routes and provide for inter- and intra-county bicycle circulation.
- Goal TM-4.7: The County shall support developments of the bicycle system to connect residential areas with commercial areas, employment centers, educational facilities, local and regional recreational facilities, and other major attractions.
- Goal TM-4.8: The County shall ensure County roads planned as part of the regional bicycle route network are constructed to have adequate width.

The 2020 Bicycle Plan Update proposes the following bikeways in the study area:

- Class I bicycle path on Corral Hollow Road from Canal at Ponderosa Drive to Ellis Town Drive, Parkside Drive to Midway Drive, and Linne Road to Delta Mendota Canal

- Class I bicycle path on Mountain House Parkway from Byron Road to the West Side Irrigation Canal
- Class II bicycle lane on Valpico Road from Lammers Road to Corral Hollow Road
- Class II bicycle lane on Lammers Road from Schulte Road to Tracy city limits
- Class III bicycle route on Corral Hollow Road from Lammers Road to the Tracy city limits
- Class III bicycle route on Hansen Road from Grant Line Road to Schulte Road

San Joaquin County Bicycle Master Plan Update (2010)

The San Joaquin County Bicycle Master Plan Update provides a blueprint for making bicycling an integral part of daily life in San Joaquin County. It provides for an updated system of bike lanes, bike routes, and bike paths; identifies necessary support facilities such as bicycle parking; and recommends a variety of programs to allow for safe, efficient, and convenient bicycle travel within San Joaquin County and connecting to regional destinations. This Plan was developed by San Joaquin County Public Works Department staff and guided by extensive input from the community.

- Goal 1 [Provide safe and efficient bikeways in San Joaquin County]: Construct bikeways identified in the San Joaquin County Bicycle Master Plan and provide for the maintenance of both existing and new facilities.
- Policy Action 1.1: Prepare and maintain a bikeway plan that identifies existing and future needs, and provide specific recommendations for facilities and programs, including provisions for bicycle use and bikeways in all new developments.
- Policy Action 1.2: Create a bikeway system that is cost-effective to construct and maintain; respects landowners, utilities, and special districts' property rights; and minimizes the potential for conflicts with other types of vehicles and users.
- Policy Action 1.3: Require all bikeways to conform to design standards contained in the California Highway Design Manual, Chapter 1000: Bikeway Planning and Design, unless otherwise established by San Joaquin County.
- Policy Action 1.4: Update local roadway design standards, if necessary, to include sufficient pavement sections and adequate rail height to accommodate bikeway facilities.
- Policy Action 1.5: Consider a proposed route's importance in providing access to regional bikeway facilities when recommending local routes for implementation.
- Policy Action 1.6: Coordinate with agencies such as Caltrans, Alameda County, Amador County, Calaveras County, Sacramento County, Solano County, Stanislaus County, and the cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy regarding the implementation of the proposed system.
- Policy Action 1.7: Provide connections to the proposed system from all existing and future transit facilities, stations, and terminals in San Joaquin County where feasible.
- Goal 2 [Ensure that the transportation network within future development areas is accessible by bicycles and connects to routes identified in the proposed system]: Include bikeway facilities in all

appropriate future development projects to facilitate on-site circulation for bicycle travel, on-site bicycle parking, and connections to the proposed system.

- Policy Action 2.1: Require future development to construct bikeways as a condition of development along appropriate roadways included in the Plan's proposed system.
- Policy Action 2.2: Condition future, large-scale development to provide support facilities such as bicycle racks, personal lockers, and showers at appropriate locations such as parks, major recreational destinations, park-and-ride facilities, employment centers, schools, and commercial centers.
- Policy Action 2.3: Consider landowner concerns when planning and acquiring off-street bikeway easements.
- Policy Action 2.4: Meet the requirements of the Americans with Disabilities Act when constructing facilities contained in the proposed system, where applicable.
- Policy Action 2.5: Whenever feasible, require future development to incorporate parks and schools as important destinations for bicyclists when designing circulation plans for subdivisions and other developments.
- Goal 3 [Improve the safety of bicyclists and promote bicycling skills through education and encouragement programs]: Develop and implement education and encouragement programs aimed at youth, adult cyclists, and motorists. Increase public awareness of bicycling, available resources, and facilities.
- Policy Action 3.1: Incorporate standard signing and traffic controls, as established by Caltrans, to ensure a high level of safety for the bicyclist and motorist.
- Policy Action 3.2: Use the California Statewide Integrated Traffic Records System (SWITRS) accident data to monitor bicycle-related accident levels annually and target a 10 percent reduction on per capita basis over the next 20 years.
- Policy Action 3.3: Work with local law enforcement agencies and local school districts to cooperatively develop a comprehensive bicycle education program that is taught to all school children in San Joaquin County.
- Policy Action 3.4: Develop adult and youth bicycle education, encouragement, and safety programs.
- Policy Action 3.5: Publicize the health benefits of bicycling.
- Goal 4 [Avoid adverse environmental impacts associated with the implementation of the proposed bicycle system.]: Mitigate potentially significant impacts to a level of less than significant.
- Policy Action 4.1: Conduct environmental review of individual projects as they advance to the implementation stage of development.
- Policy Action 4.2: Avoid areas of sensitive habitats for plants and wildlife when constructing facilities contained in the proposed system.
- Policy Action 4.3: Solicit and consider community input in the design and location of bikeway facilities.



- Policy Action 4.4: Consider the effect on other transportation facilities such as travel lane widths, turn lanes, and on-street parking when planning and designing on-street bikeways.
- Goal 5 [Ensure the timely funding and construction of the bicycle improvements described in this Plan]: The County should work to fund construction of the bicycle improvements in this plan and maximize the amount of local, state, and federal funding for bikeway facilities that can be received by agencies in San Joaquin County.
- Policy Action 5.1: Maintain current information regarding regional, state, and federal funding programs for bikeway facilities along specific funding requirements and deadlines.
- Policy Action 5.2: Prepare joint grant applications with other local and regional agencies for state and federal funds, as appropriate.

San Joaquin Council of Governments Regional Bicycle, Pedestrian, and Safe Routes to School Master Plan (2012)

This Bicycle, Pedestrian and Safe Routes to School (BP~SRtS) Plan provides recommended bicycle and pedestrian projects for San Joaquin County and its seven cities. The San Joaquin Council of Governments (SJCOG) is a Joint Powers Authority comprised of the County of San Joaquin and the cities of Stockton, Lodi, Manteca, Tracy, Ripon, Escalon, and Lathrop. SJCOG serves as the regional transportation planning agency and a technical and informational resource for these jurisdictions.

SJCOG, in coordination with member agencies, developed this Plan to identify bikeways and pedestrian projects of regional significance in order to prioritize funding and facilitate project implementation. This plan also helps set Measure K funding priorities. In November 2006, the voters of San Joaquin County approved the use of Measure K funds to expand and enhance pedestrian and bicycle safety and facilities within San Joaquin County. The goal of the Bike, Pedestrian, and Safe Routes to Schools Program Guidelines is to ensure that Measure K funds (Competitive / Non-Competitive) are expeditiously utilized to deliver projects that are valued throughout the region.

One of the important uses of the Plan is to support a local / regional project's value when applying and competing for other local, state, and federal funding opportunities. To clarify, the only compelling condition when a member agency would need to individually adopt the Regional BP~SRtS Master Plan is when the Plan is solely used to support an application during the State Bicycle Transportation Account (BTA) competitive process. Jurisdictions also have the option of using locally approved bike plans (certified by SJCOG as compliant) when pursuing BTA funding. For any other grant processes, simply referencing that the project is also supported in the regional master Plan will provide additional support for the project to be considered for funding.

The Plan also provides each of the region's jurisdictions with the standard elements of the Bicycle Transportation Account Compliant Plan, availing them of important external funding sources for nonmotorized transportation planning.

1.1.1. Vision: The following statement articulates the vision for this Plan: The BP~SRtS Plan builds upon current successes to meet the mobility needs for people of all ages and abilities in San Joaquin County by

improving and enhancing the existing bicycle and pedestrian network. Improving and enhancing the bicycle and pedestrian network is realized through better connectivity, accessibility, and safety measures between specific origins and destinations referred to as Community Activity Centers (CACs).

1.1.2. Goals: The following goals are components of the vision that the recommendations in this plan can help to achieve: increase bicycle and pedestrian mobility throughout San Joaquin County; improve bicycle, pedestrian, and school access safety; increase the number of commute, recreation, and utilitarian bicycle and pedestrian trips; increase education and awareness of bicycling and walking in San Joaquin County; and address congestion near schools and on the regional Congestion Management Program network.

1.1.3. Objectives: Objectives are specific, measurable steps that work toward achieving the Plan's goals and help to evaluate the progress of implementation such as increasing the mileage of bicycle and pedestrian facilities in San Joaquin County by 10 percent in the next five years and 20 percent in the next ten years and increasing the competitiveness of local jurisdictions for grant funding for bicycle, pedestrian, and Safe Routes to School improvements.

San Joaquin Regional Transit District Short-Range Transit Plan 2018–2028

The San Joaquin Regional Transit District Short-Range Transit Plan (SRTP) for fiscal years (FY) 2018-2019 to 2027-2028 serves as a guide for the development of the goals, objectives, and policies for future transit services in the Stockton Metropolitan Area (SMA) and unincorporated San Joaquin County over the next 10 years. The plan is developed within the context of the regional planning process, which will implement San Joaquin Council of Governments' (SJCOG) Regional Transportation Plan & Sustainable Communities Strategy (RTP/SCS) (2018) and the Regional Transit Systems Plan (2017).

Developing and updating the SRTP is a critical step in the ongoing efforts of the RTD Board of Directors and staff in fulfilling its mission and vision. The SRTP proposes strategies that will guide transit development while containing costs within available revenues. Stakeholder discussions helped shape the design and strategies contained in the SRTP, which aims to accomplish the following:

- Develop strategic services and capital programs to provide transit services in a manner that balances the diverse needs of the traveling public, meets the community's transit needs, and competes effectively with single-occupant vehicles.
- Maintain sound financial management by implementing system efficiency standards and diversifying RTD's revenue streams.
- Coordinate with local agencies at all levels to ensure transit competes as a viable mode and that all transportation system investments are strategic and socially and economically equitable.
- Help reduce traffic congestion and air pollution in the San Joaquin Valley in order to meet regional air quality goals.

This SRTP outlines RTD's plans based upon three main goals:

- Accessibility: Through a robust network of new BRT and Mobility Management services, RTD can meet the needs of today's residents who do not have access to service and improve access with higher frequency service to current users. Improved accessibility also increases the attractiveness of RTD's services, encouraging new riders to experience public transit.
- Sustainability: By being a public transit provider, RTD reduces millions of tons of carbon emissions every year. In addition, many millions more tons of carbon emissions will be reduced through RTD's plan for renewable energy through solar power and electric and hybrid transit vehicles.
- Resilience: RTD continues to focus on improving existing transit services and the quality of life of its passengers. Through new technology and partnerships, RTD's passengers will be more informed and be better able to use RTD's services. Using new technology, RTD will improve on-time performance, be better equipped to manage disruptions and delays, and continue to provide outstanding customer service.

In all, this SRTP outlines over $20 million in operating improvements and an additional $200 million in capital improvements to benefit San Joaquin County and its citizens.

Accordingly, the SRTP identifies the following service objectives to provide the highest level of transit service to the greatest number of people within RTD's financial means:

- Enhancing Stockton Metropolitan Area (SMA) service by:
    - Improving BRT service and connectivity.
    - Restoring midday, off-peak, and night frequency.
    - Restoring weekend service frequency.
- Improving the quality of mobility services while reducing the cost of providing Americans with Disabilities Act (ADA) Dial-A-Ride (DAR) service.
- Improving the quality of Intercity and Commuter service.
    - Improving Hopper deviated fixed-route service levels.
    - Improving administrative management through technology and training.
    - Coordinating with local jurisdictions, San Joaquin County, and local developers to incorporate transit services and amenities within land use planning to establish transit-oriented development.
    - Coordinating a transit consolidation study of the transit systems in the region to improve efficiency, reduce overhead, and increase transit service countywide.

To prevent duplication, RTD could coordinate with ACE to provide additional bus trips in between ACE trains and shuttle services to ACE stations in San Joaquin County, especially since the implementation of Saturday service in FY 19.

San Joaquin County Improvement Standards

The purpose of the San Joaquin County Improvement Standards (2014) is to establish minimum design standards and standard plans for the construction of subdivisions, commercial, and other types of development projects.

San Joaquin County Traffic Impact Study Guidelines (2008)

This document provides guidance on a variety of relevant topics including study area selection, analysis methods, significance thresholds, identification of improvements to address deficient operations, and report documentation. The specific "word-for-word" guidance from this document is first provided by topic area, followed immediately (in italics) by an assessment of how that guidance is addressed in this study. As the County's *TIA Guidelines* (2008) are now 15 years old, some aspects of it have been superseded by changes in best practices, state laws, technology and available data, and other considerations.

Study Area

1. The area to be covered by traffic impact studies will be determined on a case-by-case basis and shall be sufficient in size to include all existing and planned adjacent and regional facilities determined to be impacted by the development project. The scope of the traffic impact study, including the study area, shall be reviewed and approved by County staff prior to preparation of the study.
2. A list of locations where traffic counts will be taken shall be submitted (within the proposed scope of work) to the San Joaquin County Department of Public Works for approval. In general, the peak hour volumes to be analyzed will include both the A.M. and P.M. peak periods; however, these peak periods may be modified or other periods may also be required, as necessary, for complete analysis. The days on which peak hour volumes are to be analyzed will be determined on a case-by-case basis.

Analysis Methods

3. "*Trip Generation*," Eighth Edition, or latest edition, by the Institute of Transportation Engineers, shall be used to determine traffic projections for required traffic studies. Special traffic generators (schools, hospitals, etc.) shall be considered when determining traffic projections.
4. Traffic projections shall include the scenarios, as listed in Section IV-C of the "San Joaquin County Traffic Study Guidelines Report Outline." These scenarios are existing conditions, existing plus the project, existing plus approved projects, existing plus approved projects plus the project, cumulative 2042 (without project), cumulative 2042 plus the project. No reductions are to be taken for TSM programs or for senior housing. Pass-by and diverted link trips shall be approved by County staff.

Significance Thresholds

5. If the LOS for a Plus Project condition exceeds the County's LOS standards, then mitigation measures that would improve the LOS to an acceptable level must be identified. LOS must be

expressed in terms of delay in seconds for intersections, and vehicles per hour for roadway segments, in addition to the corresponding letter (A – F) designation.

6. If the LOS for conditions at a given location is already at an unacceptable LOS, then the impacts must be assessed in terms of 'v/c ratio' (for roadway segments) or 'delay' (for intersection approaches). If the 'v/c ratio' for a roadway segment, under 'existing plus approved and significant pending plus project' conditions, exceeds the v/c ratio for the same roadway segment under 'existing' conditions then mitigation measures that would return the 'v/c' ratio to the 'existing' level must be identified. Similarly, if the 'delay' at a given intersection approach under 'existing plus approved and significant pending plus project' conditions exceeds the 'delay' for the same intersection approach under 'existing' conditions, then mitigation measures that would return the 'delay' to the 'existing' level must be identified.
7. A potential impact to a study intersection shall not be automatically considered "not significant" if it does not meet the peak hour signal warrant. If a signal is not warranted, other methods of mitigation (channelization, roundabout, etc.) shall be investigated and discussed with County staff. The impact will only be considered "not significant" after approval of County staff. In addition, the County does not use the "five second rule;" any increase in delay at an intersection must be addressed.

Identification of Operational Improvements for Deficient Operations

8. For project impact analysis and identification of mitigation measures, the traffic impact study must consider all existing applicable legislation and all forms and modes of transportation (including bicycle and pedestrian) and improvements (including roundabouts). In addition to identifying mitigation measures, the report should also determine the project's fair share responsibility at study locations in the cumulative plus project scenario. The project's fair share responsibility should be determined by dividing the number of 'project generated trips' at a location by the difference of cumulative trips minus existing plus approved project trips. The project's fair share responsibility must be expressed in terms of both percentage (%) and dollar ($) amount. If both AM and PM peak hour impacts are identified, the fair share shall be the average of the two.

Documentation

9. Traffic Impact Studies shall follow the format of the attached "San Joaquin County Traffic Impact Study Guidelines Report Outline." The report shall be prepared under the direction of a Registered Engineer and shall contain that Engineer's Stamp and signature.

City of Tracy General Plan (2011)

The *City of Tracy General Plan* (2011) is the principal policy and planning document for guiding future conservation, enhancement, and development in the City. It represents the basic policy direction of the Tracy City Council on basic community values, ideals, and aspirations to govern a shared environment through 2025. The General Plan addresses all aspects of development including land use, transportation, housing, economic development, public facilities, infrastructure, and open spaces, among other topics.

The Circulation Element of the General Plan contains the following relevant goals, policies, objectives, and actions that may be related to the proposed project's transportation impacts:

Goal CIR-1 A roadway system that provides access and mobility for all of Tracy's residents and businesses while maintaining the quality of life in the community.

- *CIR-1.1 Implement a hierarchical street system in which each street serves a specific, primary function and is sensitive to the context of the land uses served.*
    - Policy P2. The City shall preserve rights-of-way needed for future roadway and freeway interchange improvements through dedication or acquisition as adjacent properties develop or redevelop.
    - Policy P3. The City shall continue to apply traffic mitigation fee programs to fund transportation infrastructure, based on a fair share of facility use.
    - Policy P4. The City should continue to pursue regional, County and State funding to fund roadway projects. These potential funding sources may include Measure K sales tax revenues, a regional or countywide transportation impact fee, and other existing and future revenue sources.
    - Policy P5. The City shall continue to participate in regional transportation funding decisions, including Measure K reauthorization, regional or countywide transportation fees, and prioritization of State funded projects.
    - Policy P6. The Roadway Master Plan update shall identify necessary improvements to various intersections on I-205 and I-580 based on land use designations and with particular attention to Terminal Access Routes in accordance with Surface Transportation Assistance Act of 1982 (STAA).
        - Action A3. Consult with San Joaquin County and the City of Lathrop to ensure that adequate rights-of-way are preserved in the City's Sphere of Influence.
- *Objective CIR-1.3 Adopt and enforce LOS standards that provide a high level of mobility and accessibility, for all modes, for residents and workers.*
    - Policy P1. To the extent feasible, the City shall strive for LOS D on all streets and intersections, with the LOS standard for each facility to be defined in the Transportation Master Plan in accordance with the opportunities and constraints identified through the traffic projections and analysis performed for that plan. The following exceptions to the LOS D standard may be allowed:
        - LOS E or lower shall be allowed on streets and at intersections within one-quarter (1/4) mile of any freeway. This lower standard is intended to discourage inter-regional traffic from using Tracy streets.
        - LOS E or lower shall be allowed in the Downtown and Bowtie area of Tracy, in order to create a pedestrian-friendly urban design character and densities necessary to support transit, bicycling, and walking.

    - Policy P2. The City may allow individual locations to fall below the City's LOS standards in instances where the construction of physical improvements would be infeasible, prohibitively expensive, significantly impact adjacent properties or the environment, or have a significant adverse effect on the character of the community, including pedestrian mobility, crossing times, and comfort/convenience.

- *Objective CIR-1.4 Protect residential areas from commercial truck traffic.*
    - Policy P1. Significant new truck traffic generating uses shall be limited to locations along designated truck routes, in industrial areas or within ¼-mile of freeways.
    - Policy P2. The City shall enforce designated truck routes based on the existing City ordinance.
        - Action A1. Update the truck route designations periodically as needed.
        - Action A2. Maintain a map of truck routes in the City.
- *Objective CIR-1.5 Protect residential areas from through traffic and high travel speeds by facilitating free flow of traffic on major streets.*
    - Policy P1. Use of local residential streets by non-local and commercial traffic shall be discouraged. The City may consider techniques such as route signs and route maps. This policy should not restrict the ability of local vehicle and nonmotorized transportation to utilize residential collectors as an effort to encourage higher levels of roadway connectivity.

City of Tracy Draft Infrastructure Master Plan Impact Fee Nexus Study (2023)

This plan, which is currently in draft form, would update impact fees for new development within the City of Tracy. The plan identifies $665 million in transportation improvements that would be funded by the plan. The traffic fee would be $7,312 per thousand square feet of industrial space. The following improvements within the study area are included in this program:

- New interchange at I-205/Lammers ($52.8 million)
- Replace interchange at I-580/International Parkway ($23.2 million)
- New 4-lane railroad crossing bridge on Hansen Road ($5.8 million)
- New 6-lane railroad crossing bridge on Pavilion Parkway ($7.5 million)
- International Parkway/I-205 Westbound Ramps improvements
- International Parkway/I-205 Eastbound Ramps improvements
- Hansen Road/Capital Park Drive improvements ($5.2 million)
- Hansen Road/Promontory Parkway improvements
- Hansen Road/Old Schulte Road improvements ($2.4 million)
- Pavilion Parkway/Capital Park Drive improvements ($6 million)
- Pavilion Parkway/Promontory Parkway improvements ($4.5 million)
- Pavilion Parkway/Old Schulte Road improvements ($5 million)

- Pavilion Parkway/Hansen Road improvements ($3.6 million)
- Hansen Road/Valpico Road improvements ($3.6 million)
- Pavilion Parkway/Grant Line Road improvements ($3.6 million)
- Lammers Road Extension/Pavilion Parkway improvements ($5 million)
- Lammers Road Extension/Grant Line Road improvements ($5 million)
- Grant Line Road/Pavilion Parkway improvements ($4.1 million)
- Byron Road/Grant Line Road improvements
- Lammers Road/Pavilion Parkway improvements ($4.1 million)
- Grant Line Road/Lammers Road improvements ($3.3 million)
- Lammers Road/Capital Park Drive improvements ($0.5 million)
- Lammers Road/Promontory Parkway improvements ($5.6 million)
- Lammers Road/Old Schulte Road improvements ($3.4 million)
- Lammers Road/Valpico Road improvements ($5.5 million)
- Corral Hollow Road/Eleventh Street improvements ($0.8 million)
- Corral Hollow Road/Valpico Road improvements ($4.8 million)
- Corral Hollow Road/Lammers Road improvements
- Widen International Parkway from I-205 EB to Capital Park Drive ($5.5 million)
- Widen International Parkway from Promontory Parkway to Old Schulte Road ($4.7 million)
- Widen Hansen Road from I-205 to Capital Park Drive ($3 million)
- Widen Hansen Road from Capital Park Drive to Promontory Parkway
- Widen Hansen Road from Promontory Parkway to Old Schulte Road
- New 2-lane divided arterial on Pavilion Parkway from Power Road to Lammers Road ($5.2 million)
- New 2-lane divided arterial on Pavilion Parkway from Lammers Road to Grant Line Road ($8.4 million)
- New 2-lane divided arterial on Pavilion Parkway from Grant Line Road to Lammers Extension ($3.5 million)
- New 2-lane divided arterial on Pavilion Parkway from Lammers Extension to Grant Line Road ($1.6 million)
- New 2-lane divided arterial on Pavilion Parkway from Grant Line Road to Von Sosten Road ($6.2 million)
- New 2-lane divided arterial on Pavilion Parkway from Van Sosten Road to Capital Park Drive ($15.9 million)
- New 2-lane divided arterial on Pavilion Parkway from Capital Park Drive to Promontory Parkway ($6.5 million)
- New 2-lane divided arterial on Pavilion Parkway from Promontory Parkway to Old Schulte Road ($7.4 million)

- New 2-lane divided arterial on Pavilion Parkway from Old Schulte Road to Hansen Road ($9.7 million)
- New 2-lane major arterial on Lammers Extension from Pavilion Parkway to Byron Road ($3.6 million)
- New 2-lane major arterial on Lammers Extension from Byron Road to Von Sosten Road ($2.6 million)
- New 2-lane major arterial on Lammers Extension from Von Sosten Road to I-205 WB ($3.5 million)
- New 8-lane major arterial on Lammers Extension from I-205 EB to Commerce Way ($0.9 million)
- New 8-lane major arterial on Lammers Extension from Commerce Way to Road M ($3.1 million)
- New 8-lane major arterial on Lammers Extension from Road M to Eleventh Street ($4 million)
- Widen Corral Hollow Road from Schulte Road to Valpico Road ($12.7 million)
- Widen Grant Line Road from Byron Road to Lammers Road ($1.4 million)
- New 4-lane divided arterial on Capital Park Drive from International Parkway to Hansen Road ($12.3 million)
- New 4-lane divided arterial on Capital Park Drive from Hansen Road to Pavilion Parkway ($12.3 million)
- New 4-lane divided arterial on Capital Park Drive from Pavilion Parkway to Commerce Way ($3.1 million)
- New 4-lane divided arterial on Capital Park Drive from Commerce Way to Road M ($4.6 million)
- New 6-lane divided arterial on Capital Park Drive from Road M to Lammers Road ($3.5 million)
- New 4-lane divided arterial on Promontory Parkway from Road H to Pavilion Parkway ($11.4 million)
- New 4-lane divided arterial from Pavilion Parkway to Lammers Road ($3.3 million)
- New 4-lane divided arterial on Schulte Road from Lammers Road to Crossroads Drive ($11.7 million)
- New 4-lane divided arterial from Crossroads Drive to Mabel Josephine Drive ($6.4 million)
- New 2-lane divided arterial on Crossroads Drive from Lammers Road to Schulte Road ($12.9 million)
- Widen Old Schulte Road from International Parkway to Hansen Road ($2.5 million)
- Widen Old Schulte Road from Hansen Road to Pavilion Parkway ($12.8 million)
- Widen Old Schulte Road from Pavilion Parkway to Lammers Road ($16.2 million)
- New 2-lane divided arterial on Hansen Road from Old Schulte Road to Pavilion Parkway ($20.7 million)
- New 2-lane divided arterial on Hansen Road from Pavilion Parkway to Valpico Road ($2.9 million)
- New 2-lane divided arterial on Hansen Road from Valpico Road to Lammers Road ($15.6 million)
- New 2-lane divided arterial on Valpico Road from Hansen Road to Lammers Road ($12.3 million)
- Widen Valpico Road from Lammers Road to Corral Hollow Road ($10.9 million)



City of Tracy Citywide Roadway and Transportation Master Plan ("TMP") (2022)

The *City of Tracy TMP* (2022) is a comprehensive document that describes existing and projected travel conditions in the City of Tracy. Besides including a detailed description of the City of Tracy travel demand model, it also describes specific planned roadway improvements, costs, and other factors.

City of Tracy Truck Routes Map (2022)

The City of Tracy website includes a link (11x17 Portrait (cityoftracy.org) to its current truck route map (dated October 2022). That map indicates the following truck routes in the project vicinity:

- Eleventh Street is a through truck route from I-205 to Lammers Road and a local truck route from Lammers Road to Tracy Boulevard
- Lammers Road is a through truck route from Byron Road to Eleventh Street and a local truck route from Eleventh Street to Promontory Parkway
- Grant Line Road is a through truck route from Byron Road to Corral Hollow Road

The map specifies that only California legal trucks (and not STAA trucks) are permitted on through truck routes.

City of Tracy Bikeways Master Plan (2005)

The *City of Tracy Bikeways Master Plan* (2005) displays existing bikeways (as of 2005) and planned bikeway facilities including proposed bike segments and a long-range bikeways plan. Proposed bikeways address bikeway system inconsistencies and gaps. The proposed bikeways in the study area include the following:

- Class I bike path on the south side of Byron Road from I-205 to Corral Hollow Road
- Class II bike lanes on Valpico Road from Schulte Road to Corral Hollow Road
- Class II bike lanes on Schulte Road from Lammers Road to Barcelona Drive

Environmental Thresholds of Significance

The following thresholds of significance are used to determine whether implementing the proposed project would result in a significant environmental impact. The thresholds are based on guidance from Appendix G of the CEQA Guidelines, and policies of San Joaquin County and other responsible agencies listed previously.

Vehicle Miles Traveled

VMT is assessed based on the methodology and criteria established in the *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020), which describes how San Joaquin County will implement Senate Bill 743. The SJCOG model is used to calculate and establish VMT.

For project land use components whose VMT impacts are otherwise not presumed to be less-than-significant based on San Joaquin County VMT thresholds, exceed the applicable VMT threshold as follows:



- Average VMT per employee exceeds 32.8 miles (i.e., 85% of the unincorporated countywide average of 38.6 VMT per employee) forecast by the SJCOG model.

Bicycle and Pedestrian Network

- Disrupt existing or planned bicycle or pedestrian facilities.
- Conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities.
- Create a demand for bicycle or pedestrian facilities that is currently unmet.

Transit Services and Facilities

- Disrupt existing or planned transit facilities.
- Conflict with adopted policies, plans, or programs regarding transit facilities or service.
- Create a demand for transit that is currently unmet.

Hazards

- Substantially increase hazards due to geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses.
- Cause the 95th percentile queue length at a freeway off-ramp to extend beyond the gore point onto the mainline (or exacerbate a current or future deficient condition by increasing the 95th percentile queue by one or more vehicles).

Emergency Vehicle Response

- Adversely affects emergency vehicle response times.

Intersection LOS Operational Deficiency Criteria

The following thresholds are used to determine whether implementing the proposed project would result in an operational deficiency at a study intersection or exacerbate operations at a facility currently or projected to operate deficiently. These thresholds of significance are derived from the above policies, particularly the County's *TIA Guidelines* (2008).

The thresholds below utilize the term 'operational deficiencies' versus 'significant impacts' to describe unacceptable intersection or roadway operations because implementation of SB 743 mandated that intersection LOS cannot be used in CEQA documents to analyze a project's environmental effects on the roadway network.

The project would cause deficient operations at an intersection (or roundabout) if meets any of the following criteria:

- Degrade existing intersection operations from an acceptable to unacceptable LOS;
- Increase average delay at an intersection that is currently operating at an unacceptable LOS;

- Degrade cumulative intersection operations from an acceptable to unacceptable LOS; or
- Increase average delay to an intersection that is projected under cumulative conditions to operate at an unacceptable LOS.

For signalized intersections, roundabouts, and all-way stop intersections, the reported delay is the weighted average of all approaches. At side-street stop control intersections, both the movement with the greatest delay and the overall intersection delay is reported. For purposes of determining deficient operations, the side-street greatest delay movement is used.

San Joaquin County

The Transportation and Mobility component of Chapter 3.2 (Public Facilities and Services Element) of the *San Joaquin County General Plan* (2016) includes the following goals and policies:

> Goal TM-3: Maintain a safe, efficient, and cost-effective roadway system for the movement of people and goods.
>
> *Policy TM-3.1* Roadway Provision

- The County LOS standard for intersections is LOS D or better on Minor Arterials and roadways of higher classification and LOS "C" or better on all other non-CMP designated County roadways and intersections.
- For roadways within a city's sphere of influence the standard is LOS D, or the city planned operating standard for that facility.

The County uses a functional classification of expressways, principal arterials, minor arterials, major/minor collectors, and local residential/commercial/industrial streets. An LOS D standard applies to arterials, while LOS C applies for collector streets and local streets. There are no existing expressways in the study area. San Joaquin County Department of Public Works staff further clarified that an LOS D standard applies for any intersection with at least one leg classified as an Arterial.

City of Tracy

The *City of Tracy General Plan* (2011) contains the following transportation objective and supporting policies related to traffic conditions:

> Objective CIR-1.3 Adopt and enforce LOS standards that provide a high level of mobility and accessibility, for all modes, for residents and workers.
>
> Policy P1. To the extent feasible, the City shall strive for LOS D on all streets and intersections, with the LOS standard for each facility to be defined in the Transportation Master Plan in accordance with the opportunities and constraints identified through the traffic projections and analysis performed for that Plan. The following exceptions to the LOS D standard may be allowed:

- LOS E or lower shall be allowed on streets and at intersections within one-quarter mile of any freeway. This lower standard is intended to discourage inter-regional traffic from using Tracy streets.
- LOS E or lower shall be allowed in the Downtown and Bowtie area of Tracy, in order to create a pedestrian-friendly urban design character and densities necessary to support transit, bicycling and walking.

Policy P2. The City may allow individual locations to fall below the City's LOS standards in instances where the construction of physical improvements would be infeasible, prohibitively expensive, significantly impact adjacent properties or the environment, or have a significant adverse effect on the character of the community, including pedestrian mobility, crossing times, and comfort/convenience.

San Joaquin County Regional Congestion Management Program (RCMP)

The *San Joaquin County Regional Congestion Management Program* (RCMP) (DKS, July 2021) identifies the following roadway segments within the study area as part of its RCMP:

- West Grant Line Road from Byron Road to Corral Hollow Road
- Eleventh Street from Mountain House Parkway/International Parkway to Corral Hollow Road
- Mountain House Parkway/International Parkway from West Grant Line Road to I-580
- Lammers Road from I-205 to Valpico Road
- Corral Hollow Road from West Grant Line Road to Valpico Road

The RCMP establishes a LOS D standard for intersections and roadways within its RCMP.

Caltrans

In May 2020, the California Department of Transportation (Caltrans) published the *Vehicle Miles Traveled-Focused Transportation Impact Study Guide (TISG)*, which replaced its *Guide for the Preparation of Traffic Impact Studies* (2002). The TISG indicates that Caltrans intends to "transition away from requesting LOS or other vehicle operations analyses of land use projects," instead placing the focus on VMT and safety. For this reason, the study area does not include traffic operations analysis of freeway facilities. However, as noted previously, four interchanges and three at-grade intersections within the State Highway System are analyzed.

Per the Caltrans' *TISG*, which emphasizes use of VMT over LOS, a specific LOS threshold is not used to evaluate adequacy of operations at state highway intersections. However, a review of various planning documents and studies conducted in the area (e.g., Tracy Hills Specific Plan DEIR in 2015) indicates that a LOS D standard has been used. The *Interim Local Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance* (Caltrans, 2020) provides guidance for evaluating adverse queuing impacts on the state highway system, though it stops short of including specific thresholds of

significance. Appendix A of that document provides practitioners with specific guidance on analysis of project effects on freeway off-ramp queuing. That information, along with supplemental explanations provided by Caltrans staff in a webinar on January 20, 2021, was used to develop the queuing deficiency thresholds described above.

Study Area

This study analyzes various roadway facilities under the jurisdiction of San Joaquin County, City of Tracy, and Caltrans. An extensive study area was chosen based on the project's size, type of land uses, and susceptibility of specific facilities being adversely affected. The study area is bounded by I-205 to the north, Corral Hollow Road to the east, Valpico Road and West Schulte Road to the south, and International Parkway to the west. The study area includes three freeway interchanges. At each interchange, operations at each ramp terminal intersection are evaluated.

Preliminary cumulative year (2042) plus project model runs informed assumptions around the daily project distribution pattern under cumulative year (2042) conditions with build out of the project as well as build out of the planned development projects such as Westside, Cordes Ranch, Tracy Hills, and others. Planned infrastructure improvements consistent with the Draft 2022 Tracy Transportation Master Plan, such as the I-205/Eleventh Street/Lammers Road and I-580/Lammers Road interchanges were also included. A second cumulative model run was performed without the inclusion of the Lammers Road/ I-205 interchange and Pavilion Parkway overcrossing of I-205. Project traffic was forecast to primarily utilize West Schulte Road, Lammers Road, and the planned Pavilion Parkway. Project study intersections were selected based on this project distribution pattern.

Figure 1 illustrates the 22 study intersections (existing and planned) selected for analysis. As shown, most of the study facilities are within the City of Tracy. Several are situated on the border between the City of Tracy and San Joaquin County. Some are wholly within unincorporated San Joaquin County.

Analysis Scenarios

The study includes an assessment of traffic conditions under the following scenarios:

- Existing Conditions represent conditions in 2023
- Existing plus Project
- Existing plus Approved Projects
- Existing plus Approved Projects plus Project
- Cumulative (Year 2042) – with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing
- Cumulative (Year 2042) plus Project – with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing
- Cumulative (Year 2042) – without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing

- Cumulative (Year 2042) plus Project – without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing

Intersection Analysis Methods

This section presents the various analysis methods used to quantify operations at study intersections and roadways.

Intersection Operations Analysis

This study analyzes traffic operations using delay and LOS as the primary measure of performance. Automobile LOS is a qualitative description of traffic flow from the perspective of motorists. The *Highway Capacity Manual* (HCM), 6th Edition (Transportation Research Board) defines six levels of service from LOS A, representing the least congested traffic conditions, to LOS F, representing the most congested traffic conditions. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving, as well as speed, travel time, traffic interruptions, and freedom to maneuver.

Intersection LOS at signalized and all-way stop-controlled intersections is based on the weighted average control delay measured in seconds per vehicle for all motorists traveling through the intersection. For side-street stop-controlled intersections, this study reports the average control delay for the lane group or movement with the greatest delay, and for the intersection as a whole.

Table 2 presents the control delay range for each LOS for signalized and unsignalized intersections. As shown, the delay ranges for signalized intersections are different from unsignalized intersections. The HCM anticipates that motorists expect signalized intersections to carry higher traffic volume that result in greater delay than an unsignalized intersection and roundabout. Unsignalized intersections are associated with more uncertainty as delays are less predictable, which can reduce users' delay tolerance.

Table 2: Levels of Service Definitions – Intersections

Level of Service	Average Control Delay[1]	
	Signalized Intersections	Unsignalized Intersections and Roundabouts
A	≤ 10	≤ 10
B	>10 to 20	>10 to 15
C	>20 to 35	>15 to 25
D	>35 to 55	>25 to 35
E	>55 to 80	>35 to 50
F	>80	>50

Notes:
1. Average control delay presented in seconds per vehicle. Delay values are rounded to the nearest second and evaluated for LOS based on the above thresholds (i.e., 10 seconds per vehicle = LOS A)

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

Study intersections are analyzed using the Synchro software program to apply the methodologies presented in the HCM. Synchro considers traffic volumes, lane configurations, signal timings, and other parameters.

When intersection operations are considered oversaturated (i.e., volume to capacity exceeds 1.0), this report will either not report a delay value if the software program is incapable of reporting that value or report a delay value 'as-is' despite it not being reasonable. Under both sets of conditions, the volume and lane configuration inputs are exceeding the range of reasonable values the software program can utilize to generate a reasonable estimate of delay. By showing unreasonably high delay values (e.g., over 5 minutes of delay per vehicle), the report allows for relative comparisons of change in delay between scenarios.



2. Existing Conditions

This chapter describes the existing transportation system and traffic conditions within the study area, including traffic operations at study intersections. The project site and surrounding roadway network is illustrated in Figure 1.

Roadway System

The roadway system in the project vicinity consists of a series of freeways and surface streets. I-580 and I-205 are freeways that serve the project regionally. South Lammers Road, International Parkway, Grant Line Road, West Schulte Road, Promontory Parkway, Hansen Road, and Byron Road are arterial streets that connect the project locally.

Interstate 580 is a four-lane freeway that terminates at US 101 in San Rafael and I-5 south of Tracy. It connects to East Bay cities including Pleasanton, Castro Valley, Oakland, and Richmond. The posted speed limit is 70 mph near the City of Tracy and the project site.

Interstate 205 is a six-lane freeway that goes through the northern part of the City of Tracy and connects to I-580 in the west and I-5 in the east. The posted speed limit is 65 mph west of Tracy's eastern city limits and 70 mph east of Tracy's city limits.

South Lammers Road is a major arterial that changes from two to six lanes and terminates at Byron Road in the north and Tracy Hills Drive in the South. The posted speed limit generally ranges from 40 mph to 50 mph. There are unsigned portions of the roadway in unincorporated San Joaquin County that operate with a 55-mph speed limit.

International Parkway is a four-lane major arterial that connects to I-205 in the north and I-580 in the south. The posted speed limit is 45 mph.

Grant Line Road is a major arterial that changes from two to six lanes and connects to Byron Road in the west and Eleventh Street in the east. It runs through the north end of town and shares an interchange with I-205. The posted speed limit is 40 mph west of North MacArthur Drive and 45 mph east of North MacArthur Drive.

West Schulte Road is a minor arterial that changes from two to six lanes and terminates at International Parkway in the west and South Lammers Road in the east. It runs through the project site area. The posted speed limit is 45 mph west of Hansen Road and 50 mph east of Hansen Road. There are unsigned portions of the roadway in unincorporated San Joaquin County that operate with a 55-mph speed limit.

Promontory Parkway is a four-lane minor arterial that currently terminates past International Parkway in the west and past Hansen Road in the east. Once the project is built the western end of Promontory Parkway will be extended to Coral Hollow Road, and the road will run north of the project site area.

Hansen Road is a two-lane minor arterial that connects to Byron Road in the north and terminates south of West Schulte Road. It has a posted speed limit of 45 mph.

Byron Road is a two-lane minor arterial that terminates at Coral Hollow Road in the east and turns into Byron Highway in the west. It connects the City of Tracy to an outlying residential neighborhood. The posted speed limit ranges from 45 mph to 55 mph.

Existing Traffic Volumes

Study Locations

Intersections are generally the critical capacity-controlling elements of roadway networks. Therefore, the operations of critical intersections surrounding the project site are used as indicators of the adequacy of the vehicular circulation system. The following intersections, also shown on Figure 1, were selected in coordination with the City of Tracy and San Joaquin County as those most likely affected by the project and thus warrant analysis:

1. Mountain House Parkway/I-205 WB Ramps
2. International Parkway/I-205 EB Ramps
3. International Parkway/Promontory Parkway
4. International Parkway/Schulte Road
5. International Parkway/I-580 NB Ramps
6. International Parkway/I-580 SB Ramps
7. Hansen Road/Promontory Parkway
8. Hansen Road/Schulte Road
9. Naglee Road/I-205 WB Ramps/Grant Line Road
10. Lammers Road/Byron Road
11. Lammers Road/Eleventh Street
12. Lammers Road/Capital Park Drive
13. Lammers Road/Schulte Road
14. Lammers Road/Valpico Road
15. Corral Hollow Road/Eleventh Street
16. Byron Road/Grant Line Road
17. Pavilion Parkway/Schulte Road (Planned)
18. Lammers Road/Promontory Parkway (Planned)
19. Pavilion Parkway/Promontory Parkway (Planned)
20. Pavilion Parkway/Capital Park Drive (Planned)
21. Lammers Road/I-205 WB Ramps (Planned)
22. Lammers Road/I-205 EB Ramps (Planned)

Data Collection and Field Observations

Morning and evening peak hour traffic counts were collected in the summer and fall of 2023. The weather was clear, and no unusual traffic conditions were noted during the counts. For counts collected in the

summer of 2023, appropriate adjustments were made to adjust to the fall conditions when local schools are in session using fall 203 counts and StreetLight Big Data. Fall counts were used exclusively for study intersections on the eastern side of the study area where John C. Kimball High School has a major effect on local traffic volumes. The intersection counts included vehicles (including trucks), bicycles, and pedestrians. **Appendix A** includes a summary of the weekday count data.

Signal timing data was collected from the City of Tracy and Caltrans. Field observations took place to confirm existing signal timing, traffic patterns, queue lengths, lane geometries, bicycle facilities, and pedestrian facilities at the study intersections to inform the existing baseline conditions.

Figure 3 displays the existing AM and PM peak hour traffic volumes, lane configurations, and traffic control devices at the study intersections. As shown, 15 of the 16 existing study intersections are signalized, and one is controlled by stop signs.

Truck Traffic

Table 3 shows the existing truck volumes on all study roadways, summed for both directions. The volumes are significantly greater on Surface Transportation Assistance Act (STAA) routes, with portions of International Parkway and West Schulte Road carrying over 3,000 and 2,000 trucks per day, respectively.

Table 3: Existing Truck Traffic on Study Roadways

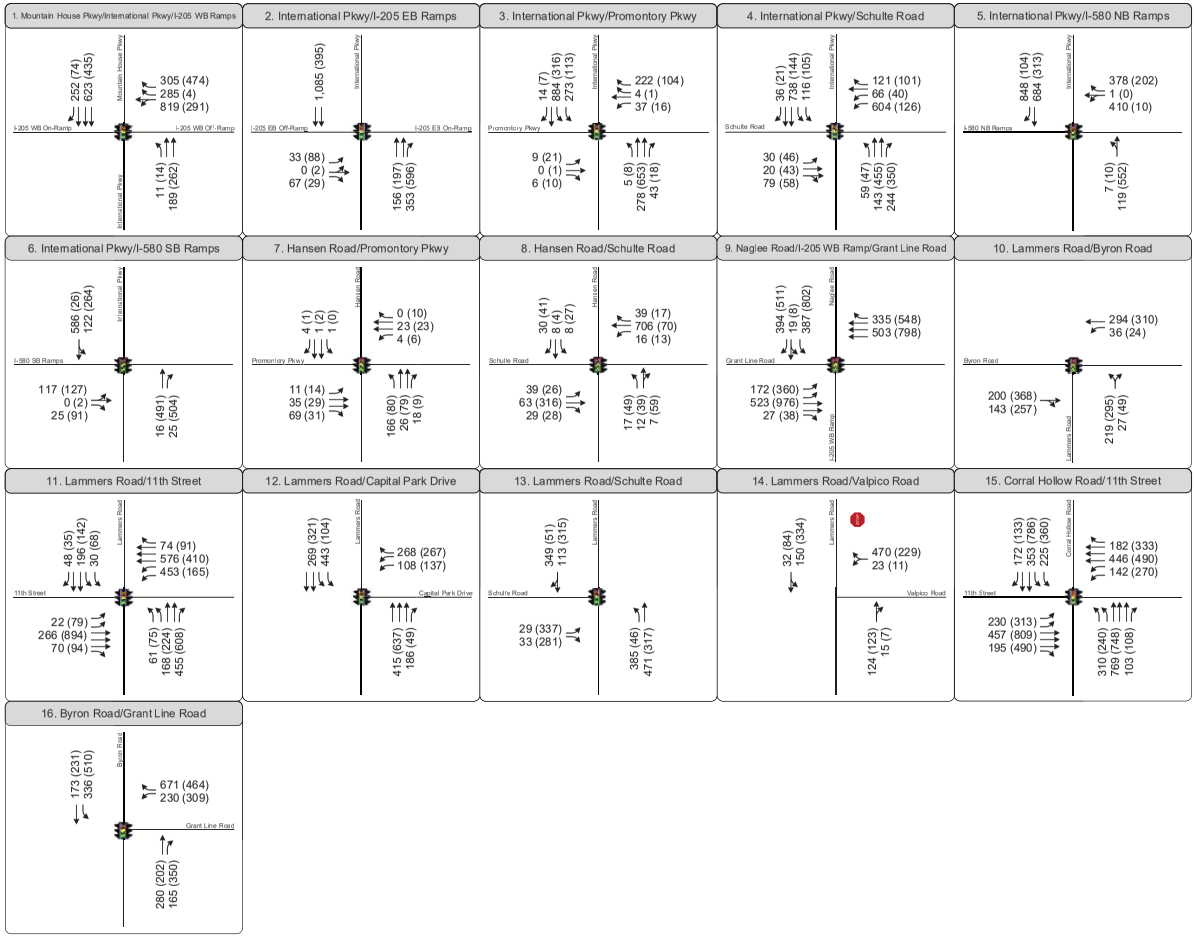
Segment[1]	Number of Trucks Per Day[1]
International Parkway south of West Schulte Road	3,150
West Schulte Road east of International Parkway	2,250
Promontory Parkway east of International Parkway	1,000
Hansen Road south of Promontory Parkway	450
Eleventh Street east of South Lammers Road	400
South Lammers Road south of Eleventh Street	250

Notes:
1. Volumes are for both directions and are rounded to the nearest 50 trucks based on counts.

Source: Fehr & Peers, 2024.

Figure 4 displays the location of existing truck routes in the study area. As shown, International Parkway, West Schulte Road, Promontory Parkway, and Hansen Road are STAA routes. STAA routes allow large trucks to operate on the interstate freeway system and certain primary routes. These trucks, referred to as STAA trucks, are longer than California legal trucks. There are also several local or through truck routes.





XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

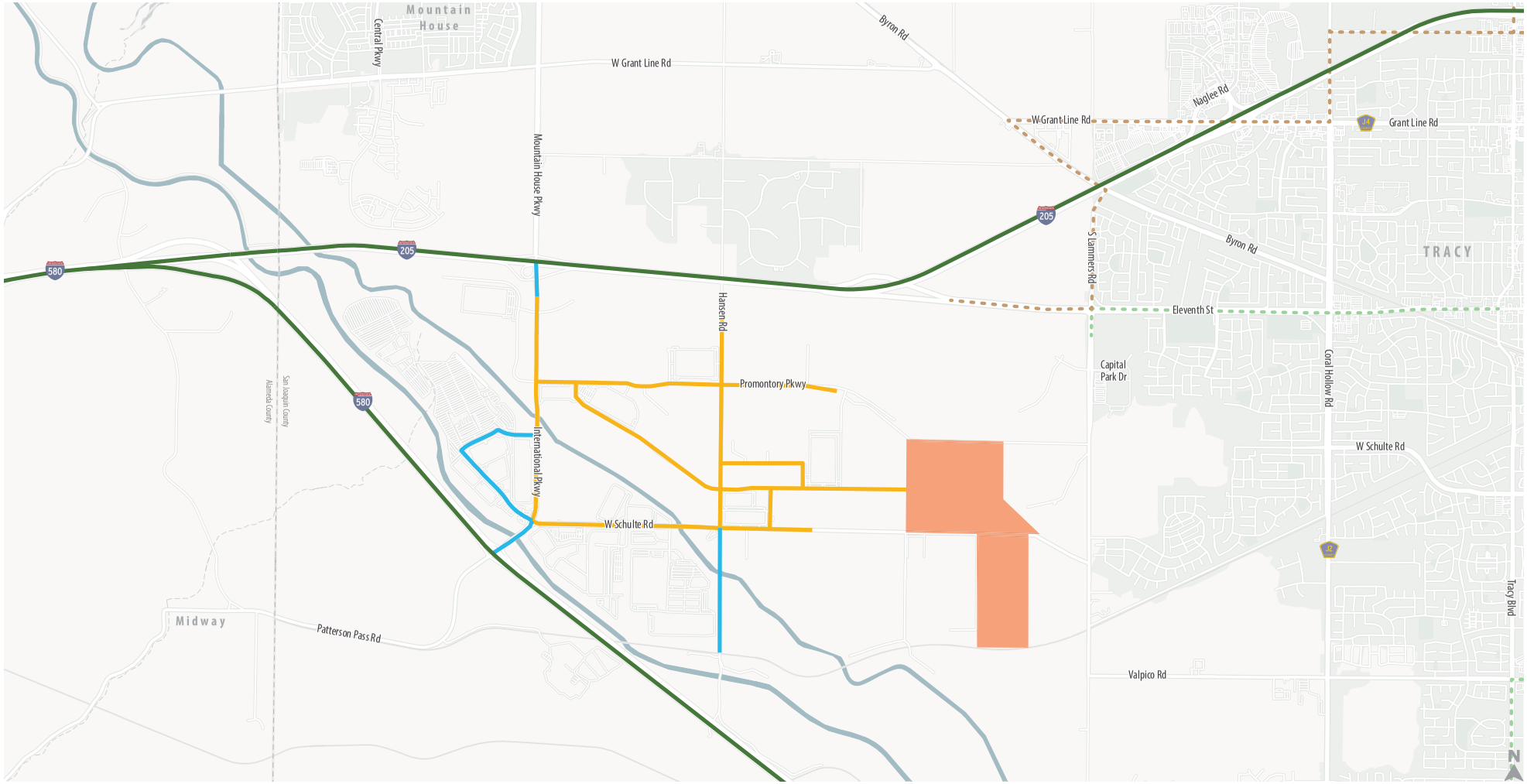
Stop Sign

Project Site

Study Intersection

Figure 3

Existing Peak Hour Intersection Volumes



Surface Transportation Assistance Act (STAA) Routes by Jurisdiction:

Project Site | State | County | City

City of Tracy Truck Traffic Routes:

Through | Local

Figure 4

Existing Truck Routes

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Intersection Operations

The field-observed peak hour factor was applied at all study intersections. For all signalized intersections, current signal timings were used. Other model inputs included the proportion of trucks during each peak hour,[2] traffic controls, posted speed limits, and other conditions.

Table 4 shows the average delay and LOS at all existing study intersections for AM and PM peak hour conditions. This table also shows the agency to which each intersection belongs. In the few instances in which the facility overlaps with both the City of Tracy and San Joaquin County, the County was shown as the lead agency given that the County is processing the proposed project. A review of the LOS results from this table reveals that all study intersections currently operate acceptably except for the following two intersections that operate deficiently:

- International Parkway / I-580 NB Ramps (PM peak hour)
- Lammers Road / Byron Road (PM peak hour)

Field observations of weekday peak hour intersection operations were performed during the summer and fall of 2023 to confirm the delays and levels of service presented in Table 4.

[2] The proportion of heavy vehicles can substantially affect the average delay at an intersection due to their greater acceleration and deceleration characteristics. The following illustrates how the percent heavy vehicles (HVs) affects the average delay for a hypothetical signalized 4-way intersection with moderate levels of traffic on all approaches. The average delay and LOS are shown for three different percentages of HVs, holding all else constant (e.g., volumes, signal timings, lanes, etc.)

Table 4: Intersection Level of Service – Existing

	Intersection	Traffic Control[1]	Agency	AM Peak		PM Peak	
				Delay[2]	LOS	Delay[2]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	34.3	C	12.3	B
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	7.2	A	5.9	A
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	25.8	C	12.7	B
4	International Pkwy/Schulte Rd	Signal	City of Tracy	39.5	D	29.0	C
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	49.4	D	**55.9**	**E**
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	34.3	C	47.6	D
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	14.3	B	12.0	B
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	17.6	B	20.3	C
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	11.6	B	17.8	B
10	Lammers Rd/Byron Rd	Signal	City of Tracy	9.7	A	**67.4**	**E**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	20.9	C	21.4	C
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	28.2	C	12.9	B
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	20.6	C	11.9	B
14	Lammers Rd/ Valpico Rd	SSSC	San Joaquin County	8.0 (11.7)	A (B)	7.0 (10.9)	A (B)
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	25.9	C	30.3	D
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	17.8	B	21.7	C

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized
2. Whole intersection average delay reported for signalized intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition Methodologies.
3. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Bicycle and Pedestrian System

As the project site and adjacent areas are rural, featuring primarily agricultural uses, there are few existing bicycle facilities in the study area. There is an existing Class III bicycle route on West Schulte Road from International Parkway to South Lammers Road. Other bike paths, lanes, and routes are currently provided on streets closer to the central part of Tracy, such as Eleventh Street and Coral Hollow Road. **Figure 5** displays the existing planned bicycle network in the study area. An extensive network of bicycle and pedestrian facilities are planned within the study area, particularly to the west of the project site that will be implemented by the IPC Phase 1 project.

Many streets in the study area have sidewalks and crosswalks for pedestrians. Hansen Road has continuous sidewalks on both sides of the street from north of Promontory Parkway to West Schule Road. International Parkway has sidewalks on one or both sides of the street from the I-205 eastbound ramps to

West Schulte Road. West Schulte Road and Hopkins Road have discontinuous sidewalks on one or both sides of the street.

Transit System

Transit service in the project vicinity is provided by San Joaquin Regional Transit District (RTD) and TRACER Bus Service, the City of Tracy's transit service. However, no bus stops or transit lines operate along the project's frontage or near the project site. Similar to the location of existing bicycle facilities, transit lines are located closer to the central part of Tracy. TRACER Routes A, B, C, and the Commuter Route connect the rest of the city to stops on streets within the study area, such as Eleventh Street, Coral Hollow Road, and Grant Line Road. San Joaquin RTD's Route 90 provides regional access from the study area to Stockton and has stops on Grant Line Road. **Figure 6** illustrates the existing transit network in the study area.

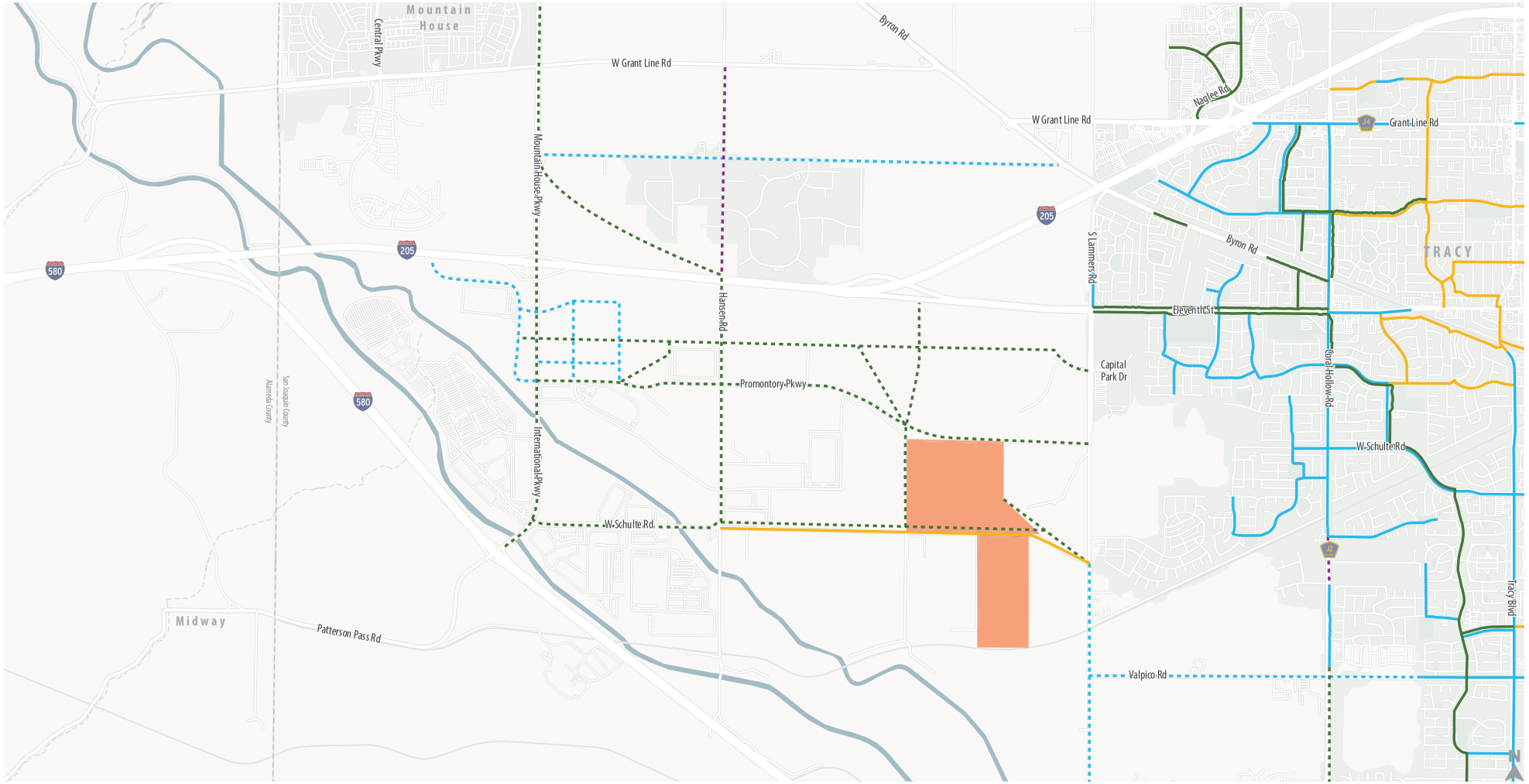


Figure 5

Existing and Planned Bicycle Network

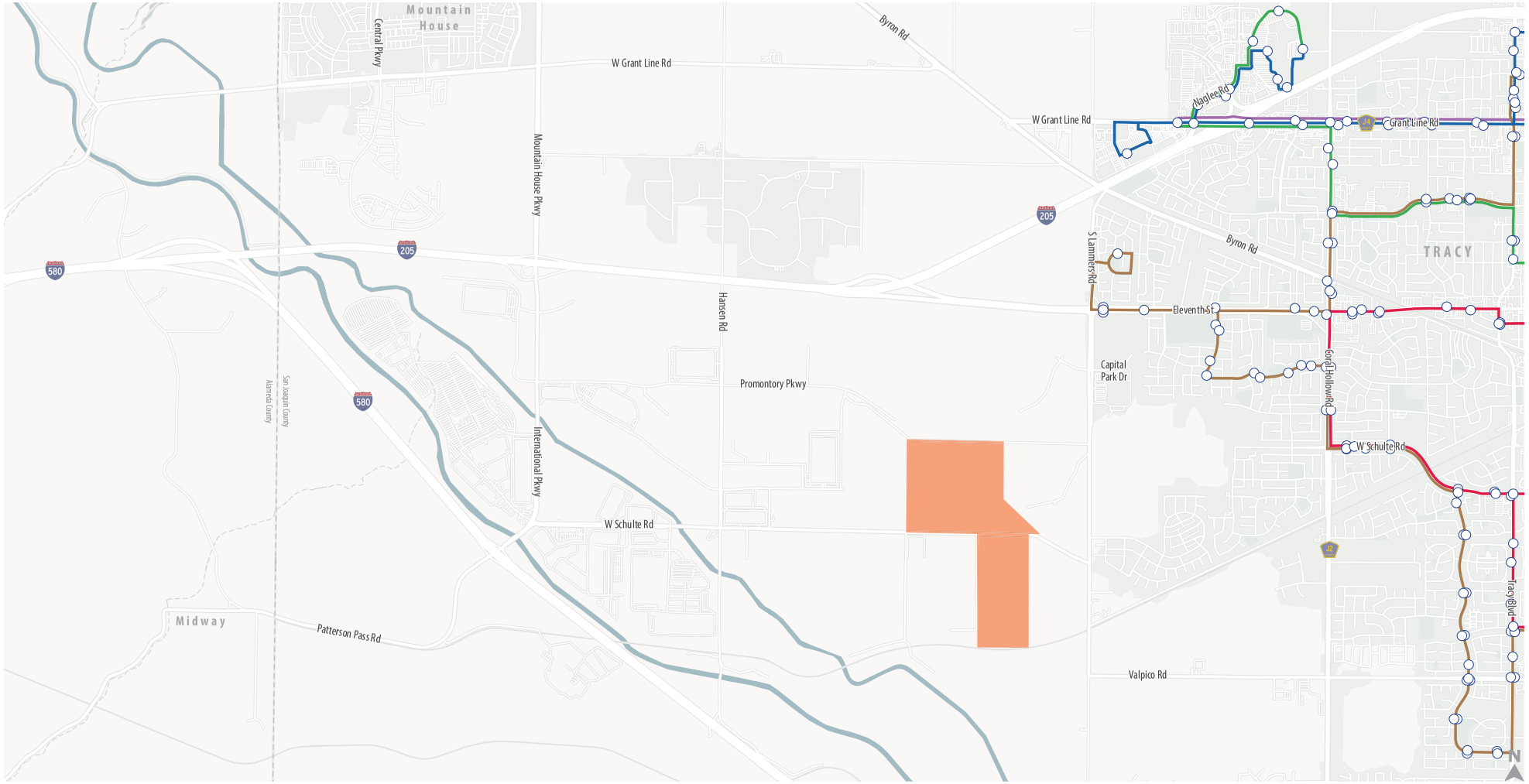


Figure 6

Existing Transit Facilities

3. Project Travel Characteristics

This chapter presents the proposed project's proposed land uses and roadway network. It then analyzes its expected travel characteristics.

Project Description

The International Park of Commerce Phase 2 Specific Plan establishes the zoning, land uses, development standards and regulations for an approximately 277.6-acre area of land located in the southwest region of San Joaquin County and adjacent to the city limits of Tracy. The Specific Plan Area is at the crossroads of two major transportation corridors, making it ideal for businesses which require large parcels for use as warehousing, manufacturing, research, and development. It is bordered by the extension of Promontory Parkway to the north, Pavilion Parkway to the west, with Schulte Road bisecting the site with development extending south of the road, and vacant property to the east. The Specific Plan Area zoning designation of General Industrial includes permitted uses to include warehouse, distribution, manufacturing and assembly, storage, industrial flex, and distribution related uses. The project is envisioned to be developed with industrial warehouse, distribution, and manufacturing buildings totaling approximately 5.36 million square feet and will include interior site circulation and the required vehicle and truck and trailer spaces. **Figure 7** shows the allowable land uses from the Specific Plan.

The Specific Plan identifies several improvements to the existing road network, including the extension of Pavilion and Promontory Parkway and improvements to existing Schulte Road. Promontory Parkway and Schulte Road both extend west and connect at International Parkway to provide access to the freeways. The project will also include improvement to Schulte Road east from Pavilion Parkway, the improvement of the half street section of Pavilion Parkway, and the extension and improvement of the half street section of Promontory Parkway along the northern project boundary. The Specific Plan proposes the following roadway cross sections:

- Pavilion Parkway – 4-Lane Major Arterial – Two travel lanes in each direction, landscaped median with turn pockets at intersections, Class I bikeway, sidewalks.
- Promontory Parkway – 6-Lane Major Arterial – Three travel lanes in each direction, landscaped median with turn pockets at intersections, Class I bikeway, sidewalks.
- Schulte Road – 4-Lane Parkway – Two travel lanes in each direction, landscaped median with turn pockets at intersections, Class I bikeway, sidewalks.
- Internal Circulation Roadways – 40-foot wide roadway cross section with curb and gutter.

The network of internal Specific Plan roads will provide for multiple users including pedestrians, bicycles, vehicles, trucks, and public transportation. Pedestrian improvements include sidewalks on both sides of all streets, and accessible pedestrian crossings at signals. Class I bicycle paths have been included on all major circulation streets within the Specific Plan to encourage and allow for alternatives to motor vehicles

and to connect with the Phase 1 of International Park of Commerce existing bicycle path network. The Specific Plan roadway system will also facilitate use of public transportation facilities by providing bus pull outs and shelters for passengers, offering shade and protection during winter weather. Such improvements shall be implemented through the site approval process required for each phase.

Figure 7: Allowable Uses Per Specific Plan

IPC2 Principally Permitted Uses	
Land Use Types (I-G/SP-1 Zoning)	
Automotive Related Services	
	Automotive Repairs, Limited
	Parking (with Charging) and Storage
	Autonomous Vehicle Storage
	Building Maintenance Services
Truck Related Services	
	Parking (with Charging) and Storage
	Mobility Hub (Non Petroleum)
	Repairs
	Truck and Trailer Storage Yard
Utility Services	
	Minor
	Major
	Water Storage
Industrial, Warehouse & Distribution	
	General Warehousing
	High-Cube Warehouse
	Cold Storage Warehouse
	Fulfillment Center
	Parcel Hub
	Automated Sorting Center
	Distribution and Logistics Facility
	Transload Facility
	General Manufacturing

IPC2 Ancillary Permitted Uses	
Land Use Types	
Truck Related Services	
	Washing
	Repairs
	Sales and Rental
Industrial, Warehouse & Distribution	
	Office

Notes	
1	All permitted uses listed require a Zoning Compliance Review approval.

Table 3.1, Principally Permitted and Ancillary Permitted Uses

Project Trip Generation

The project's trip generation was estimated using both published trip rates from the most recent version of the *Trip Generation Manual*, 11th Edition (Institute of Transportation Engineers, 2021) and locally collected data for warehouse/logistics operations in San Joaquin County.

As the exact nature of the land uses that would ultimately develop on site are currently unknown, estimates of the sizes and types of uses were made to forecast site generated traffic. Based on the project's allowable land uses per the Specific Plan, the 5.36 million square feet of total space was distributed per the percentages presented in **Table 5**.

Table 5: Vehicle Trip Generation Summary

ITE Land Use	ITE Code	Percent of Project	KSF	Daily Trips	AM Peak			PM Peak		
					In	Out	Total	In	Out	Total
High Cube Transload and Short-Term Storage Warehouse	154	10%	536	751	33	10	43	15	39	54
High-Cube Fulfillment Center Warehouse – Sort	155	5%	268	1,726	189	45	234	125	197	322
General Light Industrial	110	10%	536	2,611	349	48	397	48	301	349
High-Cube Parcel Hub Warehouse	156	10%	536	2,482	304	72	376	278	66	344
High-Cube Cold Storage Warehouse	157	10%	536	1,137	47	12	59	25	40	65
Warehousing	150	25%	1,340	2,292	175	53	228	67	175	242
High-Cube Fulfillment Center Warehouse – Non-Sort	155	25%	1,340	2,426	162	39	201	83	132	215
Manufacturing	140	5%	268	1,273	139	44	183	61	138	199
Total New Vehicle Trips				**14,698**	**1,398**	**323**	**1,721**	**702**	**1,088**	**1,790**

Notes:
ITE 154 (High Cube Transload and Short-Term Storage Warehouse) Trip Generation Calculations:
Daily: T = 1.40(X)
AM Peak Hour: T = 0.08(X) (77% in, 23% out)
PM Peak Hour: T = 0.10(X) (28% in, 72% out)
ITE 155 (High-Cube Fulfillment Center Warehouse – Sort) Trip Generation Calculations:
Daily: T = 6.44(X)
AM Peak Hour: T = 0.74(X) (81% in, 19% out)
PM Peak Hour: T = 1.20(X) (39% in, 61% out)
ITE 110 (General Light Industrial) Trip Generation Calculations:
Daily: T = 4.87(X)
AM Peak Hour: T = 0.74(X) (88% in, 12% out)
PM Peak Hour: T = 0.65(X) (14% in, 86% out)
ITE 156 (High-Cube Parcel Hub Warehouse) Trip Generation Calculations:
Daily: T = 4.63(X)
AM Peak Hour: T = 0.70(X) (81% in, 19% out)
PM Peak Hour: T = 0.64(X) (81% in, 19% out)
ITE 157 (High-Cube Cold Storage Warehouse) Trip Generation Calculations:
Daily: T = 2.12(X)
AM Peak Hour: T = 0.11(X) (81% in, 19% out)
PM Peak Hour: T = 0.12(X) (39% in, 61% out)
ITE 150 (Warehousing) Trip Generation Calculations:
Daily: T = 1.71(X)
AM Peak Hour: T = 0.17(X) (77% in, 23% out)
PM Peak Hour: T = 0.18(X) (28% in, 72% out)
ITE 155 (High-Cube Fulfillment Center Warehouse – Non-Sort) Trip Generation Calculations:
Daily: T = 1.81(X)
AM Peak Hour: T = 0.15(X) (81% in, 19% out)
PM Peak Hour: T = 0.16(X) (39% in, 61% out)
ITE 140 (Manufacturing) Trip Generation Calculations:
Daily: T = 4.75(X)
AM Peak Hour: T = 0.68(X) (76% in, 24% out)
PM Peak Hour: T = 0.74(X) (31% in, 69% out)
Source: Fehr & Peers, 2024; Institute of Transportation Engineers, *Trip Generation, 11th Edition*; Institute of Transportation Engineers,

The project is estimated to generate about 14,698 daily weekday trips, 1,721 AM peak hour trips, and 1,790 PM peak hour trips. It should be noted that the results of the trip generation analysis can vary substantially based on the assumed distribution of land use types. The various land uses under consideration have trip generation rates which are quite different: in particular, ITE Land Use Code 155 "High Cube Fulfillment Center Warehouse – Sort" has a trip generation rate which is considerably larger than the other land uses under consideration.

It should be noted that the results in the table above are total trip, including both truck and passenger cars. To estimate the effects of truck trips on the transportation network within the transportation assessment, truck trips were converted to a passenger car equivalent (PCE) using a factor of 2.0. A PCE of 2.0 was identified based on the anticipated mix of trucks associated with the land use and trip generation characteristics presented in Table 5 and Table 6 (this is also the default factor recommended in the Transportation Research Board's *Highway Capacity Manual*). Converting truck trips to PCEs better accounts for the additional strain that truck trips place on the operations of the circulation system. The project's wastewater treatment facility would produce up to 100 cubic yards of brine per year, resulting in fourteen additional truck trips per year. These trips are also included in the assessment.

Table 6 presents the medium and heavy truck percentages used in the study. This data was taken from the *High-Cube Warehouse Vehicle Trip Generation Analysis* (Institute of Transportation Engineers, Washington, DC, October 2016) reference.

Table 6: Heavy Vehicle Percentages

Land Use (Applicable ITE Codes)	Medium Trucks	Heavy Trucks	Autos
Transload and Short-Term Storage (154, 110, 150, 140)	15.2%	16.0%	68.8%
Cold Storage (157)	4.1%	35.4%	60.5%
Fulfillment Center (155)	5.8%	3.0%	91.2%
Parcel Hub (156)	28.4%	9.2%	62.3%

Source: Fehr & Peers, 2024; *High-Cube Warehouse Vehicle Trip Generation Analysis*, Institute of Transportation Engineers, Washington, DC, October 2016.

Local Trip Generation Data

The *San Joaquin Countywide Warehousing Data Collection and Travel Behavior Study* (Fehr & Peers, June 2021) collected 72 hours of driveway vehicle classification count data at 39 warehousing buildings across San Joaquin County in June 2021. The data collection was performed by National Data & Surveying Services (NDS) using cameras to count and classify vehicles entering and exiting the individual building driveways. The 39 warehousing buildings totaled over 25.7 million square feet, representing roughly 28 percent of all warehousing building space in San Joaquin County based on Colliers 21Q1 estimates. This data was used to develop average trip generation rates per thousand square feet (KSF) for warehousing uses in San Joaquin County including within the cities of Tracy, Stockton, Lathrop, Manteca, and Lodi. The



39 warehousing buildings, including their occupying tenant, type of warehouse, and square footage, are shown in **Table 7** below.

Table 7: San Joaquin Countywide Warehousing Data Collection

City	Tenant	Address	Driveways	Building Type	Square Feet
Lathrop	California Logistics	11900/11940/1196011980 S. Harlan Rd, Lathrop, CA 95330	3	Warehouse	1,235,000
Lathrop	Tesla, Inc.	701 D'Arcy Pkwy, Lathrop, CA 95330	1	Manufacturing	92,747
Manteca	Ford Motor Company	1260 Phoenix Dr, Manteca, CA 95336	2	Warehouse	608,860
Stockton	Innovel Solutions	2115 Sinclair Ave, Stockton, CA 95215	2	Warehouse	780,393
Tracy	UPS Supply Chain	1150 West Arbor Ave, Tracy, CA 95304	2	Warehouse	795,732
Stockton	Pratt Corrugated Holdings	4727 Fite Ct, Stockton, CA 95215	2	Warehouse	350,892
Stockton	HJ Heinz	1111 Runway Dr, Stockton, CA 95206	2	Warehouse	500,199
Stockton	Prism Team Services, Inc.	1030 Runway Dr, Stockton, CA 95206	3	Warehouse	443,640
Tracy	Leggett & Platt	2015 N. MacArthur Dr, Tracy, CA 95376	1	Warehouse	158,065
Tracy	Orchard Supply Company	2020 N. MacArthur Dr, Tracy, CA 95376	2	Warehouse	346,524
Stockton	Fox Head, Inc	4611 Newcastle Rd, Stockton, CA 95215	2	Warehouse	388,000
Stockton	Amazon.com Services, Inc.	4718 Newcastle Rd, Stockton, CA 95215	2	Warehouse	735,980
Stockton	Pitney Bowes	4601 Newcastle Rd, Stockton, CA 95215	2	Warehouse	388,183
Stockton	Niagara Bottling, LLC	4733 Newcastle Rd, Stockton, CA 95215	2	Warehouse	186,944
Stockton	Homesite Services, Inc.	811 Zephyr St, Stockton, CA 95206	1	Warehouse	512,000
Stockton	Masonite Corporation	2516 Station Dr # A, Stockton, CA 95215	1	Warehouse	39,200
Stockton	Kraft Foods Group, Inc.	3632 Petersen Rd #150, Stockton, CA 95215	2	Warehouse	180,000
Stockton	Coastal Pacific Food	4512 Frontier Way, Stockton, CA 95215	1	Warehouse	351,788
Tracy	Restoration Hardware	1015 Performance Dr, Stockton, CA 95206	1	Warehouse	500,004
Tracy	Best Buy	2900 N. MacArthur Dr, Tracy, CA 95376	4	Warehouse	283,712
Lathrop	Wayfair	6653 Hopkins Rd, Tracy, CA 95377	5	Warehouse	641,364
Lathrop	Home Depot	5120 Glacier Street, Lathrop, CA 95330	2	Warehouse	1,167,000

City	Tenant	Address	Driveways	Building Type	Square Feet
Lodi	Pacific Coast Producers	18300 S Harlan Rd, Lathrop, CA 95330	1	Distribution Center	953,000
Lodi	Dart Container	650 S Guild Ave, Lodi, CA 95240	4	Warehouse	1,500,000
Manteca	Lowes	1400 E Victor Rd, Lodi, CA 95240	2	Warehouse	340,000
Stockton	Dollar Tree	2226 Roth Rd, Manteca, CA 95336	3	Warehouse	570,000
Manteca	UPS	1122 Runway Dr, Stockton, CA 95206	1	Warehouse	855,000
Manteca	Cargill Food	600 Spreckels Ave, Manteca, CA 95336	2	Warehouse	560,000
Stockton	KeHE Distributors	730 Spreckels Ave, Manteca, CA 95336	2	Warehouse	350,000
Tracy	International Paper	4650 Newcastle Rd. Stockton. CA 95215	2	Warehouse	770,000
Tracy	Zinus	400 Valpico Rd, Tracy, CA 95376	1	Warehouse	375,000
Tracy	Medline	5731 Promontory Pkwy, Tracy, CA 95377	2	Warehouse	664,333
Tracy	Smuckers	24550 Hansen Rd, Tracy, CA 95377	3	Warehouse	1,005,500
Tracy	Amazon	6140 Promontory Pkwy, Tracy, CA 95377	3	Warehouse	403,560
Tracy	Costco	188 S Mountain House Pkwy, Tracy, CA 95377	4	Warehouse	1,001,449
Tracy	Safeway	25501 Gateway Blvd, Tracy, CA 95377	2	Warehouse	1,161,306
Tracy	Amazon	16900 W Schulte Rd, Tracy, CA 95377	4	Warehouse	2,200,000
Tracy	Crate & Barrel	1555 N Chrisman Rd, Tracy, CA 95376	3	Fulfillment	1,124,921

Source: Fehr & Peers, data collected in June 2021.

The average trip generation rates per KSF of building space from the June 2021 San Joaquin Countywide Warehousing Data Collection effort, stratified by autos, medium-duty trucks, and heavy-duty trucks, are provided in **Table 8**.

Table 8: San Joaquin County Warehousing Trip Generation Rates per KSF

Warehouse Data	AM Peak Hour				PM Peak Hour				Daily			
	Autos	Medium Trucks	Heavy Trucks	Total	Autos	Medium Trucks	Heavy Trucks	Total	Autos	Medium Trucks	Heavy Trucks	Total
Total Trip Generation	3,784	185	717	4,685	4,702	121	630	5,453	25,625	2,020	11,503	39,148
Total Area (KSF)	25,746											
Trip Generation Rate (Trips per KSF)	0.147	0.007	0.028	0.18	0.183	0.005	0.024	0.21	0.995	0.078	0.447	1.52

Notes:

1. Trucks refer to heavy-duty (i.e., three or more axle-vehicles only) vehicles. Medium-duty trucks (e.g., two-axle box trucks) are included in the auto category because they, like autos, are not affected by vehicle weight restrictions on certain study roadways. Medium-duty trucks are also not classified as "heavy vehicles" by the HCM.

Source: Fehr & Peers, data collected in June 2021.

As shown above, the average daily trip generation per KSF of building space for all 39 warehousing buildings in San Joaquin County was 0.078 medium-duty truck trips, 0.447 heavy-duty truck trips, and 0.995 auto trips. The average total daily rate was 1.52 trips per KSF with the average AM peak hour rate being 018 trips per 1,000 KSF, and the average PM peak hour rate being 0.21 trips per 1,000 KSF.

If these rates were applied to the project's proposed 5.36 million square feet of use, estimates of total AM peak hour trip generation would be 965 trips, with PM peak hour trip generation being 1,126 trips. These estimates were substantially below the results presented in Table 5 using the ITE methodology. As a result, this study applied ITE rates as a conservative methodology for measuring the potential impacts of the proposed project on the local and regional transportation networks.

Project Trip Distribution/Assignment

Given the unique nature of warehousing land uses and the lack of available data on the travel patterns of users of these facilities, trip distribution and average trip length data was collected from mobile device data purchased from StreetLight. The origin-destination data provided by StreetLight was combined with the driveway count data described above to identify and quantify vehicle travel demands, the origin-destination and demographic characteristics of vehicle travelers in the Central Valley Gateway, and the roadways their users were utilizing. This information was used to inform the City of Tracy travel demand model and produce trip distribution patterns for the proposed project.

A zone system was developed that included a separate zone for each of the existing 39 warehousing buildings where driveway classification counts were collected. The analysis tracked all trips starting or ending at one of these 39 warehousing buildings. The start of trips coming to the zones and end of trips leaving the zones were tagged to the national census block group system, allowing for aggregation to any desired geography such as the city of county level.



StreetLight data was obtained for the following data periods:

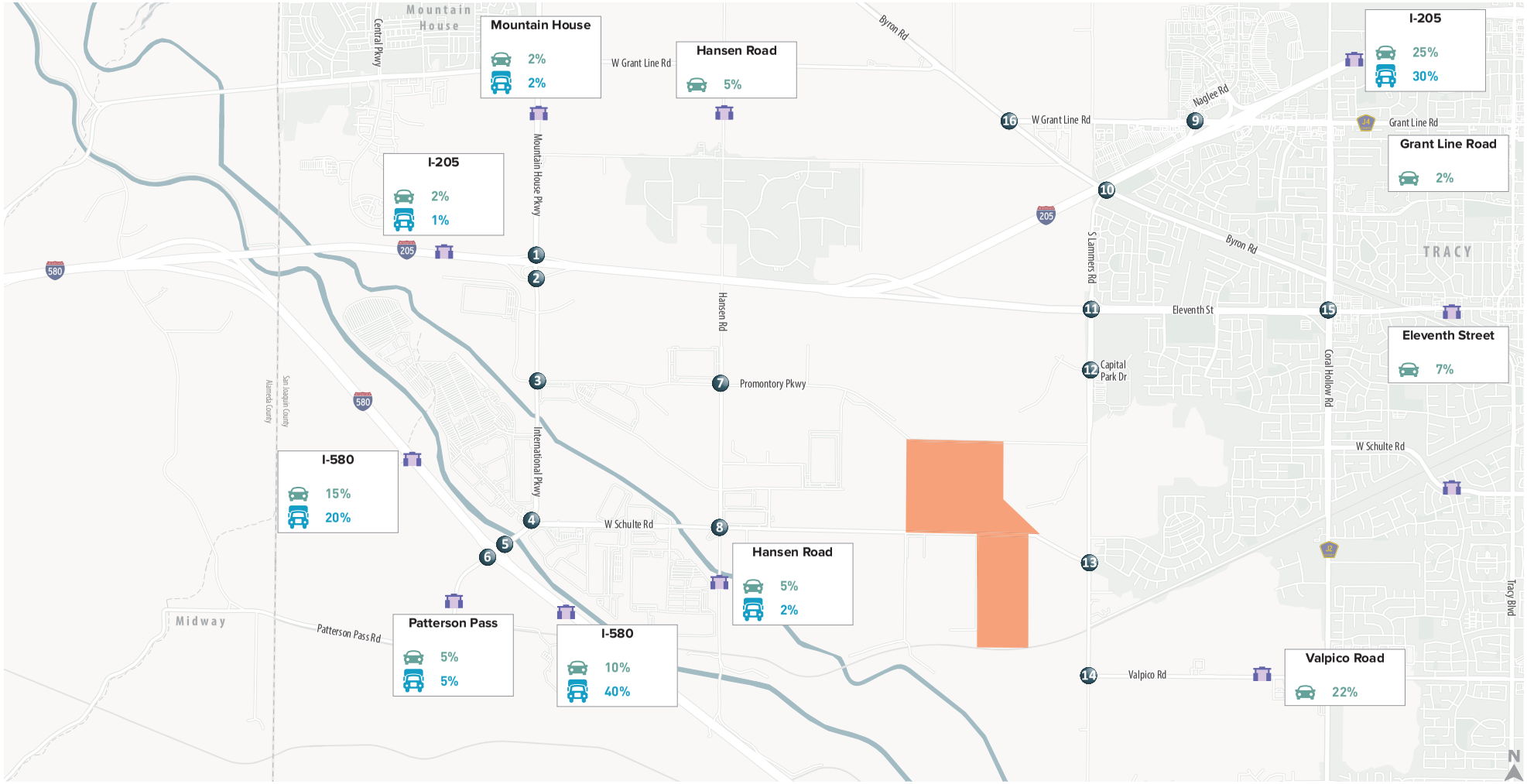
- Year: 2021
- Month: June
- Day Type: average weekday (average of Tuesday, Wednesday, and Thursday) and average weekend (average of Saturday and Sunday)
- Day Part: All day (12am-12am), Early AM (12am-6am), Peak AM (6am-10am), Mid-Day (10am-3pm), Peak PM (3pm-7pm), Late PM (7pm-12am)

The following location-based services data products were purchased from StreetLight to provide sample origin-destination data:

- Cuebiq-based origin and destination data for each of the 39 building zones
- Cuebiq-based home and workplace distribution for each of the 39 building zones

Premium trip and traveler metrics were also obtained for the Cuebiq-based data, providing trip length, trip time, trip purpose, and demographic data based on 2010 American Community Survey (ACS) data. The data obtained from StreetLight included over 20,000 personal device data samples and 9,000 commercial vehicle data samples for the June 2021 data period. The StreetLight trip tables do not provide the total number of trips that occur on a daily basis but provide the relative relationship of trips from each zone to every other zone in the geographic layer. The origin-destination data was combined with the driveway vehicle classification count data to scale "relative" travel patterns to an "absolute" measure of vehicle trips and their distribution patterns/trip lengths.

Figure 8 presents the project trip distribution pattern for automobiles and trucks, under existing conditions with the exiting plus proposed project roadway network. **Figure 9** and **Figure 10** present the project trip assignment for automobiles and trucks, respectively.



Project Site

Study Intersection

Gateway Location

Planned Study Intersection

Project Trip Distribution:

Roadway Name

Auto Trip Distro

Truck Trip Distro

Figure 8

Existing Trip Distribution



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

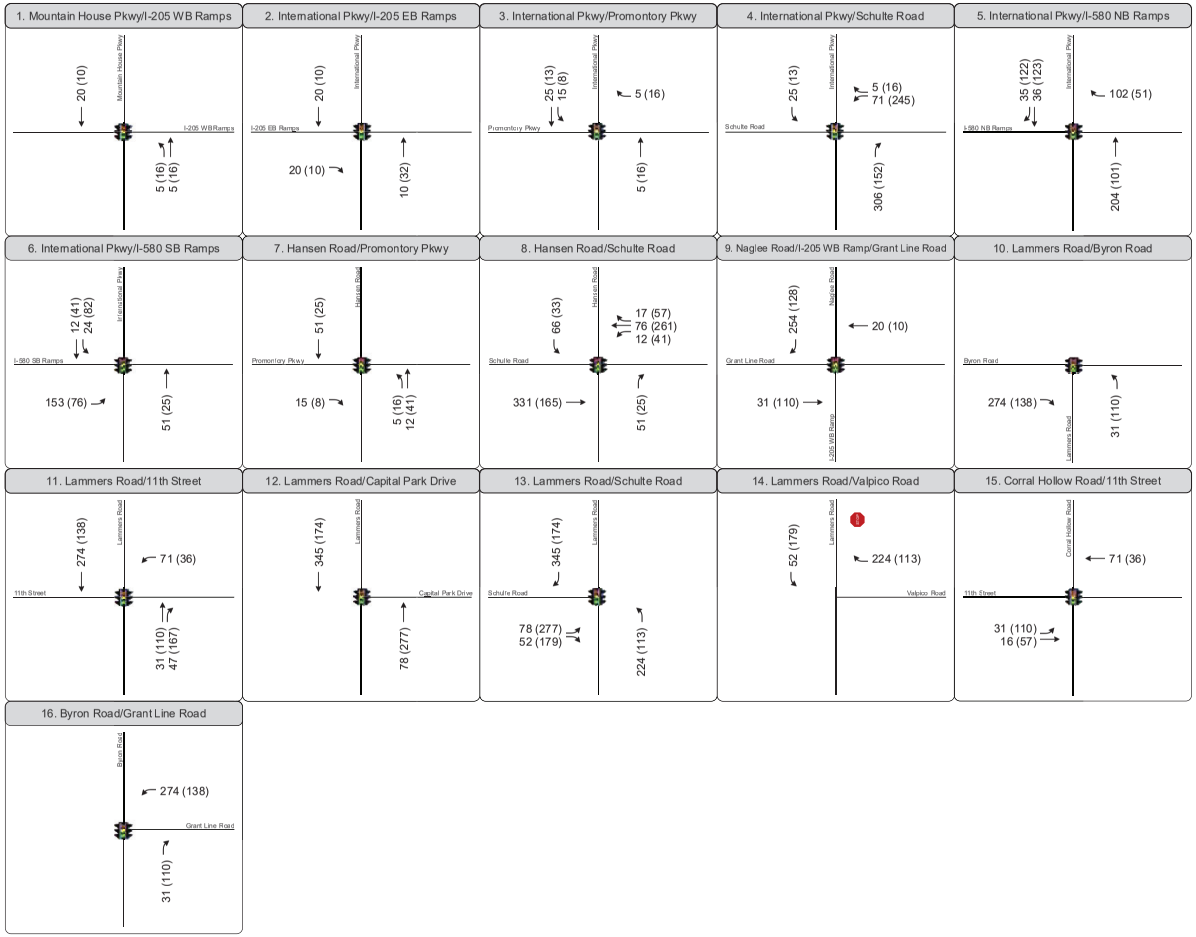
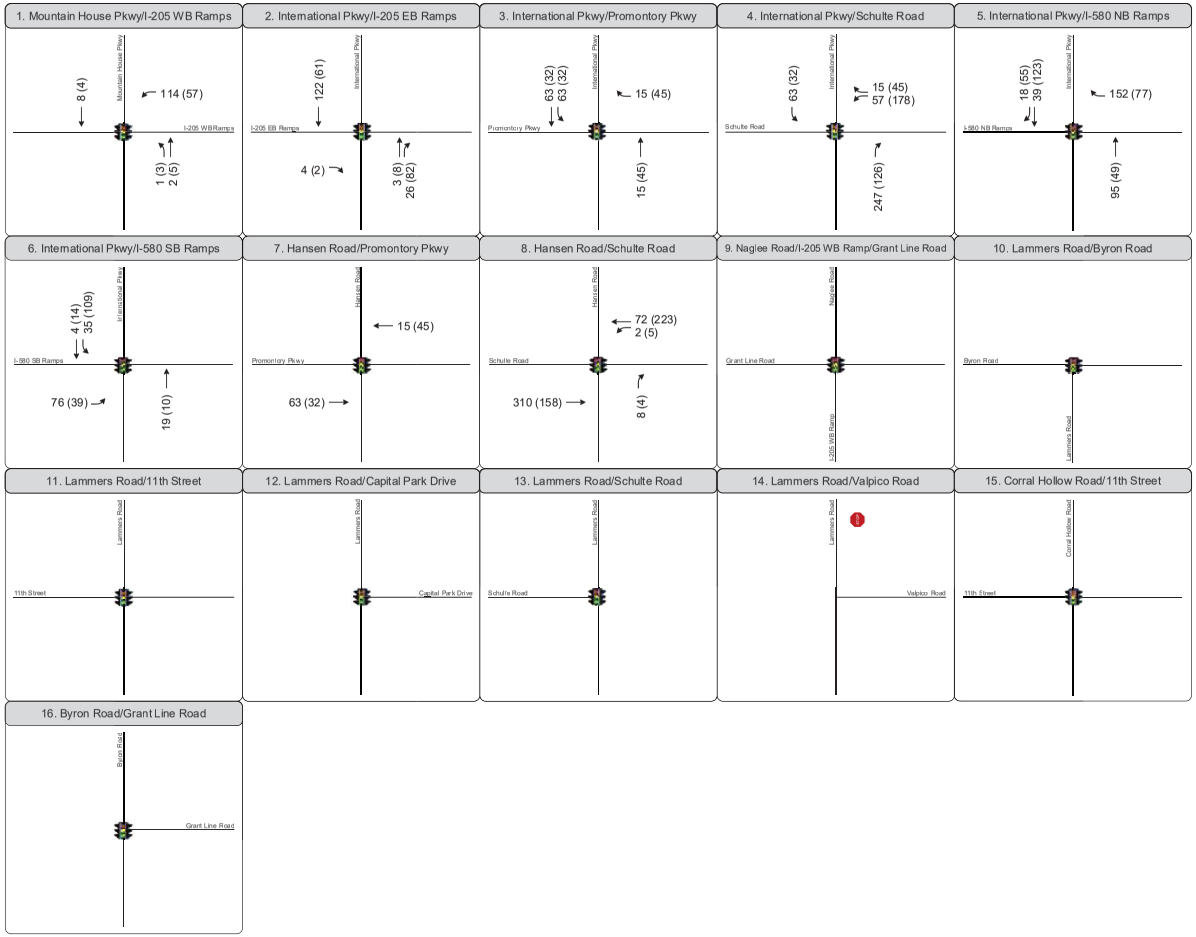


Figure 9

Existing Automobile Project Trip Assignment





XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Figure 10

Existing Truck Project Trip Assignment

4. VMT Analysis

This section describes the different methods used to calculate the proposed project's VMT under baseline and cumulative conditions. It then presents VMT results for the project (total project VMT for both automobiles and trucks) and the daily VMT per employee, which is used to assess environmental significance.

Analysis Methodology

The following two documents are the most influential in how the VMT analysis was performed:

- *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR, 2018)
- *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020)

Both documents were discussed at length in Section 1. As noted previously, the *San Joaquin County VMT Thresholds Study* adopts many of the recommended technical approaches and guidance contained in the *Technical Advisory*.

The *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020) recommends that the SJCOG model be used to estimate the project's VMT. It should be noted that this report was published in November 2020, with much of the analysis occurring well before then (e.g., COVID-19 is not referenced anywhere within it). The *Technical Advisory* defines "automobiles" as on-road passenger vehicles, specifically cars and light trucks (but excluding heavy trucks).

This study utilizes the SJCOG model to estimate the weekday project VMT per employee under baseline conditions, per the methodology and requirements of the *San Joaquin County VMT Thresholds Study*. This figure is then compared to the unincorporated countywide average VMT per employee and the relevant environmental significance threshold of 85 percent of the unincorporated countywide average VMT per employee.

Total project generated VMT is also assessed using the SJCOG model and other tools. As the SJCOG model does not explicitly model or evaluate truck traffic, off-model data relative to truck traffic (generation and trip lengths) is used to assess total weekday daily truck VMT. This data is discussed in further detail below.

VMT Defined

VMT is defined as one mile of travel driven by a vehicle regardless of the number of occupants or type of engine (e.g., internal combustion engine versus electric). Per the *Technical Advisory*, VMT is expressed on a daily (weekday) basis. VMT totals are not truncated at agency boundaries; rather, they represent the entire distance of the trip.

VMT, in and of itself, is not a measure of traffic congestion. It is used as an input in various other EIR technical areas. It can also be used to compare the relative efficiency of multiple land use-transportation planning scenarios. All VMT calculations are "project-generated," not "project effect" VMT. project-generated refers to the amount of travel its users would generate. In contrast, project effect refers to how the VMT of an entire area would change if a project were approved and constructed. Project effect on VMT is mentioned prominently in the *Technical Advisory*, but only raised in the *San Joaquin County VMT Thresholds Study* in the context of adding retail. Since evaluation of VMT using County thresholds does not require analysis of project effects on VMT, no such analysis was performed.

Truck VMT

As the SJCOG model does not explicitly model or evaluate truck traffic, other data relative to truck traffic (trip generation and trip lengths) was used to assess weekday daily truck VMT. The *San Joaquin Countywide Warehousing Data Collection and Travel Behavior Study* (June 2021), described in Section 3, was used to better understand the travel behavior of truck movements at existing warehousing buildings across San Joaquin County. It was prepared in response to a review of local and regional planning efforts, which had revealed a lack of data and understanding of the travel characteristics of these types of facilities. This data was used to estimate the length of truck trips associated with the project.

The *San Joaquin Countywide Warehousing Data Collection and Travel Behavior Study* included the purchase of multiple Big Data datasets from StreetLight Data, Inc. for the warehousing sites. These data sources are derived from location-based services (LBS) data and complex machine learning algorithms to understand travel behavior across the country.[3] Mobile device data was obtained for warehouses located within and near the City of Tracy (i.e., consisting of International Park of Commerce (IPC), Patterson Pass, and the Northeast Industrial Area collectively referred to as the "Central Valley Gateway"). By studying where mobile devices are located over the course of the day (i.e., during overnight vs. daytime hours), it was possible to determine which devices were associated with employee trips versus visitor trips versus truck trips. Global Positioning System (GPS)-based freight metrics for medium- to heavy-duty commercial trucks were also obtained to understand the origin-destination and length of commercial vehicle trips. Trip origins and destinations were then tracked at a Census Block Group level.

[3] StreetLight Data, Inc. processes approximately 40 billion anonymized location records per month from smart phones and navigation devices in connected cars and trucks and uses machine learning to transform these records into aggregated and normalized route-based travel patterns. Data is validated using permanent traffic counters and embedded sensors, and normalized with multiple data sources, including parcel data, digital road network data, and census information.

Total Project VMT

Table 9 shows the calculations of total project generated VMT for both baseline and cumulative conditions. VMT for both automobiles and trucks are presented separately. Daily automobile and truck trip generation is based on the calculations presented earlier in Section 3 and presented in Table 5 and Table 6. Average trip length for automobile trips was obtained from the SJCOG travel demand model for baseline and cumulative conditions while the average trip length for truck trips was obtained from the *San Joaquin Countywide Warehousing Data Collection and Travel Behavior Study* discussed above.

Table 9: Project Total Daily VMT

Scenario	Measure	Daily Trips [1]	Average Trip Length[2]	VMT Generated
Baseline plus Project	Automobile VMT	10,787	25.29	272,803
	Truck VMT	3,911	41.8	163,480
Cumulative plus Project	Automobile VMT	10,787	19.9	214,661
	Truck VMT	3,911	41.8	163,480

1. Calculated based on trip generation estimates presented in Table 5 and Table 6.
2. Automobile trip lengths from the SJCOG model, truck trip lengths from the *San Joaquin Countywide Warehousing Data Collection and Travel Behavior Study*.

Source: Fehr & Peers, 2024.

Table 10 shows the unincorporated countywide average VMT per employee under baseline and cumulative conditions. It also shows values representing 85 percent of those totals, which represent the VMT significance thresholds applied in this study. Finally, the table shows the project's daily home-based work VMT per employee under baseline and cumulative conditions as calculated by the SJCOG model.

Table 10: Daily VMT Per Employee

Scenario	HBW Auto VMT per Employee [1]
Unincorporated Countywide Average – Baseline	38.6 VMT per employee
85% of Unincorporated Countywide Average – Baseline	32.8 VMT per employee
Project VMT, Baseline Conditions	41.5 VMT per employee
Unincorporated Countywide Average – Cumulative	31.1 VMT per employee
85% of Unincorporated Countywide Average – Cumulative	26.5 VMT per employee
Project VMT, Cumulative Conditions	33.8 VMT per employee

1. Calculated using the 2016 SJCOG travel demand model. VMT shown is only associated with employee travel between the project and home.

5. Multimodal Transportation

Internal Circulation

Implementation of the Specific Plan Project would make improvements to the adjacent roadway network and construct the site's internal roadway network. On the western side of the project site, Pavilion Parkway would be extended, and two additional lanes would be added to the existing two-lane facility to create a four-lane roadway. On the northern side of the site, Promontory Parkway would be extended, and two additional lanes would be added to the existing four-lane road to create a six-lane facility. West Schulte Road on the south side of the project site would be widened from the current two-lane roadway to a four-lane facility with a median. These three project-adjacent roads would all be designed to STAA standards to allow for truck traffic. The proposed cross sections for Schulte Road, Pavilion Parkway, and Promontory Parkway from the Specific Plan are presented below.

Access to and within the project site would be provided by internal driveways from Promontory Parkway, Pavilion Parkway, and Schulte Road. The driveways will be 40 feet wide and allow for both vehicle and truck access. The project will ensure safe on-site circulation of trucks and vehicles by designing driveways to meet STAA standards.

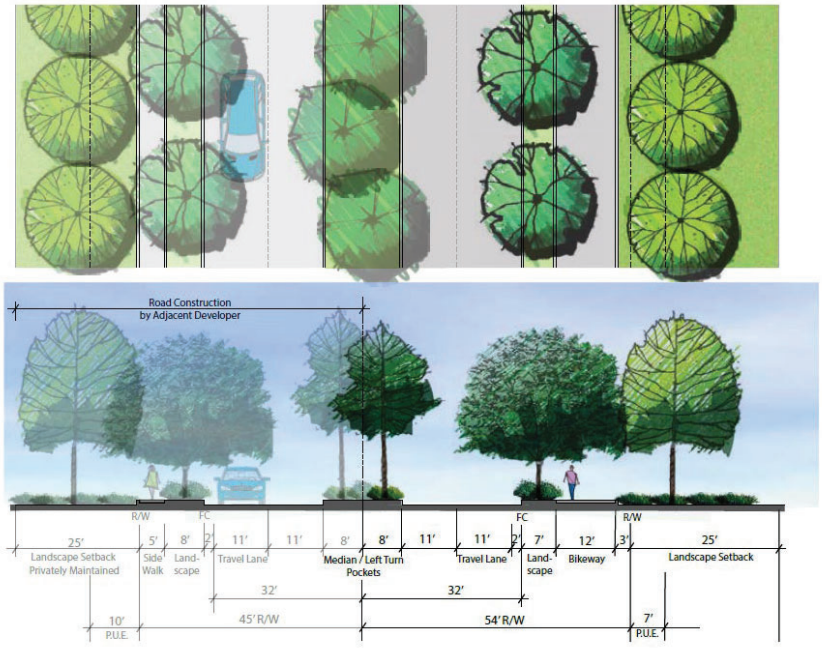


Figure 6.3, Conceptual 4-Lane Parkway, Section B-B

Schulte Road – Proposed Cross Section

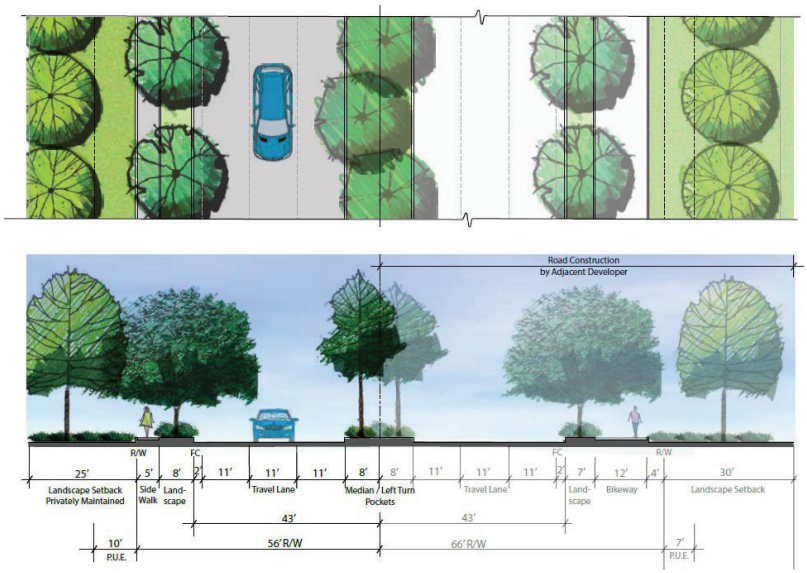


Figure 6.5, Conceptual 6-Lane Parkway, Section C-C

Promontory Parkway – Proposed Cross Section

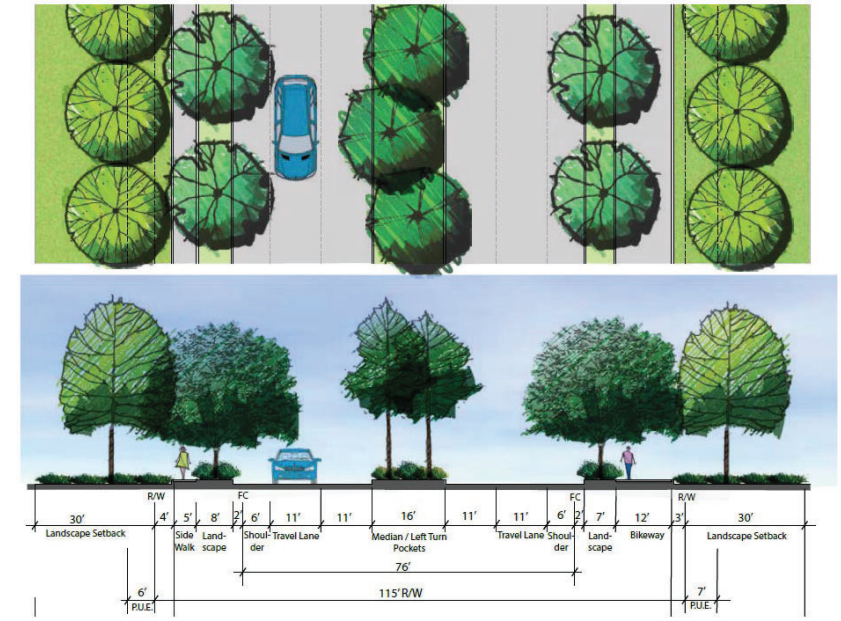


Figure 6.8, Conceptual 4-Lane Parkway, Section A2-A2

Pavilion Parkway – Proposed Cross Section

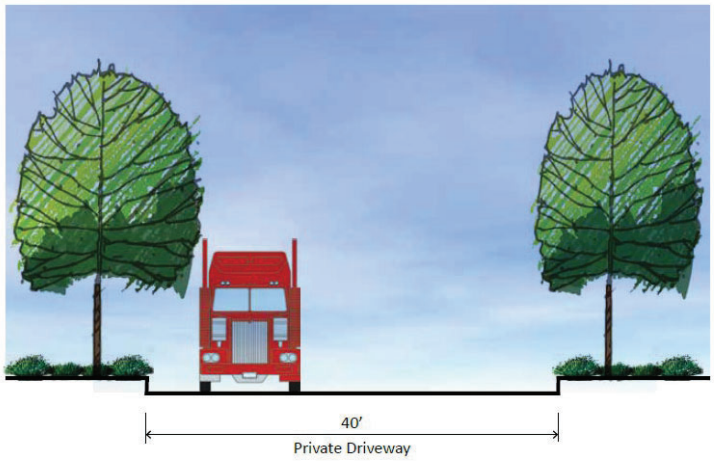


Figure 6.10, Internal Private Road Section

Internal Roadways – Proposed Cross Section

Bicycle and Pedestrian Network

The project plans to make improvements to the existing bicycle and pedestrian network in the study area. It aims to encourage bicycle and pedestrian usage by including Class I bicycle paths on all major circulation streets within the project area, including West Schulte Road, Pavilion Parkway, and Promontory Parkway. Sidewalks would be provided along project frontages and connect to the surrounding public pedestrian network. In addition, large canopy trees will shade the sidewalks and improvements to pedestrian crossings at signalized intersections will be made.

Transit System

No transit routes currently operate within the Specific Plan area. However, the Specific Plan roadway system accommodates future public transportation service by providing bus pull outs and shelters for passengers offering shade and protection during winter weather. Such improvements shall be implemented through the site approval process required for each phase.

6. Intersection Levels of Service

Existing Plus Project Buildout

This section analyzes the effects of project buildout on the existing roadway system.

Traffic Forecasts

Project buildout trips were assigned to the study roadways and intersections in accordance with the trip generation, distribution, and assignment procedures described previously. Figure 8 illustrates the macro-overall network trip distribution of project trips on the study area roadway network assuming the existing roadway network. Different trip distributions are used for automobile and truck trips, considering truck traffic restrictions on the local roadway network, as predicted by the City of Tracy travel demand model. Figure 9 presents the assignment of automobile trips to the study intersections and Figure 10 presents the assignment of truck trips to the study intersections. **Figure 11** presents the total Existing plus Project peak hour traffic volumes including existing traffic counts and buildout of the project.

Intersection Operations

Table 11 shows the AM and PM peak hour average delay and LOS at study intersections under Existing Plus Project Buildout conditions. As shown, the project would worsen already deficient operations at two intersections (International Parkway/I-580 NB Ramps and Lammers Road/Byron Road). It would cause an additional four intersections to degrade to deficient conditions. Of the 16 total existing study intersections, the project would cause the number operating deficiently to worsen from two to six.



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

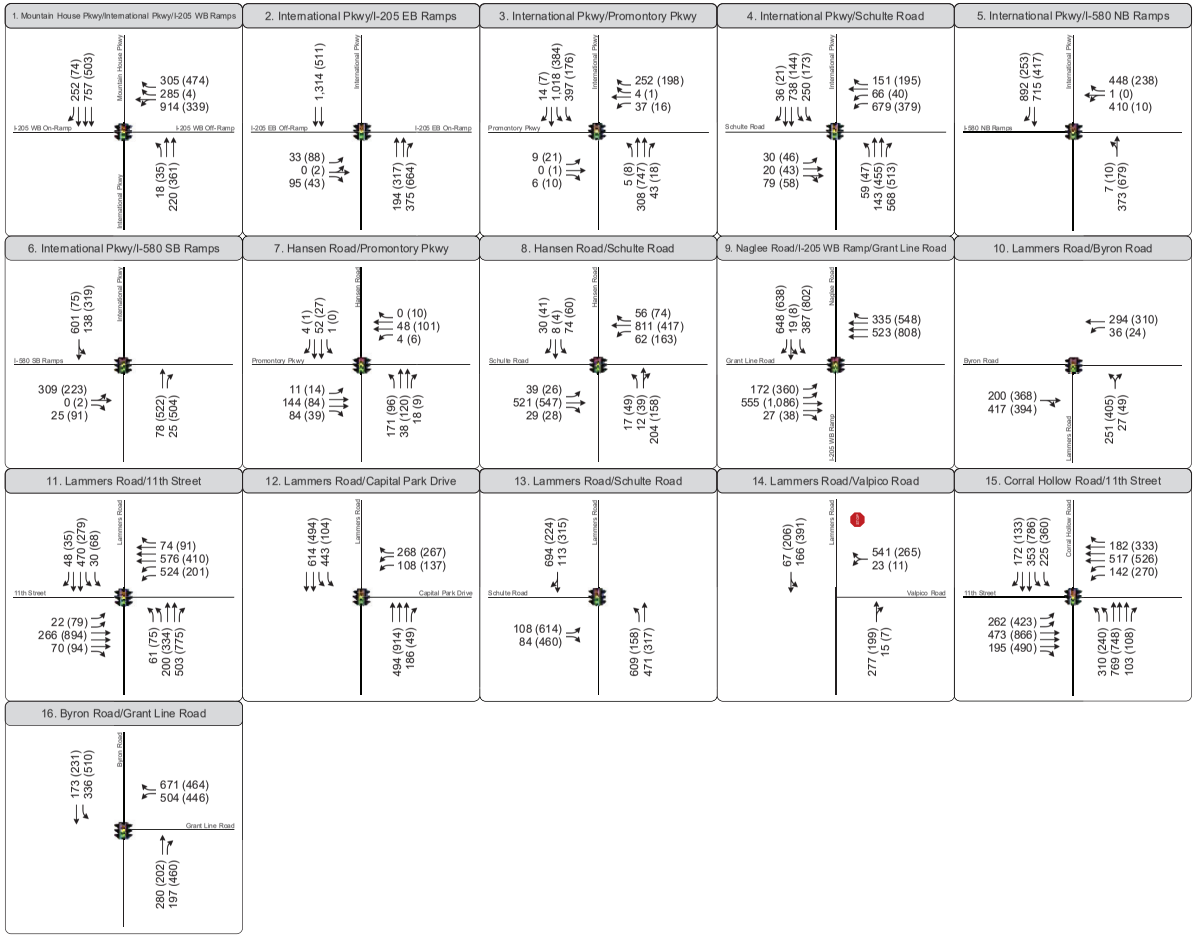


Figure 11

Existing Plus Project Peak Hour Intersection Volumes

Table 11: Intersection Level of Service – Existing Plus Project Buildout

Intersection		Traffic Control[1]	Agency	Existing				Existing Plus Project Buildout			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	34.3	C	12.3	B	**90.0**	**F**	14.4	B
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	7.2	A	5.9	A	10.9	B	6.4	A
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	25.8	C	12.7	B	43.6	D	14.7	B
4	International Pkwy/Schulte Rd	Signal	City of Tracy	39.5	D	29.0	C	**78.6**	**E**	39.6	D
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	49.4	D	**55.9**	**E**	**>180**	**F**	**106.0**	**F**
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	34.3	C	47.6	D	**>180**	**F**	**>180**	**F**
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	14.3	B	12.0	B	15.3	B	12.1	B
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	17.6	B	20.3	C	43.8	D	36.5	D
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	11.6	B	17.8	B	11.8	B	18.3	B
10	Lammers Rd/Byron Rd	Signal	City of Tracy	9.7	B	**67.4**	**E**	15.6	B	**168.3**	**F**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	20.9	C	21.4	C	29.4	C	24.4	C
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	28.2	C	12.9	B	25.4	C	13.5	B
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	20.6	C	11.9	B	**132.6**	**F**	28.4	C
14	Lammers Rd / Valpico Rd	SSSC	San Joaquin County	8.0 (11.7)	A (B)	7.0 (10.9)	A (B)	12.5 (17.6)	B (C)	9.0 (13.8)	A (B)
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	25.9	C	30.3	D	28.0	C	35.3	D
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	17.8	B	21.7	C	34.2	C	31.2	C

Notes:

1. SSSC = Side-Street Stop-Controlled; Signal = Signalized
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Existing Plus Approved Projects

The Existing plus Approved Projects future baseline scenario includes traffic associated with all currently approved but not yet developed or occupied projects. Lists of development projects that have been approved but not yet occupied that could materially affect traffic conditions in the study area were obtained from the City of Tracy and San Joaquin County. These approved projects are summarized in **Table 12** below. The approved projects include a wide range of large and small commercial, retail, residential and warehousing/logistics projects planned in the area. Likely the most impactful would be the approved but not yet constructed portions of Cordes Ranch/IPC Phase 1 which neighbors the Specific Plan site.

Approved Projects Roadway Network Assumptions

The analysis of the Existing plus Approved Projects scenario includes not only traffic associated with all approved but not yet constructed development projects, it also includes approved but not yet constructed roadway network improvements. This includes all the on- and off-site roadway network improvements to be constructed by IPC Phase 1, which are illustrated in **Figure 12**. It also includes programmed improvements to the International Parkway/Interstate 205 and International Parkway/Interstate 580 interchanges. These improvements are summarized at this site – I-205 and I-580 International Parkway (205and580interchanges.com). Finally, the scenario reflects the installation of a traffic signal with the addition of turn lane pockets on all three approaches at the Lammers Road and Valpico Road intersection. This improvement is currently in process and is expected to be completed in the near-term horizon.

Traffic Forecasts

Trips associated with all approved projects were assigned to the intersections in accordance with their respective trip generation, distribution, and assignment procedures, using the City of Tracy travel demand model. Figure 8 illustrates the macro-overall network trip distribution of project trips on the study area roadway network used in the Existing plus Approved Projects. Different trip distributions are used for automobile and truck trips, considering truck traffic restrictions on the local roadway network, as predicted by the City of Tracy travel demand model. Figure 9 presents the assignment of automobile trips to the study intersections and Figure 10 presents the assignment of truck trips to the study intersections. **Figure 13** presents the total Existing plus Approved Projects peak hour traffic volumes including existing traffic counts and buildout of the approved projects. **Figure 14** presents the total Existing plus Approved Projects plus Project peak hour traffic volumes including existing traffic counts, buildout of the approved projects and buildout of the proposed project.

Table 12: List of Approved Projects

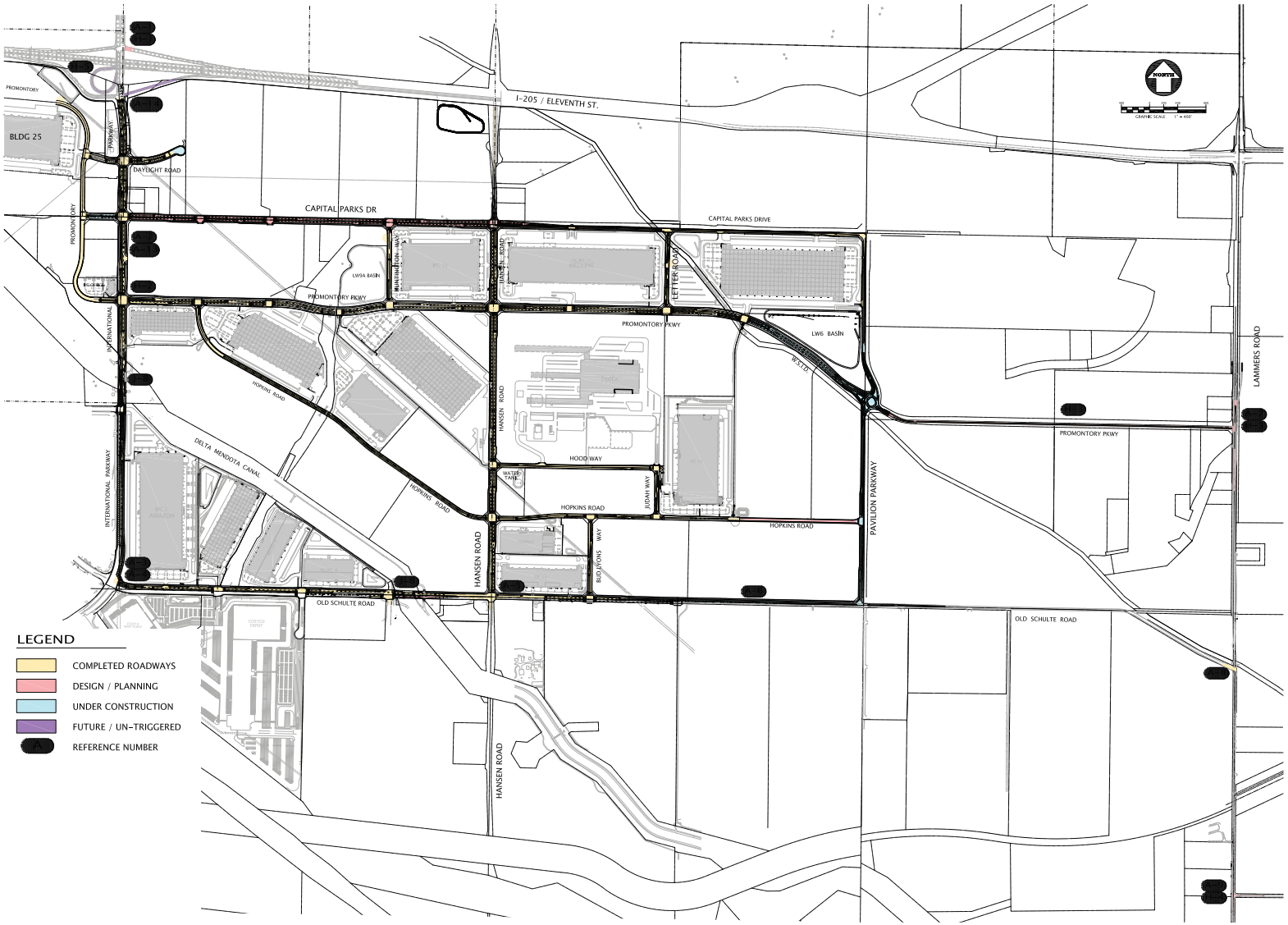
	Lead Agency	Project Name	Project Address	Description	Status
1	City of Tracy	4-Story Hotel (Extended Stay America Premier Suites)	N Side of Joe Pombo Pkwy, N of Grant Line Road	54,902 sf of hotel use	Approved
2	City of Tracy	Avenues	12650 W. Valpico Road	480 residential units on 95.83 acres	Approved
3	City of Tracy	Byron Apartments	2660 Byron Road	60 residential units	Approved
4	City of Tracy	Commercial Building Shell	Auto Plaza Dr. west of Naglee Road	27,336 sf commercial use	Approved
5	City of Tracy	Convenience Store and Gas Station (Edgewood Commercial Center)	SEC Corral Hollow/ Middlefield Drive	3,884 sf commercial use and gas station	Under Construction
6	City of Tracy	Cordes Ranch Development	International Pkwy/I-205	18,147,338 sf of mixed commercial space	Approved
7	City of Tracy	Ellis Phase 2	Ellis Town Drive	106-acre neighborhood development park of larger Ellis Specific Plan	Under Construction
8	City of Tracy	Ellis Phase 3	4260 Lammers Road	74-acre neighborhood development part of larger Ellis Specific Plan	Under Construction
9	City of Tracy	Ellis RE Lots/Limited Use Area	SE area of Ellis SP	41.87-acre mixed- use development part of larger Ellis Specific Plan	Approved
10	City of Tracy	Seefried – 3 New Industrial Buildings	7191 W. Grant Line Road	1,035,500 sf industrial development	Under Construction
11	City of Tracy	Tracy Assisted Living & Memory Care	South of Grant Line, west of Corral Hollow	87,107 sf assisted living and residential use	Approved
12	City of Tracy	Tracy Hills KT Project (Hillview)	Tracy Hills Drive east of Corral Hollow	36-acre mixed residential development	Under Construction
13	City of Tracy	Tracy Hills Phase 1A (includes revision to 7C)	Tracy Hills Drive west of Corral Hollow	367-acre mixed residential development	Under Construction
14	City of Tracy	Tracy Hills Phase 1B	Tracy Hills Drive west of Phase 1A	434 mixed residential units part of Tracy Hill Specific Plan	Under Construction
15	City of Tracy	Tracy Hills Phase 2	Tracy Hills south of I-580	1,517 mixed residential units part of Tracy Hill Specific Plan	Approved
16	City of Tracy	Tracy Village	SEC Valpico Rd. & Corral Hollow Road	135 acre residential and shared use development	Under Construction
17	City of Tracy	Triad One Story Medical Office Building	Orchard Pkwy. & Grant Line Road	10,000 sf medical office development	Approved
18	City of Tracy	Warehouse with Office	1850 N. Chrisman Road	90,000 sf mixed office and industrial space	Approved



	Lead Agency	Project Name	Project Address	Description	Status
19	San Joaquin County	PA-0600207	12100 W. Valpico Road, Tracy, 95377	48,349 sf regional church and K-8 school	Under Construction
20	San Joaquin County	PA-0600630	11770 W. Clover Road, Tracy, 95304	A religious assembly (having a total maximum seating capacity of 249 people); conversion of an existing 1,770 sq. ft. single family residence to a prayer hall (seating capacity 90), addition of four restrooms, and 30 parking spaces. phase two to be completed within two years and to consist of a proposed 19,600 sq. ft. two-story assembly hall, and 46 additional parking spaces.	Under Construction
21	San Joaquin County	PA-1300003	26666 S. Hansen Road, Tracy, 95377	Construction of a 6,200 sf canine boarding and care facility	Under Construction
22	San Joaquin County	PA-1400084	26955 S. Hansen Road, Tracy, 95377	27,240 sf Industrial and commercial use trucking facility	Under Construction
23	San Joaquin County	PA-1800159	18201 W. Grant Line Road, Mountain House, 95391	21,683 sf commercial mixed use	Under Construction
24	San Joaquin County	PA-1800305	26106 S. Patterson Pass Road, Tracy, 95377	60,870 sf nursery sales and services – landscaping services	Under Construction
25	San Joaquin County	PA-1900127	16151 W. Grant Line Road, Tracy, 95304	60,233 sf regional religious assembly space	Under Construction
26	San Joaquin County	PA-2000003	54 W Conejo Court, Mountain House, 95391	3-acre parcel multi-use; educational services, recreation, and medical services	Under Construction
27	San Joaquin County	PA-2000065	17400 W. Bethany Road, Tracy, 95391	12,000 sf Construction services (heavy operation) facility	Under Construction
28	San Joaquin County	PA-2000083	26603 S. Hansen Road, Tracy, 95377	8,973 sf multi-use parcel; residential, automotive sales and services; and vehicle storage	Under Construction
29	San Joaquin County	PA-2000221	505 E. Arnaudo Blvd, Mountain House, 95391	304 dwelling unit multi-family residential space	Under Construction

	Lead Agency	Project Name	Project Address	Description	Status
30	San Joaquin County	PA-2100154	North side of E. Arnaudo Avenue, located between S. Tradition Street and S. Providence Street, Mountain House, 95391	176 dwelling unit multi-family residential apartments	Under Construction
31	San Joaquin County	PA-2100207	26901 S. Hansen Road, Tracy, 95377	439 space trailer parking and storage facility	Under Construction
32	San Joaquin County	PA-2100287	North side of E. Arnaudo Avenue, located between S. Tradition Street and S. Providence Street, Mountain House, 95391	176 dwelling unit multi-family residential homes	Under Construction
33	San Joaquin County	PA-2200047	270 E. Central Pkwy, Mountain House, 95391	336 dwelling unit multi-family residential homes	Under Construction

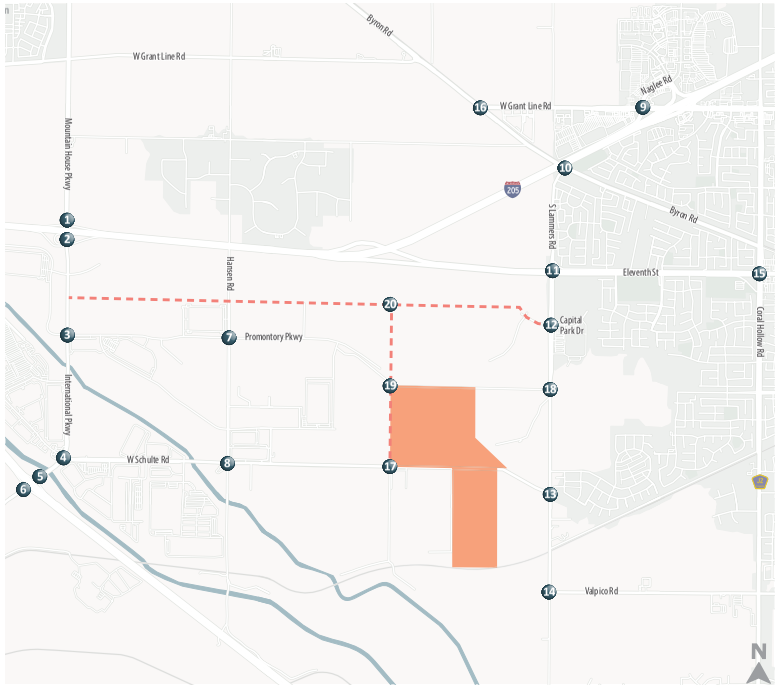
Source: International Park of Commerce Phase 2 Project Environmental Impact Report – Cumulative Approach Memo, Stantec, June 23, 2023.



Site Plan Source: Kier & Wright, November 29, 2022.

Figure 12

IPC Phase 1 Roadway Improvements



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Planned Roadways

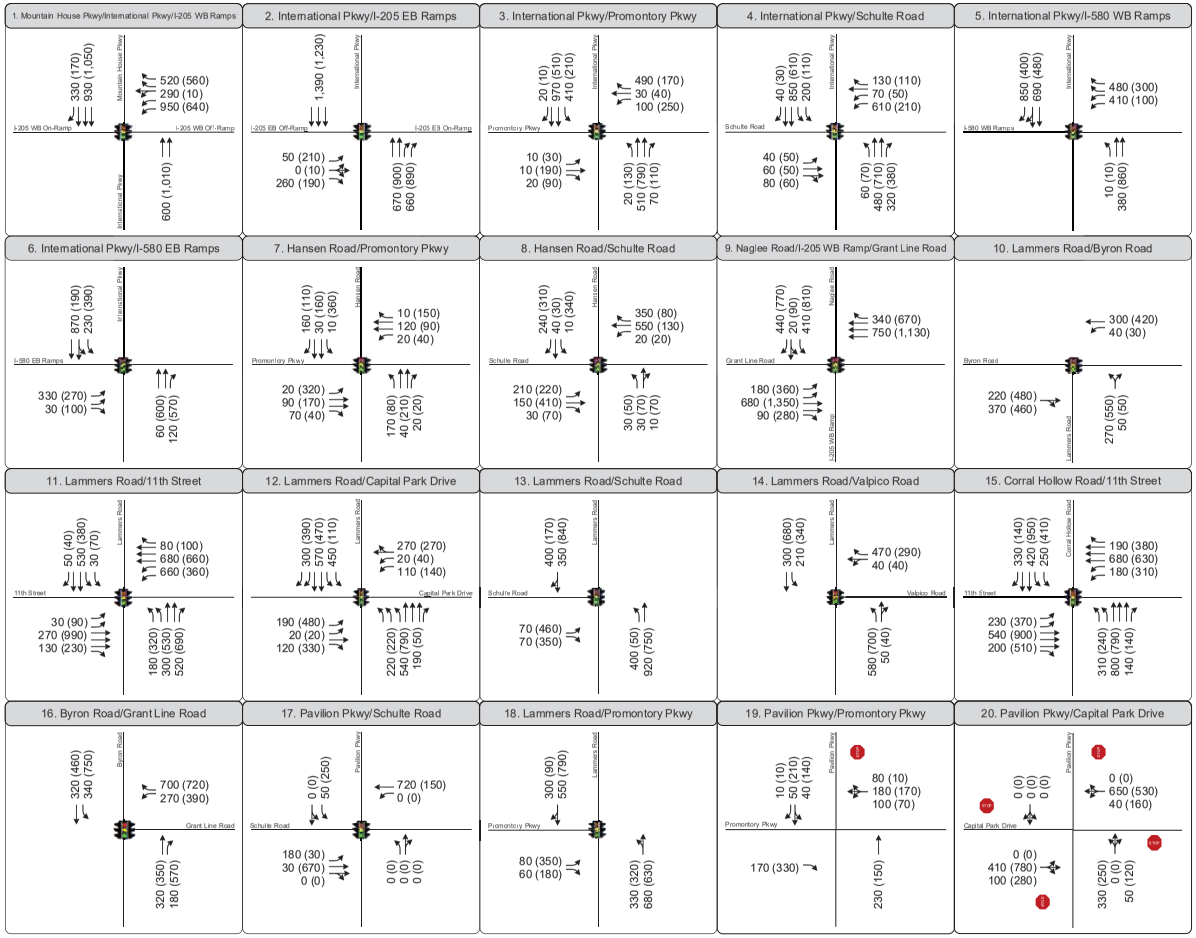


Figure 13

Existing Plus Approved Projects No Project Peak Hour Intersection Volumes

Intersection Operations

Table 13 shows the average delay and LOS at all study intersections under Existing plus Approved Projects conditions for the weekday AM and PM peak hours. This table indicates that the following five study intersections would operate deficiently under this scenario.

- Hansen Road/Schulte Road
- Lammers Road/Byron Road
- Lammers Road/Schulte Road
- Byron Road/Grant Line Road
- Pavilion Parkway/Capital Park Drive

It should be noted that conditions at some intersections improve in this scenario relative to existing baseline conditions. This occurs due to the planned roadway improvements described above.

Table 13: Intersection Level of Service – Existing Plus Approved Projects Conditions

	Intersection	Traffic Control[1]	Agency	AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	12.2	B	11.8	B
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	6.9	A	7.5	A
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	53.2	D	52.8	D
4	International Pkwy/Schulte Rd	Signal	City of Tracy	38.0	D	31.5	C
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	12.3	B	13.7	B
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	11.8	B	14.4	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	16.0	B	41.6	D
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	29.5	C	**65.4**	**E**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	12.1	B	24.9	C
10	Lammers Rd/Byron Rd	Signal	City of Tracy	15.9	B	**58.5**	**E**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	51.7	D	45.5	D
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	29.4	C	38.6	D
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	25.3	C	**59.8**	**E**
14	Lammers Rd/Valpico Rd	Signal	City San Joaquin County	31.2	C	39.2	D
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	29.9	C	40.7	D
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	22.9	C	**88.3**	**F**
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	25.2	C	7.1	A
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	10.6	B	26.8	C
19	Pavilion Pkwy/Promontory Pkwy	Roundabout	City of Tracy	6.4	A	10.3	B
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**115.1 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**
21	Lammers Rd/I-205 WB Ramps	N/A	Caltrans	*Does not exist in scenario*			
22	Lammers Rd/I-205 EB Ramps	N/A	Caltrans	*Does not exist in scenario*			

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Existing Plus Approved Projects Plus Project

This section analyzes the effects of project buildout in combination with the traffic and roadway network improvements associated with all approved but not yet occupied projects.

Traffic Forecasts

Project buildout trips were assigned to the study roadways and intersections in accordance with the trip generation, distribution, and assignment procedures described previously. Figure 8 illustrates the macro-overall network trip distribution of project trips on the study area roadway network assuming the existing roadway plus approved project roadway network. Different trip distributions are used for automobile and truck trips, considering truck traffic restrictions on the local roadway network, as predicted by the City of Tracy travel demand model. Figure 9 presents the assignment of automobile trips to the study intersections and Figure 10 presents the assignment of truck trips to the study intersections. Figure 14 presents the total Existing plus Approved Projects plus Project peak hour traffic volumes including existing traffic counts, approved projects, and buildout of the project.

Intersection Operations

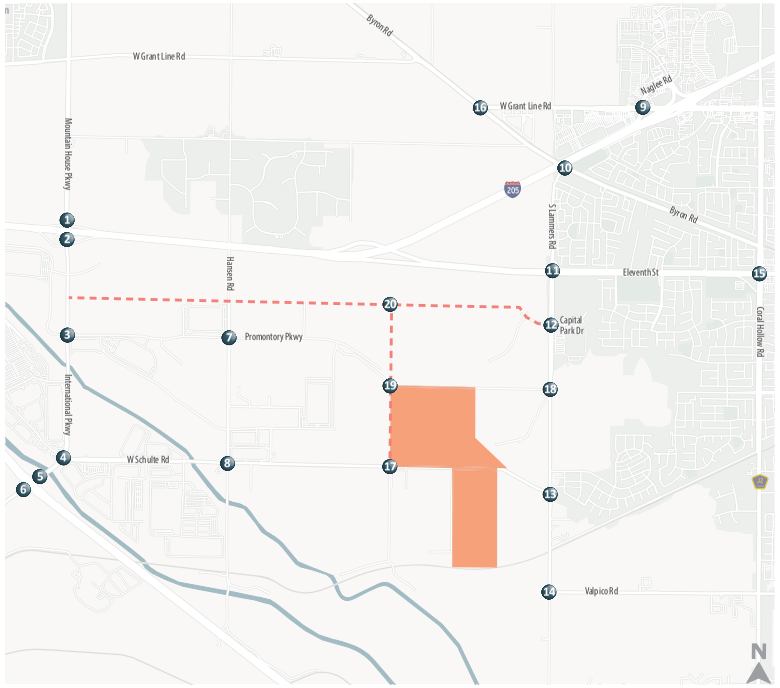
Table 14 shows the AM and PM peak hour average delay and LOS at study intersections under Existing plus Approved Projects plus Project conditions. As shown, the project would worsen already deficient operations at five intersections:

- Hansen Road/Schulte Road
- Lammers Road/Byron Road
- Lammers Road/Schulte Road
- Byron Road/Grant Line Road
- Pavilion Parkway/Capital Park Drive

It would cause an additional four intersections to degrade to deficient conditions:

- International Parkway/Promontory Parkway
- International Parkway/Schulte Road
- Lammers Road/Eleventh Street
- Lammers Road/Promontory Parkway

Of the total 22 study intersections, the project would cause the number operating deficiently to increase from five to nine.



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Planned Roadways

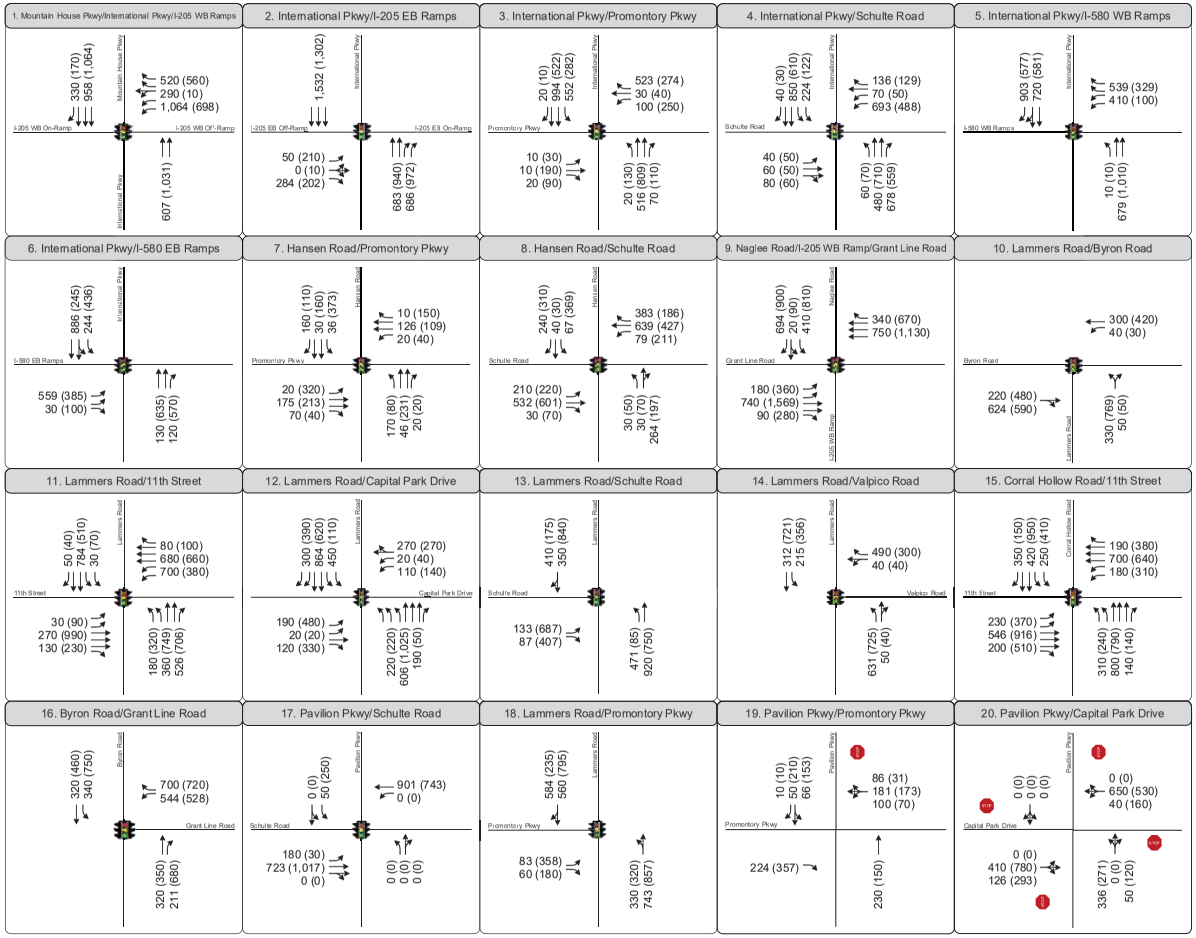


Figure 14

Existing Plus Approved Projects Plus Project Peak Hour Intersection Volumes

Table 14: Intersection Level of Service – Existing Plus Approved Projects Plus Project

	Intersection	Traffic Control[1]	Agency	Existing Plus Approved Projects				Existing Plus Approved Projects Plus Project			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	12.2	B	11.8	B	13.7	B	12.2	B
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	6.9	A	7.5	A	7.3	A	7.5	A
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	53.2	D	52.8	D	**>180**	**F**	**78.5**	**E**
4	International Pkwy/Schulte Rd	Signal	City of Tracy	38.0	D	31.5	C	**55.8**	**E**	38.6	D
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	12.3	B	13.7	B	39.5	D	21.2	C
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	11.8	B	14.4	B	13.5	B	18	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	16.0	B	41.6	D	16.8	B	44	D
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	29.5	C	**65.4**	**E**	**89.8**	**F**	**232.3**	**F**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	12.1	B	24.9	C	20.1	C	33.9	C
10	Lammers Rd/Byron Rd	Signal	City of Tracy	15.9	B	**58.5**	**E**	53.3	D	**134.5**	**F**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	51.7	D	45.5	D	**116.3**	**F**	**99.7**	**F**
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	29.4	C	38.6	D	30.2	C	45.8	D
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	25.3	C	**59.8**	**E**	46.2	D	**118.4**	**F**
14	Lammers Rd/Valpico Rd	Signal	San Joaquin County	31.2	C	39.2	D	53.6	D	43.8	D
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	29.9	C	40.7	D	30.8	C	41	D
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	22.9	C	**88.3**	**F**	47.1	D	**101.1**	**F**
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	25.2	C	7.1	A	53.3	D	15.9	B
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	10.6	B	26.8	C	**60.4**	**E**	42.2	D
19	Pavilion Pkwy/Promontory Pkwy	Roundabout	City of Tracy	6.4	A	10.3	B	8	A	3	A
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**115.1 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**

Intersection		Traffic Control[1]	Agency	Existing Plus Approved Projects				Existing Plus Approved Projects Plus Project			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
21	Lammers Rd/I-205 WB Ramps	N/A	Caltrans	*Does not exist in scenario*							
22	Lammers Rd/I-205 EB Ramps	N/A	Caltrans	*Does not exist in scenario*							

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Cumulative with Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

This section describes anticipated transportation conditions under cumulative conditions assuming the project site remains vacant (i.e., the "no project" scenario). The cumulative setting corresponds to the Year 2042, which is the horizon year of the City of Tracy travel demand model.

Traffic Forecasts

This study used a travel model to forecast CEQA VMT efficiency metrics for the project, as well as roadway segment and intersection turning movement forecasts for the informational non-CEQA level of service intersection congestion analysis. The overall approach to developing traffic demand forecasts for the project is to make use of analytical tools that are appropriate to answer the questions being raised. This study addressed auto and truck traffic patterns between three important sub-regions of California (the San Joaquin Valley, the Bay Area, and the Sacramento Valley), as well as more localized patterns of travel within the Tri-Valley area itself.

The primary travel demand model for this geographic area is the Three County Model, which is maintained by the San Joaquin Council of Governments (SJCOG). The benefits of the Three County Model are that it includes the most up to date regional land use forecasts and a truck component. However, the model does not include specific trip generation rates for warehousing uses and lacks detail in the project study area. Additionally, the model validated poorly in the project study during initial model evaluation as shown in **Table 15**. Green shading indicates the threshold was met; orange shading indicates the threshold was not met.

Table 15: 2019 Three County Model Validation

Validation Measure	AM Peak Hour	PM Peak Hour	Daily	Threshold
Volume-to-Count Ratio	1.88	1.34	0.92	+/- 10%
Percent of Links Within Deviation Allowance	35.4%	33.8%	59.3%	At least 75%
Percent Root Mean Square Error	275.8%	104.9%	32.1%	Below 40%
Correlation Coefficient	0.98	0.94	0.96	At least 0.88
Number of Validation Locations	133	133	77	

Source: Fehr & Peers, 2024.

As part of the traffic analysis process for the Tracy Hills Project and other recent development projects in the City of Tracy, the Three County Model has been progressively modified and supplemental detail has been added within the Tracy area and nearby counties. This model is referred to as the City of Tracy Model. The benefits of the City of Tracy Model are it includes significantly greater detail in the project study area and includes the Bay Area, two very important aspects given the project's location. The City of Tracy model also validated significantly better in the project study area during initial model evaluation as shown in **Table 16**. Green shading indicates the threshold was met; orange shading indicates the threshold was not met.

Table 16: 2019 City of Tracy Model Validation

Validation Measure	AM Peak Hour	PM Peak Hour	Daily	Threshold
Volume-to-Count Ratio	0.74	0.87	0.76	+/- 10%
Percent of Links Within Deviation Allowance	24.6%	32.3%	37.0%	At least 75%
Percent Root Mean Square Error	59.6%	44.3%	29.2%	Below 40%
Correlation Coefficient	0.91	0.96	0.99	At least 0.88
Number of Validation Locations	133	133	77	

Source: Fehr & Peers, 2024.

The City of Tracy Model also has some key limitations, such as also not including specific trip generation rates or friction factor curves for warehousing uses like the Three County Model and it lacks a truck component. However, it was determined that these limitations could more easily be mitigated than those of the three County Model which would require the addition of the Bay Area and significant levels of detail added in the project study area. Truck trip tables from the Three County Model for non-Central Valley Gateway land uses could easily be integrated into the City of Tracy Model, while Central Valley Gateway-generated trucks trips could be input based on the driveway count and mobile device data analysis discussed in the previous section. A review of the structure of both models indicated the City of



Tracy Model provided a more appropriate framework for the inclusion of warehousing trip generation and trip distribution patterns through hard-coded special generator trip tables.

City of Tracy Model Refinement

A locally validated subarea model for the Central Valley Gateway was meant for testing infrastructure projects with greater sensitivity to labor and freight movements to and from the Central Valley Gateway. The Tracy Hills version of the City of Tracy Model served as the starting point for the subarea model, which was then refined using empirical data collected from driveway counts and location-enabled mobile devices. A traffic analysis zone (TAZ) was added for each Central Valley Gateway building and the corresponding observed trip generation from driveway counts and factored origin-destination patterns from mobile device data were hard coded. The model was statically validated to assess the mode's predictive capabilities before it was updated to produce near term (2030) and cumulative year (2042) forecasts. The validation process compared traffic volume outputs from the base year (2019) model to observed 2019/Pre-Covid 2020 traffic count data to determine if model outputs fell within an acceptable range of error.

The California Transportation Commission established guidelines for determining whether a model is valid and acceptable for forecasting future year traffic volumes. **Table 17** presents a comparison of 2019 weekday model volumes to weekday traffic count data using the validation thresholds discussed in 2017 California Regional Transportation Plan Guidelines (California Transportation Commission, January 18, 2017) for AM peak hour, PM peak hour, and daily conditions. For this study, a target validation criterion of plus or minus 10 percent for any categories not included in the Commission guidelines was used. Green shading indicates the threshold was met.

Table 17: 2019 Refined City of Tracy Model Validation

Validation Measure	AM Peak Hour	PM Peak Hour	Daily	Threshold
Volume-to-Count Ratio	0.97	1.10	0.99	+/- 10%
Percent of Links Within Deviation Allowance	75.4%	83.1%	100.0%	At least 75%
Percent Root Mean Square Error	33.8%	31.4%	10.6%	Below 40%
Correlation Coefficient	0.91	0.96	0.99	At least 0.88
Number of Validation Locations	133	133	77	

Source: Fehr & Peers, 2024.

As shown in Table 17, the 2019 Refined City of Tracy Model highway volumes meet all 2017 California RTP model validation standards for AM peak hour, PM peak hour, and daily conditions, a critical step in ensuring a high level of confidence in the resulting traffic forecasts.

Table 18 provides the 2019 Refined City of Tracy Model validation for key freeway segments within the project study area. As shown below, the two-way 2019 model forecasts for all four freeway segments are within 10 percent of the 2019 traffic count and meet the Caltrans deviation allowance.

Table 18: 2019 Refined City of Tracy Model Validation – Key Freeway Segments

Freeway Mainline	2019 Traffic Count	2019 Model Volume	Model minus Count	Model Deviation	Meet Criteria?
I-580 (West of I-205)	161,673	158,054	-3,619	-2%	Yes
I-205 (East of I-580)	111,039	112,332	1,293	1%	Yes
I-580 (West of International Parkway)	50,634	45,723	-4,911	-10%	Yes
I-580 (East of International Parkway)	54,578	53,565	-1,013	-2%	Yes

Source: Fehr & Peers, 2024.

Table 19 provides the 2019 Refined City of Tracy Model validation for the suggested freeway validation criteria listed in the 1992 Caltrans Travel Forecasting Guidelines. As shown below, the model meets the suggested freeway validation criteria listed in the 1992 Caltrans Travel Forecasting Guidelines for all three model time periods.

Table 19: 2019 Refined City of Tracy Model Validation – 1992 Caltrans Travel Forecasting Guidelines Functional Classification Percent Error

Functional Classification	AM Peak Hour	PM Peak Hour	Daily	Threshold
Freeways	3%	-2%	-5%	7%

Source: Fehr & Peers, 2024.

Cumulative Year Travel Model Development

Once the base year (2019) Refined City of Tracy Model was validated, the 2042 land use growth, infrastructure improvements, and truck traffic forecasts from the Three County Model were incorporated to ensure consistency with the regional model projections. In order to account for the additional planned development of roughly 18.5 million square feet of warehousing development within the Central Valley Gateway by 2025, TAZs were added for each planned building within the Central Valley Gateway. Trip generation rates derived from driveway counts at existing uses were used to forecast traffic volumes generated by each planned warehousing development. Origin-destination patterns for the planned warehousing developments were derived based on a combination of existing patterns from the StreetLight analysis and on-residential land use growth patterns from the Three County Model. The origin-destination patterns were factored to match the forecasted trip generation and hard coded in the model similar to how trip generation and trip distribution for existing warehousing facilities were coded in the model.



Traffic volume forecasts were then developed for a near term (2030) scenario and a cumulative year (2042) scenario, consistent with the latest regional planning baselines.

Forecasting Procedure

Through the model evaluation and model refinement process it was determined that the Refined City of Tracy Model is the most suitable for the project. The Refined City of Tracy Model will be validated to base year (2022) conditions using the criteria in the 1992 Caltrans Forecasting Guidelines. Traffic volumes will then be forecasted using the difference method to post-process raw model volumes to generate final traffic volume forecasts.

The following ongoing regional infrastructure improvements are assumed in the refined City of Tracy Model runs. Modifications can be made per input from County staff.

1. I-205 / International Parkway interchange improvements
2. I-580 / International Parkway interchange improvements
3. I-205 / Lammers Road interchange
4. I-580 / Lammers Road interchange
5. I-580 / Hansen Road interchange
6. I-205 Managed Lanes Project
7. Schulte Road extension
8. Capital Park Drive extension
9. Promontory Parkway extension
10. Pavilion Parkway extension

The refined City of Tracy Model was also modified to include the proposed Valley Link passenger rail line, consistent with station location, ridership forecasts, and mode of access assumptions from the Final Environmental Impact Report (EIR) for Valley Link dated April 2021. The near term (2030) scenario assumes the initial operating segment (IOS) with 2,636 average weekday boardings at the Mountain House station. The cumulative year (2042) scenario assumes the full project implementation with 1,231 boardings at the Mountain House station. Both scenarios assume the Mountain House station alternative location west of Hansen Road south of Safeway, which is currently the preferred alternative.

For these reasons, the local intersection forecasts were developed using the refined City of Tracy travel demand model. This tool was found to be the most appropriate for the development of intersection turning movement forecasts under the various scenarios being evaluated in this study. Project VMT is assessed using the SJCOG travel demand model as required by the County's guidelines. The SJCOG travel demand model is an appropriate tool for assessing project VMT and provides an "apples to apples" comparison to the approved standards of significance relative to VMT.



Cumulative Scenarios

To provide information to local decision-makers, two cumulative scenarios have been evaluated, as follows:

- Cumulative (Year 2042) – with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing
- Cumulative (Year 2042) – without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing

Both cumulative scenarios are assessed with and without the proposed project. The first cumulative scenario includes all the improvements and modeling assumptions described above. In the second scenario, the new interchange at Eleventh Street/I-205 and the extension of Pavilion Parkway over I-205 are not included. The intent of the second analysis is to model the localized traffic effects if these improvements are not funded and implemented. **Figure 15** presents the AM and PM peak hour traffic volumes under the Cumulative with Eleventh Street/-205 and the extension of Pavilion Parkway over I-205 scenario.



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Planned Roadways

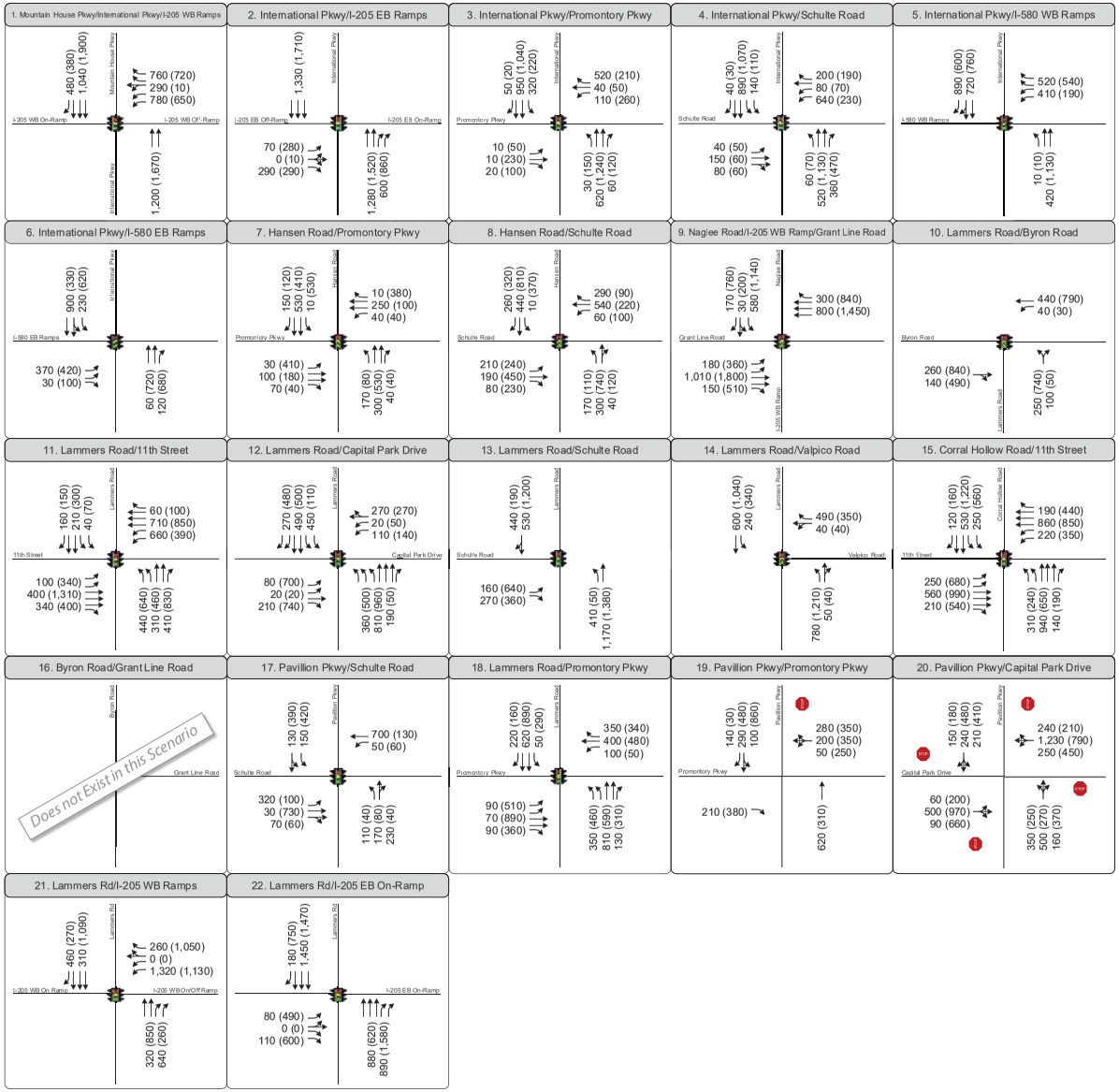


Figure 15

Cumulative Alternative 1 (with I-205/Lammers Interchange) No Project Peak Hour Intersection Volumes

Intersection Operations

Table 20 shows the average delay and LOS at study intersections under the Cumulative with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing scenario for the AM and PM peak hours. This table indicates that 13 study intersections would operate deficiently under this condition based on the applicable level of service standards.

- International Parkway/Promontory Parkway
- Hansen Road/Promontory Parkway
- Hansen Road/Schulte Road
- Lammers Road/Byron Road
- Lammers Road/Eleventh Street
- Lammers Road/Capital Park Drive
- Lammers Road/Schulte Road
- Lammers Road/Valpico Road
- Corral Hollow Road/Eleventh Street
- Pavilion Parkway/Schulte Road
- Lammers Road/Promontory Parkway
- Pavilion Parkway/Promontory Parkway
- Pavilion Parkway/Capital Park Drive

Table 20: Intersection Level of Service – Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing

	Intersection	Traffic Control[1]	Agency	AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	22.7	C	29.6	C
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	8.9	A	10.0	B
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	48.2	D	**93.9**	**F**
4	International Pkwy/Schulte Rd	Signal	City of Tracy	48.2	D	38.9	D
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	19.1	B	39.6	C
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	17.6	B	18.6	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	19.4	B	**>180**	**F**
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**139.0**	**F**	**>180**	**F**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	14.8	B	48.4	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	13.5	B	**>180**	**F**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	33.6	C	**64.2**	**E**
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	30.2	C	**60.5**	**E**
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**73.2**	**E**	**>180**	**F**
14	Lammers Rd / Valpico Rd	Signal	San Joaquin County	**90.6**	**F**	**137.0**	**F**
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	36.1	D	**71.6**	**E**
16	Byron Rd/Grant Line Rd	N/A	San Joaquin County	*Does not exist in scenario*			
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	**>180**	**F**	**>180**	**F**
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	22.3	C	**61.7**	**E**
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	32.7	D	**>180**	**F**
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**
21	Lammers Rd/I-205 WB Ramps	Signal	Caltrans	31.3	C	41.2	D
22	Lammers Rd/I-205 EB Ramps	Signal	Caltrans	2.3	A	21.3	C

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Cumulative Plus Project with Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

This section analyzes the effects of project buildout along with all cumulative development and roadway improvements, including the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing of I-205.

Traffic Forecasts

Figure 16 illustrates the project trip distribution under Cumulative year (2042) conditions with the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing. Project traffic is forecasted to primarily use West Schulte Road, Lammers Road, and the planned Pavilion Parkway in this scenario. Different trip distributions are used for automobile and truck trips, considering truck traffic restrictions on the local roadway network, as predicted by the City of Tracy travel demand model. **Figure 17** presents the assignment of automobile trips to the study intersections and **Figure 18** presents the assignment of truck trips to the study intersections. **Figure 19** presents the total Cumulative year (2042) conditions with the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing peak hour traffic volumes.

Intersection Operations

Table 21 shows the AM and PM peak hour average delay and LOS at study intersections under Cumulative plus Project with Eleventh Street/I-205 Interchange and Pavilion Parkway overcrossing. As shown, the project would worsen already deficient PM peak hour operations at 13 intersections:

- International Parkway/Promontory Parkway
- Hansen Road/Promontory Parkway
- Hansen Road/Schulte Road
- Lammers Road/Byron Road
- Lammers Road/Eleventh Street
- Lammers Road/Capital Park Drive
- Lammers Road/Schulte Road
- Lammers Road/Valpico Road
- Corral Hollow Road/Eleventh Street
- Pavilion Parkway/Schulte Road
- Lammers Road/Promontory Parkway
- Pavilion Parkway/Promontory Parkway
- Pavilion Parkway/Capital Park Drive

It would additionally cause the intersections at International Parkway/Schulte Road and Lammers Road/I-205 WB Ramps to degrade to deficient conditions.

Of the 21 total study intersections, the project would cause the number operating deficiently to worsen from 13 to 15.

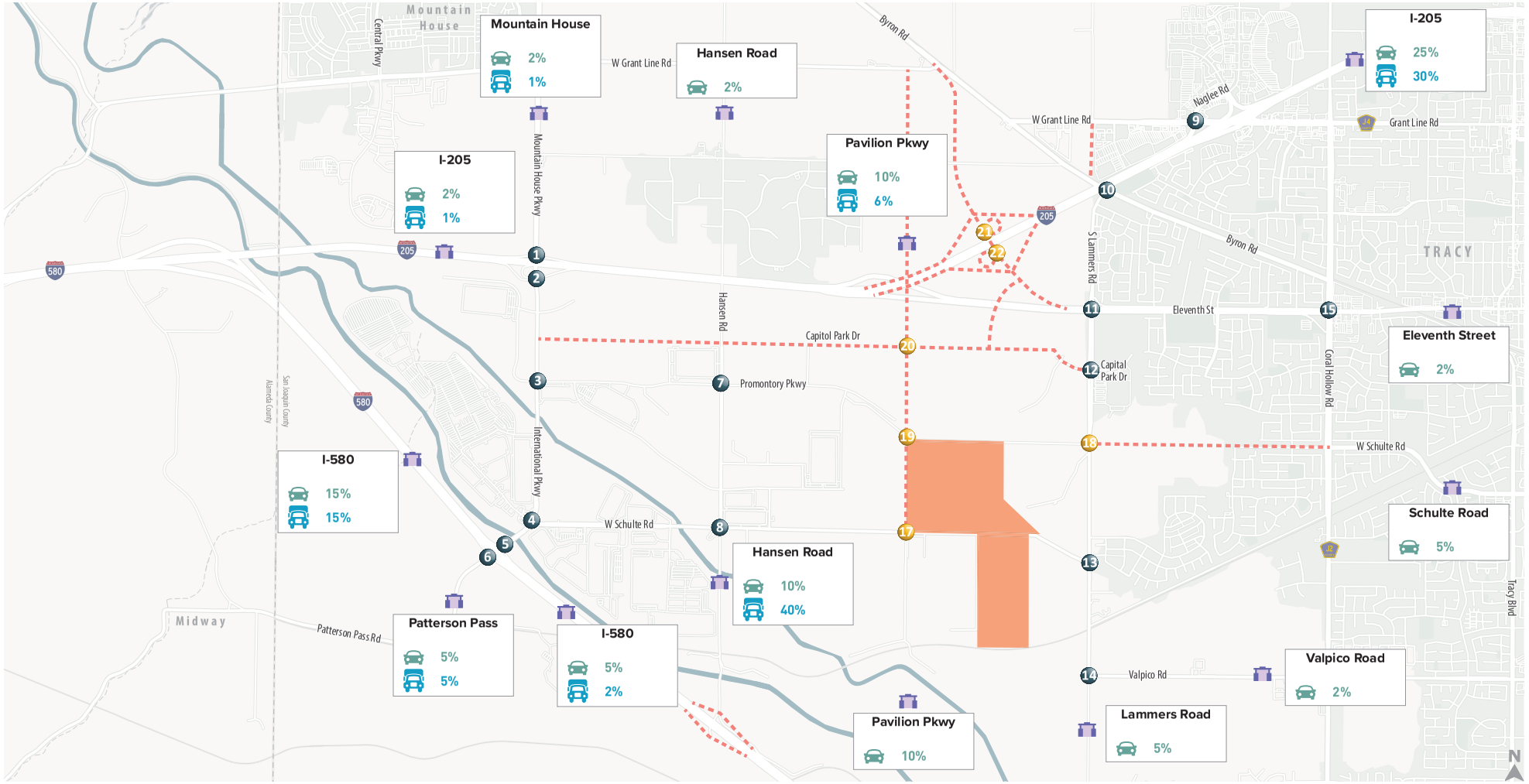


Figure 16

Cumulative Year (2042) with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing Project Trip Distribution

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XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Planned Roadways



Figure 17

Cumulative with I-205/Lammers Interchange and Pavilion Parkway Extension Automobile Project Trip Assignment



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Planned Roadways

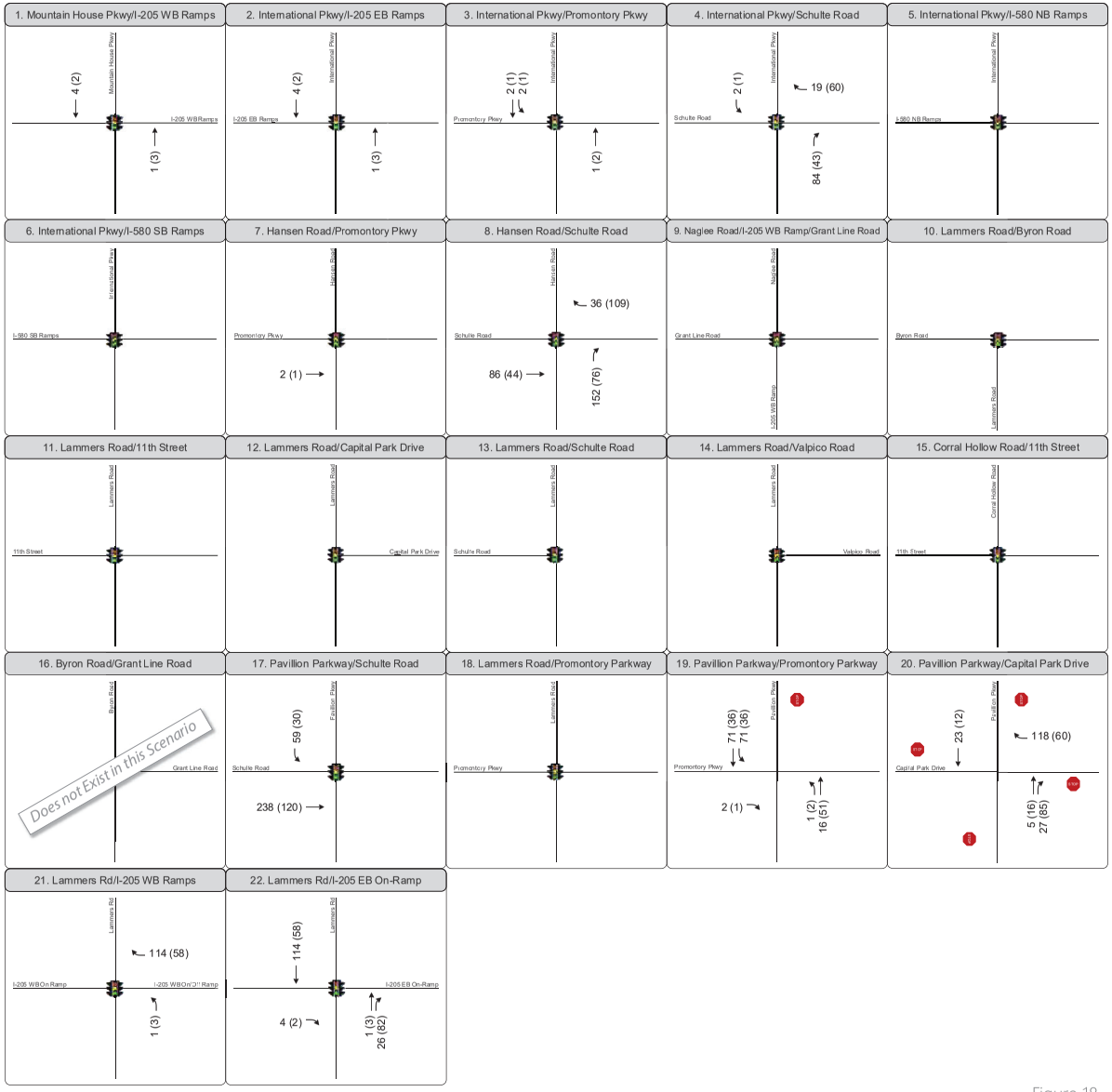


Figure 18

Cumulative with I-205/Lammers Interchange and Pavilion Parkway Extension Truck Project Trip Assignment



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Planned Roadways

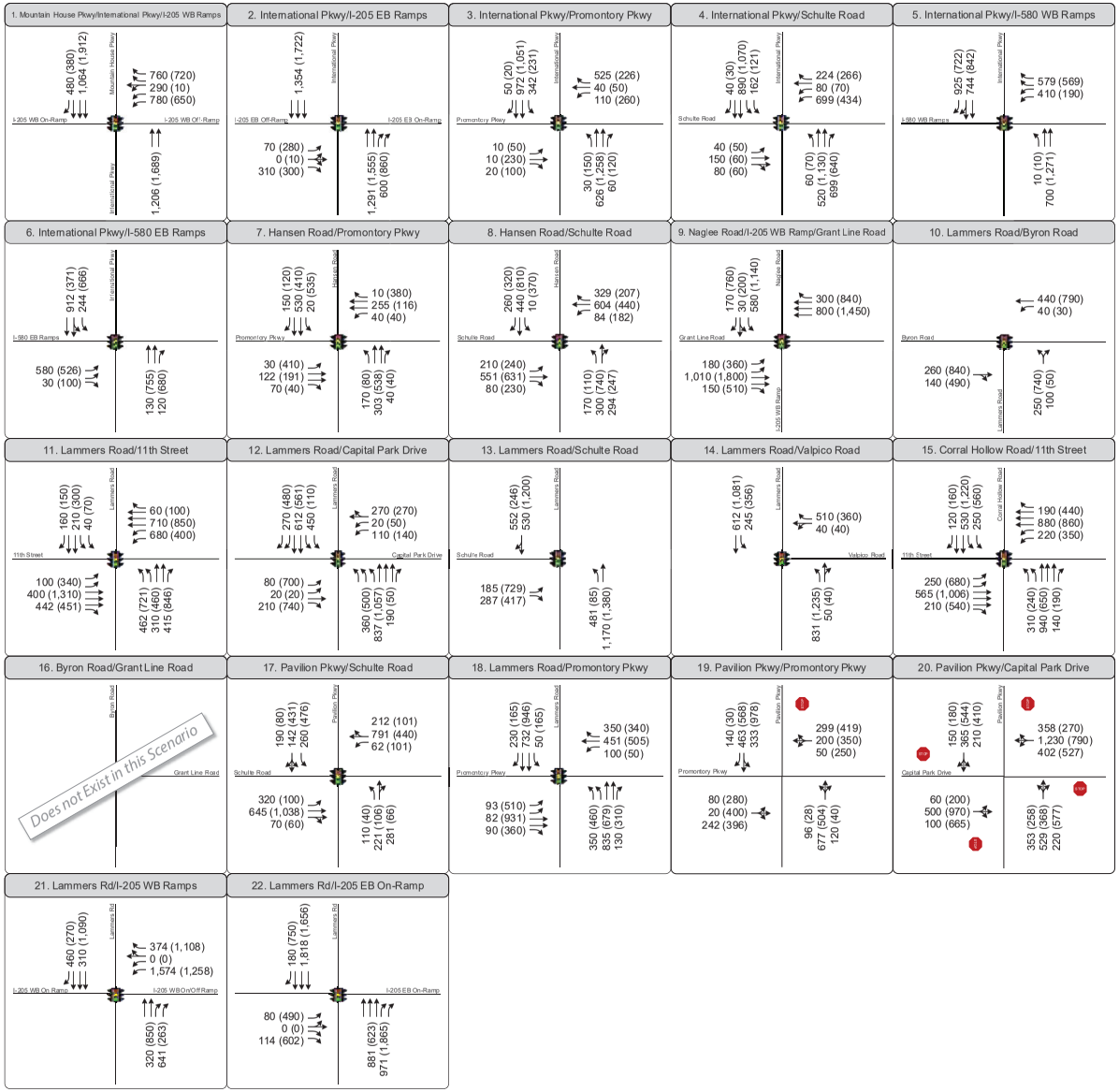


Figure 19

Cumulative Alternative 1 (with I-205/Lammers Interchange) Plus Project Peak Hour Intersection Volumes

Table 21: Intersection Level of Service – Cumulative Plus Project with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing

	Intersection	Traffic Control[1]	Agency	Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing				Cumulative plus Project with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	22.7	C	29.6	D	22.8	C	41.1	D
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	8.9	A	10.0	B	9.4	A	10.6	B
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	48.2	D	**93.9**	**F**	51.8	D	**98.1**	**F**
4	International Pkwy/Schulte Rd	Signal	City of Tracy	48.2	D	38.9	D	**57.0**	**E**	51.0	
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	19.1	B	39.6	C	34.0	C	53.3	D
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	17.6	B	18.6	B	12.9	B	19.3	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	19.4	B	**>180**	**F**	19.7	B	**>180**	**F**
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**139.0**	**F**	**>180**	**F**	**179.2**	**F**	**>180**	**F**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	14.8	B	48.4	D	14.8	B	48.4	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	13.5	B	**>180**	**F**	13.5	C	**>180**	**F**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	33.6	C	**64.2**	**E**	35.6	D	**79.4**	**E**
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	30.2	C	**60.5**	**E**	30.4	C	**71.4**	**E**
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**73.2**	**E**	**>180**	**F**	**112.5**	**F**	**>180**	**F**
14	Lammers Rd / Valpico Rd	Signal	San Joaquin County	**90.6**	**F**	**137.0**	**F**	**104.6**	**F**	**146.0**	**F**
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	36.1	D	**71.6**	**E**	36.4	D	**72.0**	**E**
16	Byron Rd/Grant Line Rd	N/A	San Joaquin County	*Does not exist in scenario*							

	Intersection	Traffic Control[1]	Agency	Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing				Cumulative plus Project with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	**>180**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	22.3	C	**61.7**	**E**	33.0	C	**67.9**	**E**
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	32.7	D	**>180**	**F**	**152.0**	**F**	**>180**	**F**
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**
21	Lammers Rd/I-205 WB Ramps	Signal	Caltrans	31.3	C	41.2	D	35.0	D	**63.4**	**F**
22	Lammers Rd/I-205 EB Ramps	Signal	Caltrans	2.3	A	21.3	C	2.0	A	20.2	C

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

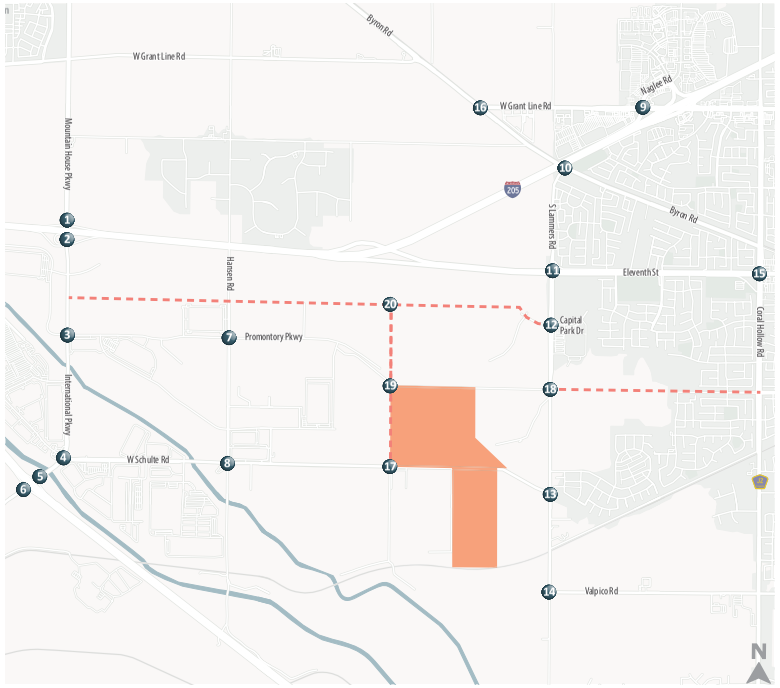
Source: Fehr & Peers, 2024.

Cumulative without Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

This section describes anticipated transportation conditions under Cumulative year 2042 conditions assuming the project site remains vacant (i.e., a "no build" scenario). However, unlike the prior scenario, this assessment does not assume the following improvements:

- Eleventh Street/I-205 Interchange: The Eleventh Street/I-205 Interchange will remain as the existing partial interchange in the cumulative scenario.
- Pavilion Parkway Overcrossing: Pavilion Parkway would not extend northward to cross over I-205.

The intent of this scenario is to model the localized cumulative traffic effects if these improvements are not funded and implemented. **Figure 20** illustrates the peak hour traffic volumes and lane configurations for the scenario.



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Planned Roadways

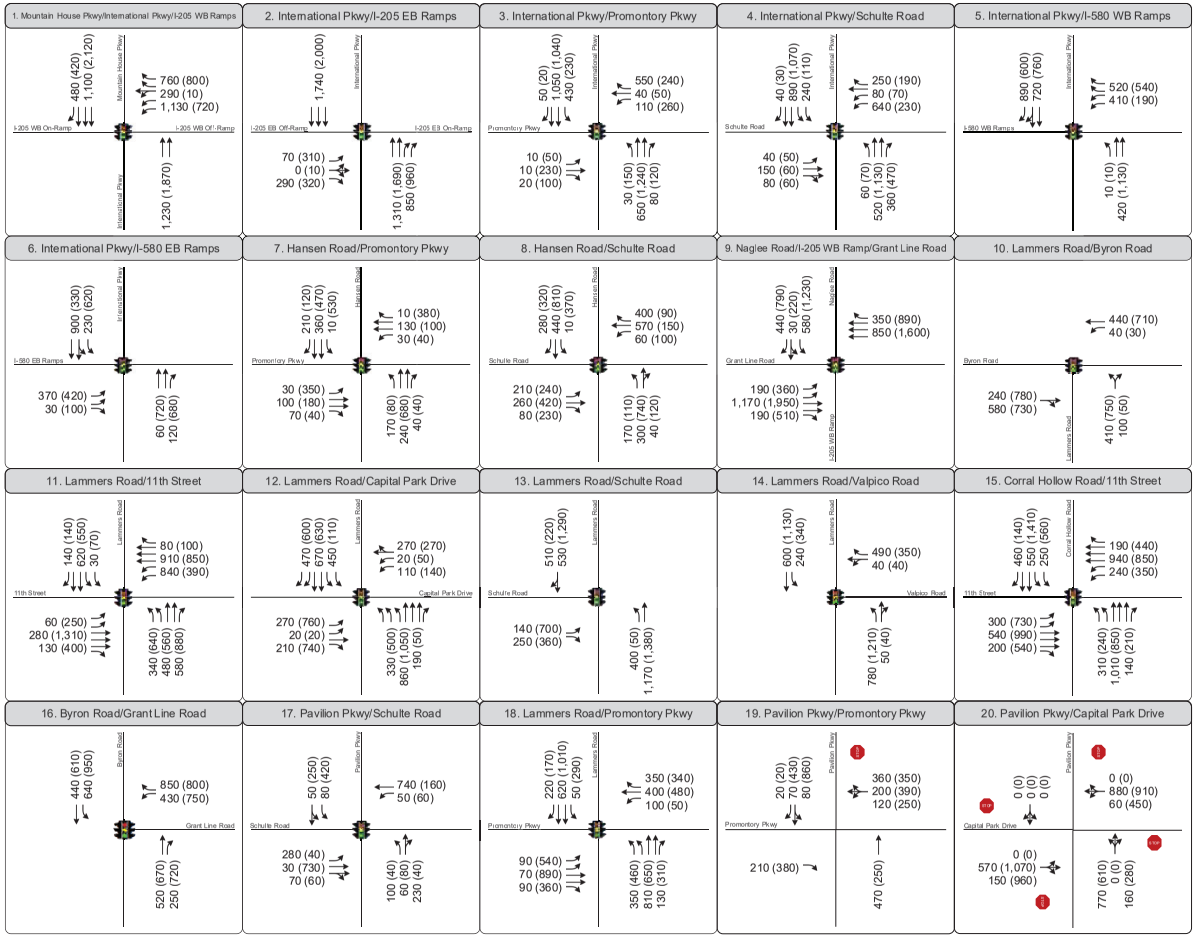


Figure 20

Cumulative Alternative 2 (without I-205/Lammers Interchange) No Project Peak Hour Intersection Volumes

Intersection Operations

Table 22 shows the average delay and LOS at all study intersections under Cumulative No Project conditions without the Eleventh Street/I-205 Interchange and Pavilion Parkway overcrossing for the AM and PM peak hours. This table indicates that 15 study intersections would operate deficiently under this scenario:

- International Parkway/Promontory Parkway
- Hansen Road/Promontory Parkway
- Hansen Road/Schulte Road
- Naglee Road/I-205 WB Ramps/Grant Line Road
- Lammers Road/Byron Road
- Lammers Road/Eleventh Street
- Lammers Road/Capital Park Drive
- Lammers Road/Schulte Road
- Lammers Road/Valpico Road
- Corral Hollow Road/Eleventh Street
- Byron Road/Grant Line Road
- Pavilion Parkway/Schulte Road
- Lammers Road/Promontory Parkway
- Pavilion Parkway/Promontory Parkway
- Pavilion Parkway/Capital Park Drive

Table 22: Intersection Level of Service – Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing

	Intersection	Traffic Control[1]	Agency	AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	30.7	C	50.7	D
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	9.2	A	14.6	B
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	36.3	D	**126.9**	**F**
4	International Pkwy/Schulte Rd	Signal	City of Tracy	51.5	D	37.7	D
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	19.1	B	29.6	C
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	17.6	B	18.7	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	16.8	B	**>180**	**F**
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**100.7**	**F**	**>180**	**F**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	16.0	B	**65.9**	**E**
10	Lammers Rd/Byron Rd	Signal	City of Tracy	**58.9**	**E**	**>180**	**F**
11	Lammers Rd/ Eleventh St	Signal	City of Tracy	50.6	D	**74.1**	**E**
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	32.1	C	**70.4**	**F**
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**77.1**	**E**	**>180**	**F**
14	Lammers Rd / Valpico Rd	Signal	San Joaquin County	**90.6**	**F**	**134.7**	**F**
15	Corral Hollow Rd/ Eleventh St	Signal	City of Tracy	49.0	D	**91.8**	**F**
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	**>180**	**F**	**>180**	**F**
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	**135.9**	**F**	34.1	C
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	28.7	C	**70.8**	**E**
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	**66.1**	**F**	**>180**	**F**
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**>180 (>180)**	**F**	**>180 (>180)**	**F**
21	Lammers Rd/I-205 WB Ramps	Signal	Caltrans	*Does not exist in scenario*			
22	Lammers Rd/I-205 EB Ramps	Signal	Caltrans	*Does not exist in scenario*			

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

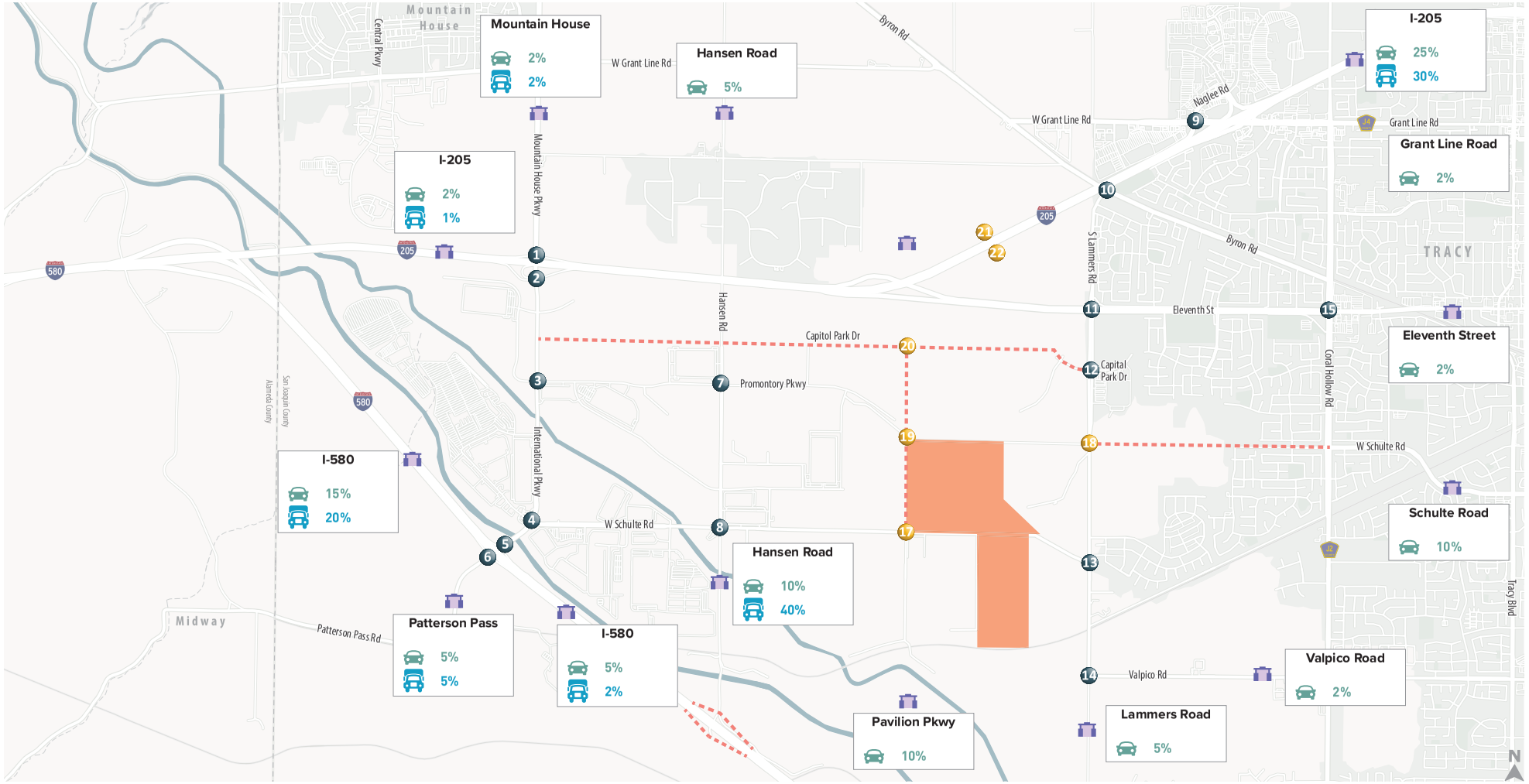
Source: Fehr & Peers, 2024.

Cumulative Plus Project without Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

This section analyzes the effects of project buildout along with all cumulative development and roadway improvements, without the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing of I-205.

Traffic Forecasts

Figure 21 illustrates the project trip distribution under Cumulative year (2042) conditions without the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing. Different trip distributions are used for automobile and truck trips, considering truck traffic restrictions on the local roadway network, as predicted by the City of Tracy travel demand model. **Figure 22** presents the assignment of automobile trips to the study intersections and **Figure 23** presents the assignment of truck trips to the study intersections. **Figure 24** presents the total Cumulative year (2042) conditions without the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing peak hour traffic volumes.



Project Site
Study Intersection
Gateway Location
New Roadway
Planned Study Intersection

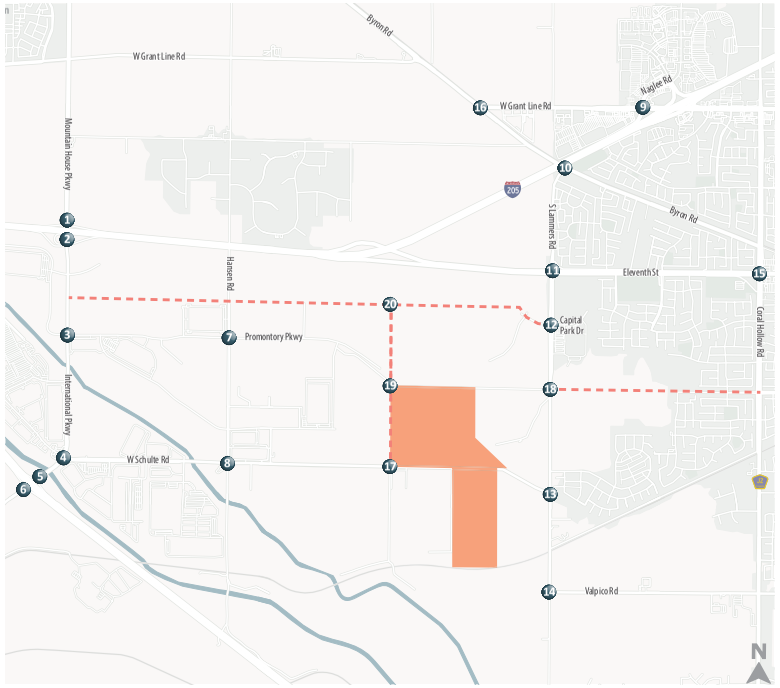
Project Trip Distribution:

Roadway Name
Auto Trip Distro
Truck Trip Distro

Figure 21

Cumulative (2042) without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing Project Trip Distribution

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XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Planned Roadways

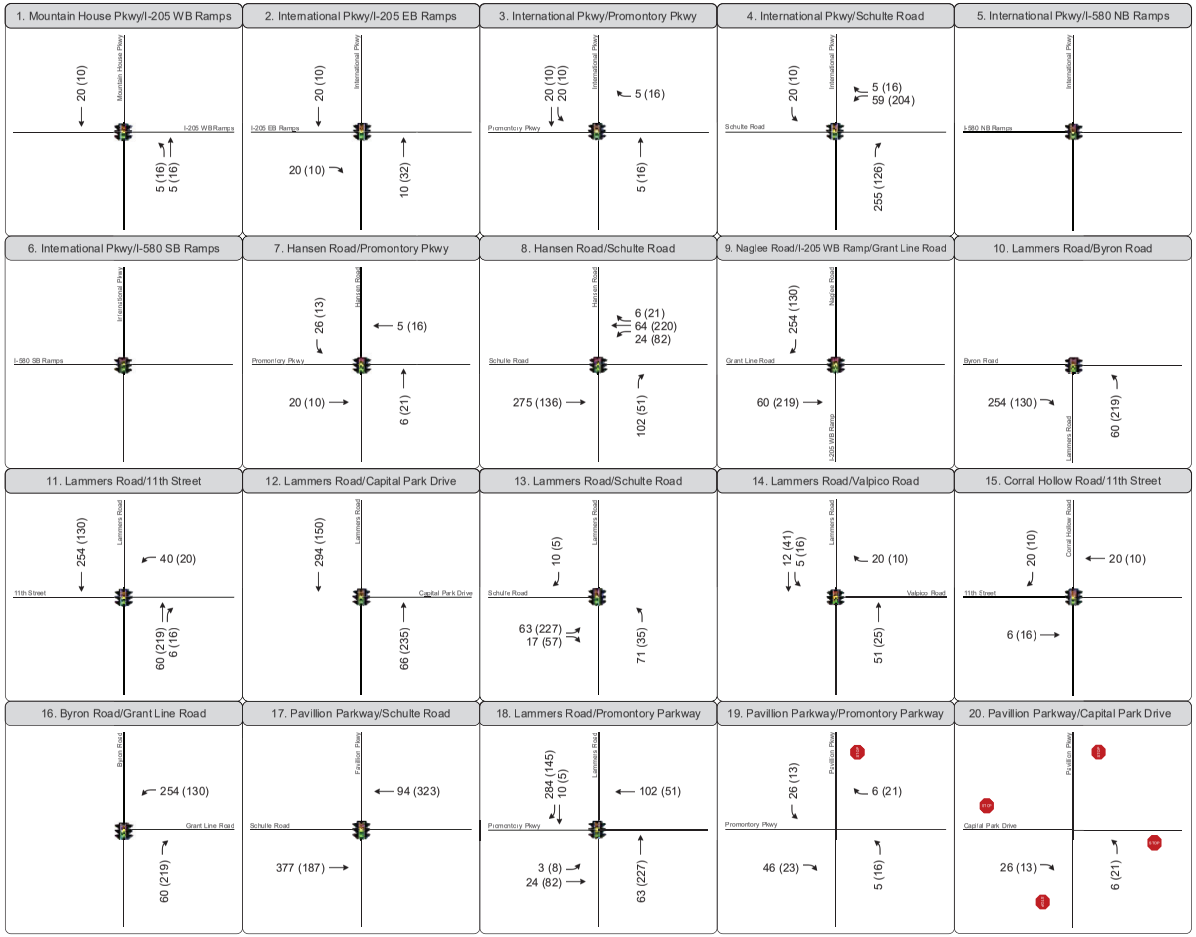
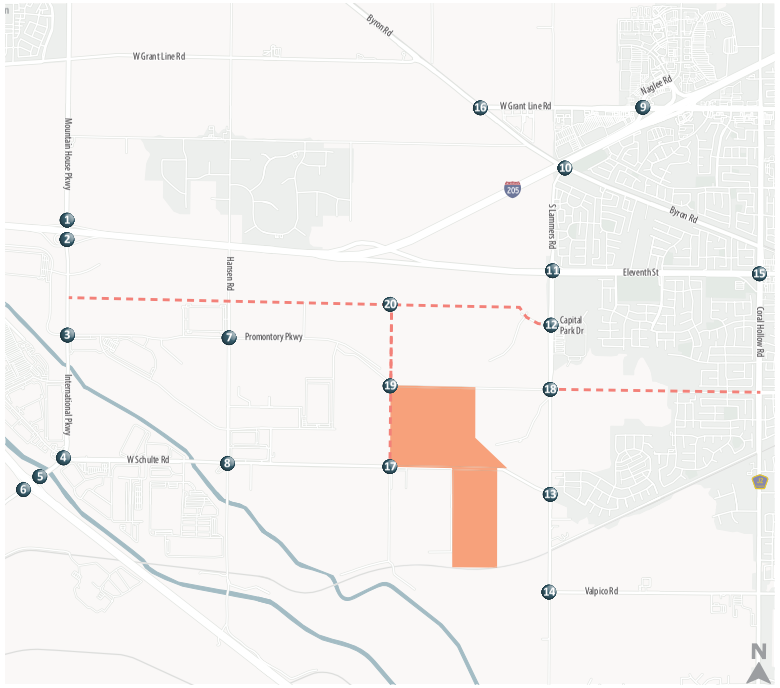


Figure 22

Cumulative without I-205/Lammers Interchange and Pavilion Parkway Extension Automobile Project Trip Assignment



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Planned Roadways

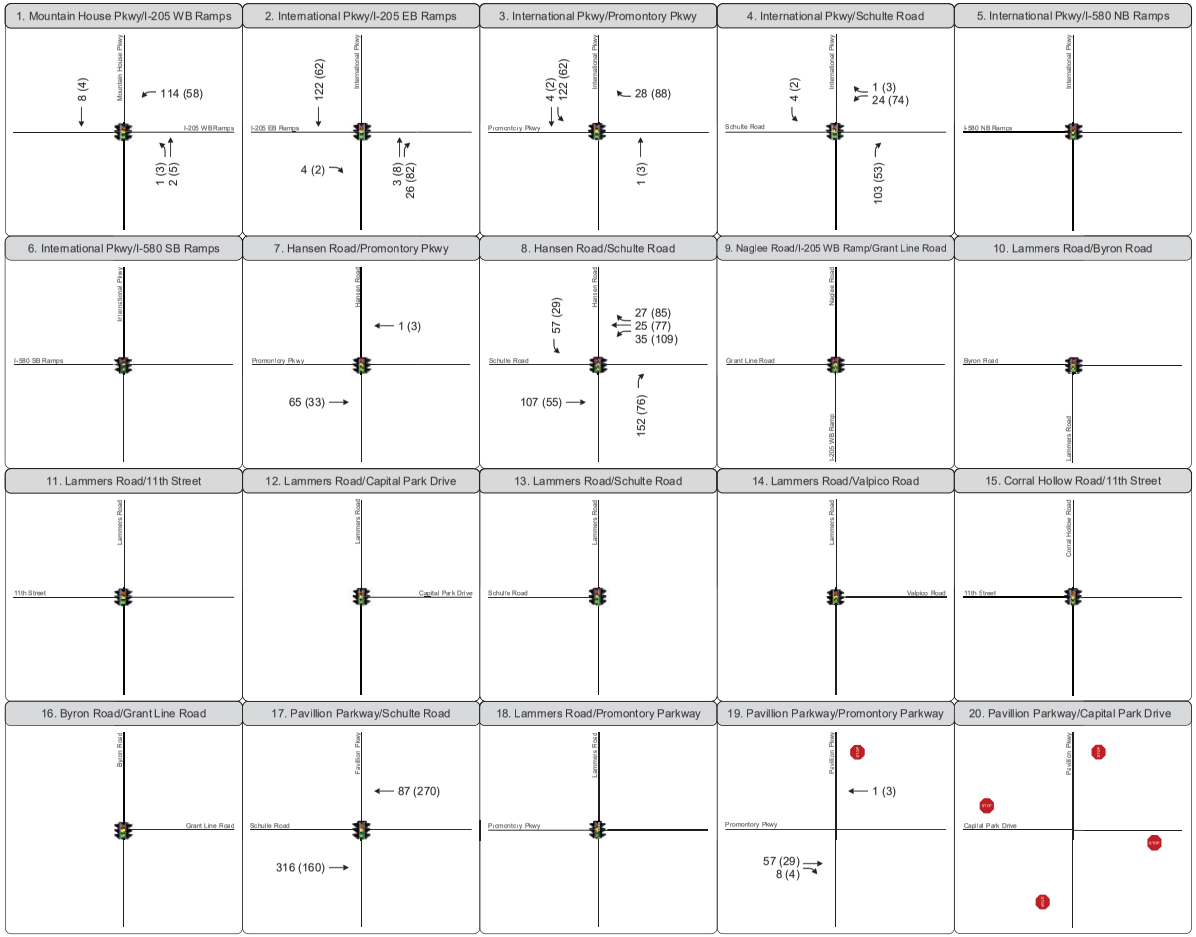
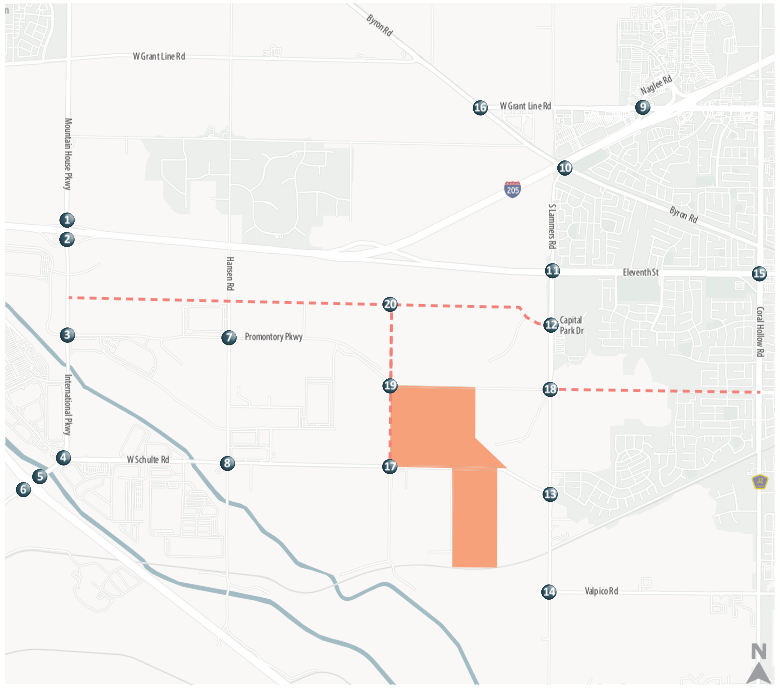


Figure 23

Cumulative without I-205/Lammers Interchange and Pavilion Parkway Extension Truck Project Trip Assignment



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Planned Roadways

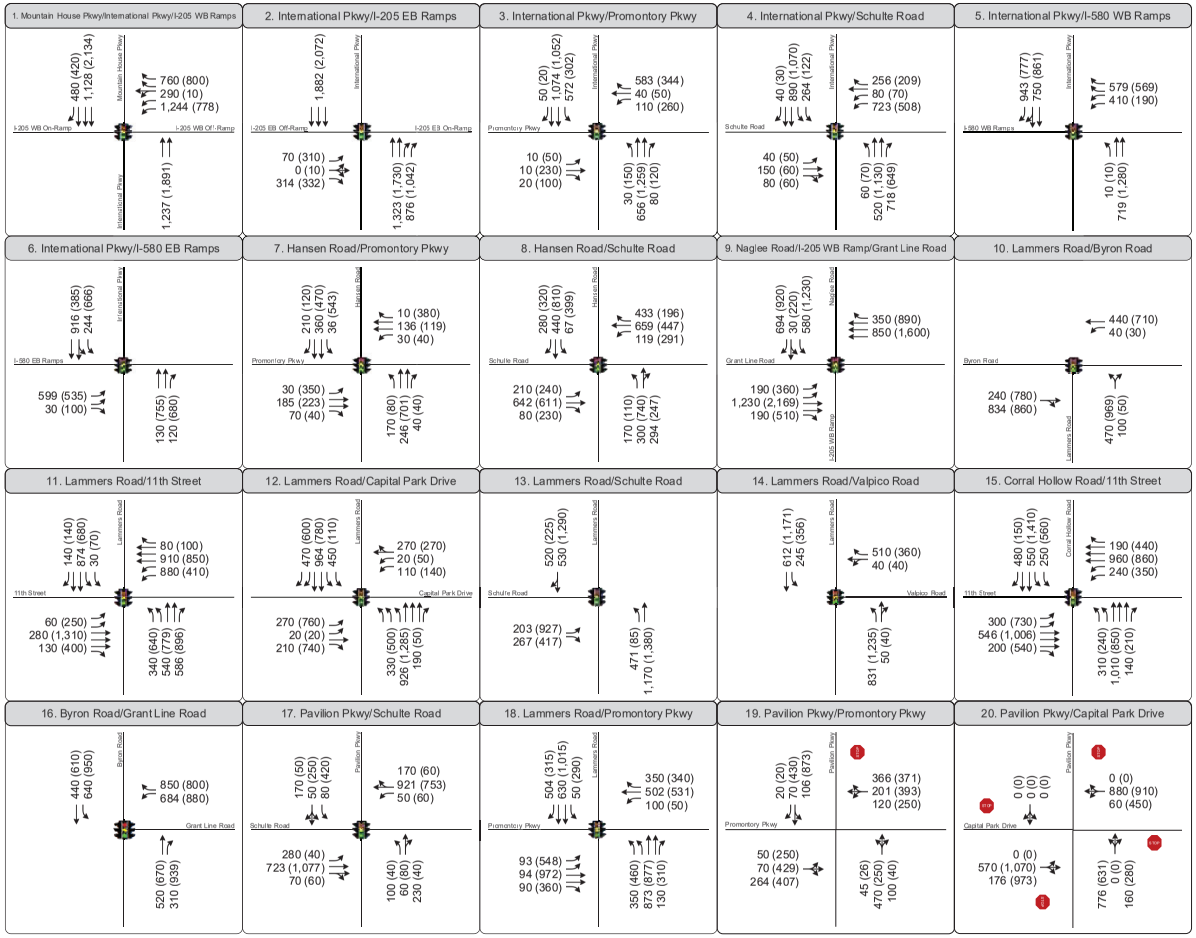


Figure 24

Cumulative Alternative 2 (without I-205/Lammers Interchange) Plus Project Peak Hour Intersection Volumes

Intersection Operations

Table 23 shows the AM and PM peak hour average delay and LOS at study intersections under Cumulative plus Project without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing. As shown, the project would worsen already deficient peak hour operations at 15 intersections:

- International Parkway/Promontory Parkway
- Hansen Road/Promontory Parkway
- Hansen Road/Schulte Road
- Naglee Road/I-205 WB Ramps/Grant Line Road
- Lammers Road/Byron Road
- Lammers Road/Eleventh Street
- Lammers Road/Capital Park Drive
- Lammers Road/Schulte Road
- Lammers Road/Valpico Road
- Corral Hollow Road/Eleventh Street
- Byron Road/Grant Line Road
- Pavilion Parkway/Schulte Road
- Lammers Road/Promontory Parkway
- Pavilion Parkway/Promontory Parkway
- Pavilion Parkway/Capital Park Drive

It would additionally cause the intersections at International Parkway/Schulte Road and International Parkway/I-580 NB Ramps to degrade to deficient conditions. Of the 22 total study intersections, the project would cause the number operating deficiently to worsen from 15 to 17.

Table 23: Intersection Level of Service – Cumulative Plus Project without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing

	Intersection	Traffic Control[1]	Agency	Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing				Cumulative plus Project without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	30.7	C	50.7	D	40	D	52.9	D
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	9.2	A	14.6	B	10	B	17.5	B
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	36.3	D	**126.9**	**F**	**72.2**	**E**	**157.0**	**F**
4	International Pkwy/Schulte Rd	Signal	City of Tracy	51.5	D	37.7	D	**73.1**	**E**	**61.0**	**E**
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	19.1	B	29.6	C	34	C	**56.6**	**E**
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	17.6	B	18.7	B	12.9	B	19.6	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	16.8	B	**170.1**	**F**	17.7	B	**174.0**	**F**
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**100.7**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	16.0	B	**65.9**	**E**	23.4	C	**84.9**	**F**
10	Lammers Rd/Byron Rd	Signal	City of Tracy	**58.9**	**E**	**>180**	**F**	**134.7**	**F**	**>180**	**F**
11	Lammers Rd/ Eleventh St	Signal	City of Tracy	50.6	D	**74.1**	**E**	**72.1**	**E**	**83.6**	**F**
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	32.1	C	**70.4**	**F**	28.8	C	**102.1**	**F**
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**77.1**	**E**	**>180**	**F**	**101.5**	**F**	**>180**	**F**
14	Lammers Rd / Valpico Rd	SSSC	San Joaquin County	**90.6**	**F**	**134.7**	**F**	**107.2**	**F**	**145.7**	**F**
15	Corral Hollow Rd/ Eleventh St	Signal	City of Tracy	49.0	D	**91.8**	**F**	41.0	D	**92.1**	**F**
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	**>180**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**

	Intersection	Traffic Control[1]	Agency	Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing				Cumulative plus Project without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	**135.9**	**F**	34.1	C	**153.2**	**F**	**>180**	**F**
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	28.7	C	**70.8**	**E**	37.6	D	**85.0**	**F**
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	**66.1**	**F**	**>180**	**F**	**70.4**	**F**	**>180**	**F**
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**>180**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**
21	Lammers Rd/I-205 WB Ramps	Signal	Caltrans	*Does not exist in scenario*							
22	Lammers Rd/I-205 EB Ramps	Signal	Caltrans	*Does not exist in scenario*							

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Vehicle Queues

Vehicle queuing is analyzed for freeway off-ramps that could potentially be adversely affected by the project. Traffic volumes, lane configurations, vehicle fleet mix, traffic controls, and other inputs were evaluated within the intersection operations analysis, which then reports the 95th percentile queues for critical movements. This queue, which is often used for design purposes (along with the need for deceleration) represents the length of queued traffic for which there is a five percent or less chance that the actual queue would be greater. Because trucks represent a considerable portion of the vehicle fleet mix in the project vicinity, the proportion of trucks and average lengths are reflected in the analysis. This methodology is consistent with procedures described in the *Highway Capacity Manual (HCM*) (Transportation Research Board, 2022).

Table 24 illustrates the anticipated 95th percentile queue lengths at the study freeway off-ramps for Existing and Existing plus Project conditions. While the project would increase queue lengths at some locations, no queue was found to spill back into the freeway mainline.

Table 24: Existing plus Project – 95th Percentile Queue Lengths – Freeway Off-Ramps

Intersection		Movement	Storage	Existing Conditions		Existing plus Project	
				AM Peak[1]	PM Peak[1]	AM Peak[1]	PM Peak[1]
1	I-205 Westbound Off Ramp	WBL	700	825	225	1,075	300
		WBT					
		WBR	1,500	50	50	50	50
2	I-205 Eastbound Off-Ramp	EBL	1,580	25	25	25	50
		EBT					
		EBR	460	50	75	75	25
5	I-580 Eastbound Off-Ramp at Patterson Pass / International Parkway	EBL	1,000	575	50	575	50
		EBT					
		EBR	350	100	125	150	275
6	I-580 Westbound Off-Ramp at Patterson Pass / International Parkway	WBL	1,100	200	250	800	750
		WBT					
		WBR	70	100	100	25	100

Notes:
1. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
Source: Fehr & Peers, 2024.

Table 25 illustrates the anticipated 95th percentile queue lengths at the study freeway off-ramps for Existing plus Approved Projects and Existing plus Approved Projects plus Project conditions. While the project would increase queue lengths at some locations, no queue was found to spill back into the freeway mainline.

Table 25: Existing plus Approved Projects plus Project – 95th Percentile Queue Lengths – Freeway Off-Ramps

Intersection		Movement	Storage	Existing plus Approved Projects Conditions		Existing plus Approved Projects plus Project	
				AM Peak[1]	PM Peak[1]	AM Peak[1]	PM Peak[1]
1	I-205 Westbound Off Ramp	WBL	720	250	175	300	225
		WBT	1,800	300	200	375	250
		WBR	1,800	100	225	100	250
2	I-205 Eastbound Off-Ramp	EBL	1,580	50	125	50	125
		EBT		75	125	125	125
		EBR	460	75	100	125	100
5	I-580 Eastbound Off-Ramp at Patterson Pass / International Parkway	EBL	1,000	25	25	25	25
		EBR	450	25	25	25	25
6	I-580 Westbound Off-Ramp at Patterson Pass / International Parkway	WBL	1,100	25	25	25	25
		WBR	600	50	100	175	100

Notes:
1. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
Source: Fehr & Peers, 2024.

Table 26 illustrates the anticipated 95th percentile queue lengths at the study freeway off-ramps for the Cumulative with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing scenario and Cumulative with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing plus Project scenario. While the project would increase queue lengths at some locations, no queue was found to spill back into the freeway mainline.

Table 26: Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing – 95th Percentile Queue Lengths – Freeway Off-Ramps

Intersection		Movement	Storage	Cumulative with Eleventh St/I-205 Interchange Conditions		Cumulative with Eleventh St/I-205 Interchange plus Project	
				AM Peak[1]	PM Peak[1]	AM Peak[1]	PM Peak[1]
1	I-205 Westbound Off Ramp	WBL	720	375	250	375	250
		WBT	1,800	450	275	450	275
		WBR	1,800	475	500	475	500
2	I-205 Eastbound Off-Ramp	EBL	1,580	75	150	75	150
		EBT		125	150	125	150
		EBR	460	125	125	125	125
5	I-580 Eastbound Off-Ramp at Patterson Pass / International Parkway	EBL	1,000	25	25	25	25
		EBR	450	125	175	200	200
6	I-580 Westbound Off-Ramp at Patterson Pass / International Parkway	WBL	1,100	25	25	25	25
		WBR	600	25	50	25	50

Notes:
1. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
Source: Fehr & Peers, 2024.

Table 27 illustrates the anticipated 95th percentile queue lengths at the study freeway off-ramps for the Cumulative without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing scenario and Cumulative without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing plus Project scenario. While the project would increase queue lengths at some locations, no queue was found to spill back into the freeway mainline.

Table 27: Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing – 95th Percentile Queue Lengths – Freeway Off-Ramps

Intersection		Movement	Storage	Cumulative without Eleventh St/I-205 Interchange Conditions		Cumulative without Eleventh St/I-205 Interchange plus Project	
				AM Peak[1]	PM Peak[1]	AM Peak[1]	PM Peak[1]
1	I-205 Westbound Off Ramp	WBL	720	600	275	725	300
		WBT	1,800	700	300	875	350
		WBR	1,800	475	575	475	575
2	I-205 Eastbound Off-Ramp	EBL	1,580	75	175	75	175
		EBT		125	175	150	175
		EBR	460	125	150	125	150
5	I-580 Eastbound Off-Ramp at Patterson Pass / International Parkway	EBL	1,000	25	50	25	50
		EBR	450	125	125	205	225
6	I-580 Westbound Off-Ramp at Patterson Pass / International Parkway	WBL	1,100	25	25	25	25
		WBR	600	25	25	25	25

Notes:
1. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
Source: Fehr & Peers, 2024.

7. Intersection Improvement Recommendations

The prior section of this report described the results of the intersection analysis conducted to evaluate the transportation related effects of the proposed project on the local roadway network. Deficient operations were identified at locations wherein levels of service were found to not meet local standards. In this section, the intersection improvements required to bring intersection operations into compliance with those standards are described. The sections below identify the needed improvements under each of the four "with project" scenarios evaluated in this study.

Existing Plus Project Recommended Improvements

Table 28 displays the recommended roadway improvements necessary to restore operations to an acceptable LOS D under Existing plus Project conditions. **Table 29** illustrates the operational effectiveness of these improvements to deficient intersections.

Table 28: Recommended Improvements to Address Operational Deficiencies – Existing Plus Project Buildout Conditions

	Facility	Lead Agency	Description of Improvement(s)
1	Mountain House Pkwy/I-205 WB Ramps	Caltrans	Modify existing signal timing splits.
4	International Pkwy/Schulte Rd	City of Tracy	Modify existing signal timing splits. Add overlap signal for northbound right-turn movement.
5	International Pkwy/I-580 NB Ramps	Caltrans	Implement the programmed interchange improvement (DDI)
6	International Pkwy/I-580 SB Ramps	Caltrans	Implement the programmed interchange improvement (DDI)
10	Lammers Rd/Byron Rd	City of Tracy	Construct eastbound right-turn pocket. Modify existing signal timing splits.
13	Lammers Rd/Schulte Rd	City of Tracy	Construct southbound right-turn pocket. Modify existing signal timing splits.

Source: Fehr & Peers, 2024.

Table 29: Intersection Operational Improvements – Existing Plus Project Buildout Conditions

	Intersection	Traffic Control[1]	Agency	Existing Conditions				Existing Plus Project Conditions							
								Without Improvements				With Improvements[4]			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	34.3	C	12.3	B	**90**	**F**	14.4	B	42.1	D		
4	International Pkwy/Schulte Rd	Signal	City of Tracy	39.5	D	29.0	C	**78.6**	**E**	39.6	D	43.9	D	33.6	C
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	49.4	D	**55.9**	**E**	**>180**	**F**	**106.0**	**F**	15.4	B	17.8	B
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	34.3	C	47.6	D	**>180**	**F**	**>180**	**F**	22.1	C	38.7	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	9.7	B	**67.4**	**E**	15.6	B	**168.3**	**F**	11.9	B	18.5	B
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	20.6	C	11.9	B	**132.6**	**F**	28.4	C	33.5	C	19.2	B

Notes:
1. Signal = Signalized
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. The overall average intersection control delay is reported in seconds per vehicle for signalized intersections. For side-street stop controlled intersections, the average control delay/for the movement with the greatest delay is shown in parentheses, while the average delay/for the entire intersection is shown not in parentheses.
4. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Existing Plus Approved Projects Plus Project Recommended Improvements

Table 30 displays the recommended roadway improvements necessary to restore operations to acceptable levels under Existing plus Approved Projects plus Project conditions. **Table 31** shows the operational effectiveness of these improvements on deficient intersections.

Table 30: Recommended Improvements to Address Operational Deficiencies – Existing Plus Approved Projects Plus Project Conditions

Facility		Lead Agency	Description of Improvement(s)
3	International Pkwy/Promontory Pkwy	City of Tracy	Construct a second southbound left-turn lane. Modify existing signal timing cycle length.
4	International Pkwy/Schulte Rd	City of Tracy	Modify existing signal timing splits. Add overlap signal for northbound right-turn movement.
8	Hansen Rd/Schulte Rd	City of Tracy	Construct following geometries: • Second eastbound left-turn lane • Second westbound left-turn lane • Second westbound through lane • Second southbound left-turn lane • Northbound right-turn pocket Modify existing signal timing splits and cycle length. Add overlap signal for northbound right-turn movement.
10	Lammers Rd/Byron Rd	City of Tracy	Construct eastbound right-turn pocket. Modify existing signal timing splits.
13	Lammers Rd/Schulte Rd	City of Tracy	Construct southbound right-turn pocket and second southbound through lane. Modify existing signal timing splits and cycle length.
16	Byron Rd/Grant Line Rd	San Joaquin County	Construct second southbound left-turn pocket. Modify existing signal timing splits and cycle length.
18	Lammers Rd/Promontory Pkwy	San Joaquin County	Construct northbound left-turn pocket and southbound right-turn pocket. Modify existing signal timing splits and cycle length.
20	Pavilion Pkwy/Capital Park Dr	City of Tracy	Install signal. Construct following geometries: • Northbound right-turn pocket • Eastbound right-turn pocket • Westbound left-turn pocket

Source: Fehr & Peers, 2024.

Table 31: Intersection Operational Improvements – Existing Plus Approved Projects Plus Project Buildout Conditions

	Intersection	Traffic Control[1]	Agency	Existing No Project Conditions				Existing Plus Approved Projects Plus Project Conditions							
								Without Improvements				With Improvements[4]			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[2]	LOS
3	International Pkwy/ Promontory Pkwy	Signal	City of Tracy	53.2	D	52.8	D	**>180**	**F**	**78.5**	**E**	29.2	C	49.2	D
4	International Pkwy/ Schulte Rd	Signal	City of Tracy	38.0	D	31.5	C	**55.8**	**E**	38.6	D	52.6	D	36.3	D
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	29.5	C	**65.4**	**E**	**89.8**	**F**	**>180**	**F**	34.3	C	37.9	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	15.9	B	**58.5**	**E**	46.2	D	118.4	F	12.9	B	29.8	C
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	25.3	C	**59.8**	**E**	46.2	D	**118.4**	**F**	12.9	B	31.6	C
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	22.9	C	**88.3**	**F**	47.1	D	**101.1**	**F**			41.7	D
18	Lammers Rd/ Promontory Pkwy	Signal	San Joaquin County	10.6	B	26.8	C	**60.4**	**E**	42.4	D	13.9	B	48.5	D
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**115.1 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	20.5	C	42.7	D

Notes:

1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Street Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. The overall average intersection control delay is reported in seconds per vehicle for signalized intersections. For side-street stop controlled intersections, the average control delay/for the movement with the greatest delay is shown in parentheses, while the average delay/for the entire intersection is shown not in parentheses.'
4. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project Recommended Improvements

Table 32 displays the recommended roadway improvements necessary to restore operations to an acceptable level under the Cumulative with Eleventh Street/I-205 Interchange and Pavilion Parkway plus Project scenario. **Table 33** shows the operational effectiveness of these improvements on deficient intersections.

Table 32: Recommended Improvements to Address Operational Deficiencies – Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project Conditions

Facility		Lead Agency	Description of Improvement(s)
3	International Pkwy/Promontory Pkwy	City of Tracy	Construct a second southbound left-turn pocket and a second westbound left-turn lane. Modify existing signal timing and cycle length.
7	Hansen Rd/Promontory Pkwy	City of Tracy	Construct following geometries: • Second southbound left-turn pocket • Second eastbound left-turn pocket • One eastbound shared through-left lane. Add overlap signal for westbound right-turn. Modify eastbound and eastbound signal timing phase to split phases. Modify existing signal timing splits and cycle length.
8	Hansen Rd/Schulte Rd	City of Tracy	Construct following geometries: • Northbound right-turn pocket • Convert existing northbound shared through-right lane to a through lane • Second northbound through lane • Second eastbound through lane • Second Eastbound left-turn pocket • Second westbound through lane • Westbound left-turn pocket • Second southbound through lane • Southbound left-turn pocket Modify existing signal timing splits and cycle length.
10	Lammers Rd/Byron Rd	City of Tracy	Construct eastbound right-turn pocket and northbound right-turn pocket. Modify existing signal timing splits and cycle length.
11	Lammers Rd/ Eleventh St	City of Tracy	Construct third northbound left-turn pocket. Modify existing signal timing splits and cycle length.
12	Lammers Rd/Capital Park Dr	City of Tracy	Add overlap signal for eastbound right-turn. Modify existing signal timing splits and cycle length.

	Facility	Lead Agency	Description of Improvement(s)
13	Lammers Rd/Schulte Rd	City of Tracy	Construct following geometries: • Southbound right-turn pocket • Convert existing southbound shared through-right lane to through lane • Second southbound through lane • Second northbound through lane Modify existing signal timing splits.
14	Lammers Rd/Valpico Rd	San Joaquin County	Construct second southbound through lane and second northbound through lane. Modify existing signal timing splits and cycle length. •
15	Corral Hollow Rd/Eleventh St	City of Tracy	Construct third southbound through lane, eastbound left-turn pocket. Add overlap signal for westbound right-turn. Modify existing signal timing splits and cycle length.
17	Pavilion Parkway/Schulte Rd	City of Tracy	Construct following geometries: • Northbound ○ One left-turn pocket ○ Two through lanes ○ One right-turn pocket • Southbound ○ Two left-turn pockets ○ One through lane ○ One right-turn pocket • Eastbound ○ One left-turn pocket ○ One through lane ○ One shared through-right lane • Westbound ○ One left-turn pocket ○ One through lane ○ One shared through-right lane Modify signal timing and cycle lengths.
18	Lammers Rd/Promontory Pkwy	San Joaquin County	Construct second westbound through lane. Modify signal timing and cycle lengths.

	Facility	Lead Agency	Description of Improvement(s)
19	Pavilion Pkwy/Promontory Pkwy	City of Tracy	Install signal. Construct following geometries: • Northbound ○ One left-turn pocket ○ One shared through-right lane • Southbound ○ Two left-turn pockets ○ One shared through-right lane • Eastbound ○ One left-turn pocket ○ Two through lanes ○ One right-turn pocket • Westbound ○ One left-turn pocket ○ Two through lanes ○ One right-turn pocket
20	Pavilion Parkway/Capital Park Dr	City of Tracy	Install signal. Construct following geometries: • Northbound ○ Two left-turn pockets ○ Two through lanes ○ One right-turn pocket • Southbound ○ Two left-turn pockets ○ Two through lanes ○ One right-turn pocket • Eastbound ○ One left-turn pocket ○ Three through lanes ○ Two right-turn pockets • Westbound ○ Two left-turn pockets ○ Two through lanes ○ One right-turn pocket Add overlap signal for eastbound and westbound right-turn.

Source: Fehr & Peers, 2024.

Table 33: Intersection Operational Improvements – Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project Conditions

	Intersection	Traffic Control[1]	Agency	Cumulative No Project Conditions				Cumulative Plus Project Conditions							
								Without Improvements				With Improvements[4]			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
3	International Pkwy/ Promontory Pkwy	Signal	City of Tracy	48.2	D	**93.9**	**F**	51.8	D	**98.1**	**F**			52.9	D
7	Hansen Rd/Promontory Pkwy	Signal	City of Tracy	19.4	B	**>180**	**F**	57.0	E	51.0	D	50.8	D		
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**139.0**	**F**	**>180**	**F**	**179.2**	**F**	**>180**	**F**	39.1	D	53.5	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	13.5	B	**>180**	**F**	13.5	B	**218.2**	**F**			52.0	D
11	Lammers Rd/ Eleventh St	Signal	City of Tracy	33.6	C	**64.2**	**E**	35.6	D	**79.4**	**E**			53.5	D
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	30.2	C	**60.5**	**E**	30.4	C	**71.4**	**E**			51.7	D
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**73.2**	**E**	**>180**	**F**	**112.5**	**F**	**>180**	**F**	17.3	B	51.2	D
14	Lammers Rd/Valpico Rd	SSSC	San Joaquin County	**90.6**	**F**	**137.0**	**F**	**104.6**	**F**	**146.0**	**F**	27.5	C	31.2	C
17	Pavilion Parkway/Schulte Rd	Signal	City of Tracy	**>180**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**	53.2	D	47.4	D
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	27.8	C	**61.7=**	**E**	33.0	C	**67.9**	**E**			47.4	D
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	32.7	D	**>180**	**F**	**152.0**	**F**	**>180**	**F**	23.6	C	51.9	D
20	Pavilion Parkway/Capital Park Dr	AWSC	City of Tracy	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	49.2	D	53.1	D

Notes:

1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Street Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. The overall average intersection control delay is reported in seconds per vehicle for signalized intersections. For side-street stop-controlled intersections, the average control delay/for the movement with the greatest delay is shown in parentheses, while the average delay/for the entire intersection is shown not in parentheses.
4. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project (Buildout) Recommended Improvements

Table 34 displays the recommended roadway improvements necessary to restore operations to an acceptable level under the Cumulative without Eleventh Street/I-205 Interchange and Pavilion Parkway overcrossing Plus Project scenario. **Table 35** shows the operational effectiveness of these improvements on deficient intersections.

Table 34: Recommended Improvements to Address Operational Deficiencies – Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project Conditions

Facility		Lead Agency	Description of Improvement(s)
3	International Pkwy/Promontory Pkwy	Caltrans	Construct second southbound left-turn pocket and third northbound through lane. Convert one westbound right-turn pocket to second southbound left-turn pocket.
4	International Pkwy/Schulte Rd	City of Tracy	Modify existing signal timing splits and cycle length. Add overlap signal for northbound and westbound right-turn.
5	International Pkwy/I-580 NB Ramps	Caltrans	Modify existing signal timing splits.
7	Hansen Rd/Promontory Pkwy	City of Tracy	Construct second southbound left-turn and second eastbound left-turn pockets. Add overlap signal for westbound right-turn. Modify existing signal timing splits and cycle length.
8	Hansen Rd/Schulte Rd	City of Tracy	Construct following geometries: • Northbound right-turn pocket • Convert existing northbound shared through-right lane to through lane • Third northbound through lane • Second southbound through lane • Second southbound left-turn lane • Second eastbound through lane • Second eastbound left-turn lane • Second westbound through lane • Second westbound left-turn lane
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Caltrans	Construct third eastbound through lane.
10	Lammers Rd/Byron Rd	City of Tracy	Construct eastbound right-turn pocket and northbound left-turn pocket. Modify existing signal timing splits and cycle length.
11	Lammers Rd/ Eleventh St	City of Tracy	Construct third northbound left-turn pocket, third southbound through lane, and third westbound left-turn pocket. Modify existing signal timing splits and cycle length.

	Facility	Lead Agency	Description of Improvement(s)
12	Lammers Rd/Capital Park Dr	City of Tracy	Construct westbound right-turn pocket and second eastbound right-turn pocket. Add overlap signal for southbound and eastbound right-turn.
13	Lammers Rd/Schulte Rd	City of Tracy	Construct second southbound through lane, second eastbound left-turn pocket, and eastbound right-turn lane. Modify existing signal timing splits and cycle length.
14	Lammers Rd/Valpico Rd	San Joaquin County	Construct second southbound through lane and second northbound through lane. Modify existing signal timing splits and cycle length. •
15	Corral Hollow Rd/Eleventh St	City of Tracy	Construct third southbound through lane, third southbound left-turn pocket, and third eastbound left-turn pocket. Modify existing signal timing splits and cycle length.
16	Byron Rd/Grant Line Rd	San Joaquin County	Construct northbound shared through-right lane, second southbound left-turn pocket, second westbound right-turn pocket, second westbound left-turn pocket. Modify existing signal timing splits and cycle length.
17	Pavilion Parkway/Schulte Rd	City of Tracy	Construct following geometries: • Northbound ○ One left-turn pocket ○ One shared through-right lane • Southbound ○ One left-turn pocket ○ One through lane ○ One right-turn pocket • Eastbound ○ One left-turn pocket ○ One through lane ○ One shared through-right lane • Westbound ○ One left-turn pocket ○ One through lane ○ One shared through-right lane Modify signal timing and cycle lengths.
18	Lammers Rd/Promontory Pkwy	San Joaquin County	Construct second westbound through lane and third westbound through lane. Modify signal timing and cycle lengths.

	Facility	Lead Agency	Description of Improvement(s)
19	Pavilion Pkwy/Promontory Pkwy	City of Tracy	Install signal. Construct following geometries: • Northbound ○ One left-turn pocket ○ One shared through-right lane • Southbound ○ Three left-turn pockets ○ One through lane ○ One shared through-right lane • Eastbound ○ One left-turn pocket ○ Two through lanes ○ One right-turn pocket • Westbound ○ One left-turn pocket ○ Two through lanes ○ One right-turn pocket
20	Pavilion Parkway/Capital Park Dr	City of Tracy	Install signal. Construct following geometries: • Northbound ○ Two left-turn pockets ○ One right-turn pocket • Eastbound ○ Two through lanes ○ Two right-turn pockets • Westbound ○ One left-turn pocket ○ Two through lanes

Source: Fehr & Peers, 2024.

Table 35: Intersection Operational Improvements – Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project Conditions

	Intersection	Traffic Control[1]	Agency	Cumulative No Project Conditions				Cumulative Plus Project Conditions							
								Without Improvements				With Improvements[3]			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
3	International Pkwy/Promontory Pkwy	Signal	Caltrans	36.3	D	**126.9**	**F**	**72.2**	**E**	**157**	**F**	28.2	C	50.2	D
4	International Pkwy/Schulte Rd	Signal	City of Tracy	51.5	D	37.7	D	**73.1**	**E**	**61**	**E**	52.0	D	53.9	D
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	19.1	B	29.6	C	34	C	**56.6**	**E**			37.7	D
7	Hansen Rd/Promontory Pkwy	Signal	City of Tracy	16.8	B	**170.1**	**F**	17.7	B	**174**	**F**			52.5	D
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**100.7**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**	52.1	D	52.1	D
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	16.0	B	**59.8**	**E**	23.4	C	**84.9**	**F**			46.4	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	**58.9**	**E**	**>180**	**F**	**134.7**	**F**	**>180**	**F**	11.4	B	25.1	C
11	Lammers Rd/ Eleventh St	Signal	City of Tracy	50.6	D	**74.1**	**E**	**72.1**	**E**	**83.6**	**F**	37.2	D	48.0	D
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	32.1	C	**70.4**	**F**	28.8	C	**102.1**	**F**			52.3	D
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**77.1**	**E**	**>180**	**F**	**101.5**	**F**	**>180**	**F**	29.5	C	31.0	D
14	Lammers Rd/Valpico Rd	SSSC	San Joaquin County	**90.6**	**F**	**134.7**	**F**	**107.2**	**F**	**145.7**	**F**	26.0	C	31.0	D
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	49.0	D	**9.18**	**F**	41.0	D	**92.1**	**F**			52.9	D
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	**>180**	**F**	**>180**	**F**	**>180**	**F**	**<180**	**F**	20.7	C	53.7	D
17	Pavilion Parkway/Schulte Rd	Signal	City of Tracy	**135.9**	**F**	34.1	C	**153.2**	**F**	**>180**	**F**	51.3	D	54.4	D
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	28.7	C	**70.8**	**E**	37.6	D	**85.0**	**F**			51.2	D
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	**66.1**	**F**	**>180**	**F**	**70.4**	**F**	**>180**	**F**	29.5	C	44.2	D
20	Pavilion Parkway/Capital Park Dr	Signal	City of Tracy	**>180**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**	17.7	B	53.2	D

Notes:
1. Signal = Signalized, SSSC = Side-Street Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.

3. The overall average intersection control delay is reported in seconds per vehicle for signalized intersections. For side-street stop-controlled intersections, the average control delay/for the movement with the greatest delay is shown in parentheses, while the average delay/for the entire intersection is shown not in parentheses.
4. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

8. Impacts and Mitigation Measures

This chapter summarizes the CEQA related environmental impacts of the proposed project related to transportation. For each identified significant impact, a mitigation measure is proposed.

Vehicle Miles Traveled

Impact TR-1: Significant Adverse VMT Impacts

As shown in **Table 36**, the project's daily VMT per employee is substantial above the unincorporated countywide average VMT per employee under baseline conditions. The project's baseline VMT per employee of 41.5 is approximately 26.5 percent above the relevant threshold of 32.8 (85 percent of the unincorporated countywide average. This impact is a **significant adverse impact** according to the County's standards.

Table 36: Baseline Daily VMT Per Employee

Scenario	HBW Auto VMT per Employee [1]
Unincorporated Countywide Average – Baseline	38.6 VMT per employee
85% of Unincorporated Countywide Average – Baseline	32.8 VMT per employee
Project VMT, Baseline Conditions	41.5 VMT per employee

1. Calculated using the 2016 SJCOG travel demand model. VMT shown is only associated with employee travel between the project and home.

Mitigation TR-1: *The project applicant shall implement transportation demand management (TDM) strategies that are considered feasible and will have a material effect on reducing VMT.*

The project applicant shall develop a TDM Plan for the proposed project, including any anticipated phasing, and shall submit the TDM Plan to the County for review and approval. The TDM Plan shall identify trip reduction strategies as well as mechanisms for funding and overseeing the delivery of trip reduction programs and strategies. The TDM Plan shall be designed to achieve the maximum feasible trip reduction. The TDM Plan shall describe which measures apply to the entire site and which, if any, apply on a parcel-by-parcel basis.

The TDM plan shall indicate the estimated vehicle trip reduction (VTR) for each strategy proposed based on published research or guidelines. For TDM measures containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. For VTR strategies involving physical improvements, the project shall obtain the necessary permits/approvals from the County and install the improvements prior to the completion of the project. Applicant will resubmit TDM Plan if there is a

material adverse impact resulting from a change from the permitted uses (i.e., unit count, use type, phasing).

Mitigation Measure Effectiveness

Transportation Demand Management strategies work best when they are applied at a city or regional scale and when the travel characteristics of the users or tenants of a site are known. The literature documenting the effectiveness of land use project-level TDM strategies is generally related to suburban and urban areas. Studies[4] show the maximum VMT reduction associated with the implementation of TDM strategies that can be expected for a warehousing and logistics project of the kind proposed in this type of environment is 5 to 10 percent. CEQA requires that feasible mitigation measures be implemented to reduce a project's level of impact. Sufficient TDM reduction strategies do not exist to reduce the project's daily VMT per employee by 26.5 percent as required to mitigate the impact.

VMT forecasts presented in this assessment do not consider some foreseeable travel changes, including increased use of transportation network companies, such as Uber and Lyft, nor the potential for autonomous vehicles. Although the technology for autonomous vehicles is expected to be available over the planning horizon, the federal and state legal and policy frameworks are uncertain. Initial modeling of an autonomous future indicates that with automated and connected vehicles, the capacity of the existing transportation system would increase as vehicles can travel closer together; however, these efficiencies are only realized when a high percentage of vehicles on the roadway are automated and connected. There is also the potential for vehicle travel to increase with zero-occupancy vehicles on the roadway. Additionally, the VMT forecasts are based on a model that was developed using data reflecting travel conditions before COVID-19; the effects of COVID-19 may be a near-term suppression in travel activity based on reduced economic output and permanently modified travel habits.

Mitigation Monitoring

The TDM Plan shall require regular periodic evaluation of the program to determine if the program goals in reducing automobile travel are satisfied and to assess the effectiveness of the various strategies implemented. Site management shall conduct annual travel surveys and driveway counts to monitor the amount of automobile travel generated by the project. The goal of the TDM Plan and programs shall be to reduce the project's daily VMT per employee by five percent. Based on the results of the surveys, the TDM programs shall be increased if these requirements are not met. Annual travel surveys and driveway counts (TDM program monitoring) shall be conducted for the first two years following project occupancy. The results of the monitoring program and travel surveys shall be submitted to the County for review and approval. If the program VMT reduction goals are met in the first two years, annual monitoring and surveys shall be suspended. If the program's VMT reduction goals are not satisfied, site management shall prepare and submit for County approval a corrective action plan. The corrective action plan shall detail the additional TDM measures to be implemented on site and their expected travel/mode split reduction.

[4] *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (CAPCOA), California Air Pollution Control Officers Association, 2021.

Additional annual travel surveys and driveway counts shall be conducted for the two years following the implementation of the corrective action plan to determine if the program's VMT reduction goals are satisfied.

Significance after Mitigation: Significant and Unavoidable

Bicycle and Pedestrian Facilities

Impact TR-2: Bicycle and Pedestrian Facilities – Disrupt Facilities, Conflict with Policies, or Generate Unmet Demand

The project would make improvements to the existing bicycle and pedestrian network in the study area. It would install Class I shared use paths on all major circulation streets within the project area, including West Schulte Road, Pavilion Parkway, and Promontory Parkway. Sidewalks would be provided along project frontages and connect to the surrounding public pedestrian network.

The project would not eliminate or adversely affect an existing or planned bikeway or pedestrian facility in a way that would discourage its use. It would also not conflict with any adopted policies, plans, or programs regarding bicycle or pedestrian facilities. The project would not create a demand for bicycle or pedestrian facilities that would be unmet by available facilities. This impact would be considered **less than significant**.

Mitigation TR-2: *None Required*

Transit Services and Facilities

Impact TR-3: Inadequate Transit Service to Meet Demand

The project would not eliminate or adversely affect existing transit access as no service is currently provided in the immediate project vicinity. It would also not conflict with any adopted policies, plans, or programs regarding transit facilities. The lack of any existing or planned fixed-route bus service to the area would lead to an unmet demand for transit service. This impact would be considered **significant**.

Mitigation TR-3: *Implement the following mitigation measures:*

- *TR-3 work with San Joaquin RTD to extend fixed-route bus service to the project site.*

Significance after Mitigation: Less than Significant

Roadway Safety / Design Standards:

Impact TR-4: Increased Hazards due to Geometric Design Features

The project would not substantially increase hazards due to geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses. The project proposes no features that would be

hazardous; all internal streets, bicycle facilities, pedestrian facilities, and transit amenities would be constructed in accordance with County design standards. No uses are proposed that would be incompatible with the surrounding transportation network. The project would not result in 95th percentile vehicle queues at Caltrans off-ramp facilities to extend into the freeway mainline. This impact is considered **less than significant**.

Mitigation TR-4: *None Required*

Emergency Vehicle Access

Impact TR-5: Adequate Emergency Vehicle Access

Emergency vehicles access to the project site would be accommodated through multiple roadways, including West Schulte Road, Promontory Parkway, and Pavilion Parkway. The project site is served by the South San Joaquin County Fire Authority and incorporates the current California Fire and Building Codes with some Municipal Code amendments, Title 19 – California Code of Regulations and national standards. Internal streets are proposed in alignment with South San Joaquin County Fire Authority requirements. The nearest fire station to the proposed project site is located at 16502 West Schulte Road (Station 94), less than a mile west of the project site.

Mitigation TR-5: *In accordance with South San Joaquin County Fire Authority requirements and design standards, provide even surface pavement, appropriate signage, delineation, and other features at all emergency access points and internal roadways to accommodate emergency vehicles. As part of the project's final design and permitting process seek and obtain approval of the South San Joaquin County Fire Authority.*

Implementing the South San Joaquin County Fire Authority requirements and design standards would ensure that the street(s) used by emergency vehicles to access the project site are in good condition and include features to facilitate the safe movement of emergency vehicles. The review and approval of the South San Joaquin County Fire Authority would confirm adequate emergency vehicle access to each parcel and building proposed as part of the project.

Significance after Mitigation: Less than significant.

Cumulative Impacts

As shown in **Table 37** the project's cumulative daily VMT per employee is substantially above the unincorporated countywide cumulative average VMT per employee under these conditions. The project's cumulative VMT per employee of 33.8 is approximately 27.5 percent above the relevant threshold of 26.5 (85 percent of the unincorporated countywide average. This impact is a **significant adverse impact** according to the County's standards.

Table 37: Cumulative Daily VMT Per Employee

Scenario	HBW Auto VMT per Employee [1]
Unincorporated Countywide Average – Cumulative	31.1 VMT per employee
85% of Unincorporated Countywide Average – Cumulative	26.5 VMT per employee
Project VMT, Cumulative Conditions	33.8 VMT per employee

1. Calculated using the 2016 SJCOG travel demand model. VMT shown is only associated with employee travel between the project and home.

Mitigation TR-6: *Implement Mitigation Measure TR-1*

The implementation of the TDM Plan described in Mitigation Measure TR-1 is expected to yield a 5 to 10 percent reduction in project VMT. CEQA requires that feasible mitigation measures be implemented to reduce a project level of impact. Sufficient TDM reduction strategies do not exist to reduce the project's cumulative daily VMT per employee by 26.5 percent as required to mitigate the impact.

Significance after Mitigation: Significant and Unavoidable

9. Potential Limitations of Travel Demand Forecasts

This chapter describes how there are certain limitations in the accuracy of the travel demand forecasts presented in this report, particularly under the cumulative scenario.

Potential Uncertainties in Travel Demand Forecasts

The Cumulative plus Project Buildout scenario arguably provides the best snapshot for understanding travel conditions in 20 years assuming the project is developed. Yet, it is acknowledged that the forecast travel demands for this horizon have a great deal of uncertainty. Following are some of those areas of uncertainty:

- A number of state laws have been enacted over the last several years intended to address California's housing supply and affordability crisis. Examples include AB 2011, SB 6, and SB 330. Other bills are currently under consideration. The net effect of these laws is a strong potential for new dwelling units to be built in areas not currently assumed by the travel demand model. This, in turn, will affect the volume of background traffic growth as well as the residence locations of project employees.
- Uncertainty also exists in the cumulative background traffic forecasts due to the lingering effects of the COVID-19 pandemic. Changes in how consumers acquire goods and services, and how employees work, are altering travel trends in the following ways:
    - substitution of some personal shopping or meal-related travel for Internet shopping and home food delivery (i.e., DoorDash),
    - work-from-home flexibility offered by many employers and preferences by many employees,
    - new modes of travel such as transportation network companies (TNCs), car share, bike share, scooter share, and on-demand micro transit (and eventually autonomous vehicles).

California state laws and policies are also focused on converting heavy-duty trucks to zero emission vehicles. In April 2023, the California Air Resources Board (CARB) adopted a regulation to phase out the sales of medium- and heavy-duty combustion trucks in California by 2036. This is intended to place the state on a path toward accomplishing Governor Newsom's goal of fully transitioning the medium- and heavy-duty trucks that travel California roads to zero-emissions technology by 2045.[5] There are several travel behavior uncertainties associated with the fleet operator and individual truck driver response to these changes including the following:

[5] Source: California Approves World's First Regulation to Phase Out Dirty Combustion Trucks and Protect Public Health | California Governor

- Ability of the electrical grid to meet electricity demand during peak periods in hot summer months,
- Adequacy of supplied electric truck charging locations,
- Lesser loads caused by heavy truck battery weights, and
- More driver time spent waiting for trucks to charge (and necessarily doing so sometimes overnight when they would prefer to be driving), which could shift more truck travel to daytime hours and require more drivers.

Like nearly all travel demand models, the City of Tracy model and the SJCOG model do not consider any of the above limitations. Further, many of these topics are still evolving (e.g., work from home preferences) or are not sufficiently well understood to even enable quantitative modeling of their effects.

Appendix A.
Data Collection

Prepared by National Data & Surveying Services

International Pkwy & I-205 WB Ramps

Peak Hour Turning Movement Count

ID: 23-080214-013
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	7:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	4:00 PM - 06:00 PM

SOUTHBOUND (International Pkwy)

AM	202	498	0	0	395	AM
NOON	0	0	0	0	0	NOON
PM	68	395	0	0	669	PM

EASTBOUND (I-205 WB Ramps)

AM	NOON	PM	
438	0	84	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (I-205 WB Ramps)

PM	NOON	AM	
431	0	244	2
4	0	227	0.5
264	0	655	0.5
0	0	0	0
0	0	0	
PM	NOON	AM	

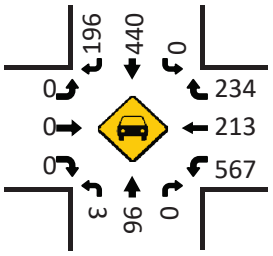
NORTHBOUND (International Pkwy)

PM	660	1	12	238	0	PM
NOON	0	0	0	0	0	NOON
AM	1153	0	9	151	0	AM

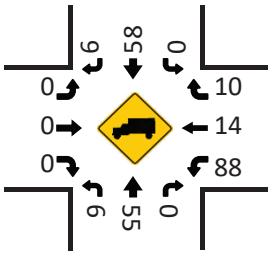
1	3	0	0
0	1	2	0

CONTROL			
Signalized			
TEV	1986 AM	0 NOON	1413 PM
PHF	0.97		0.90

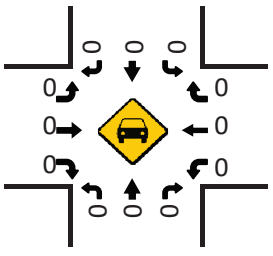
Cars (AM)



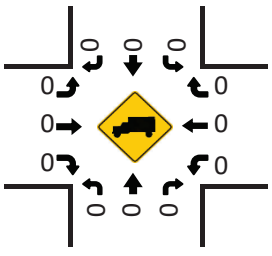
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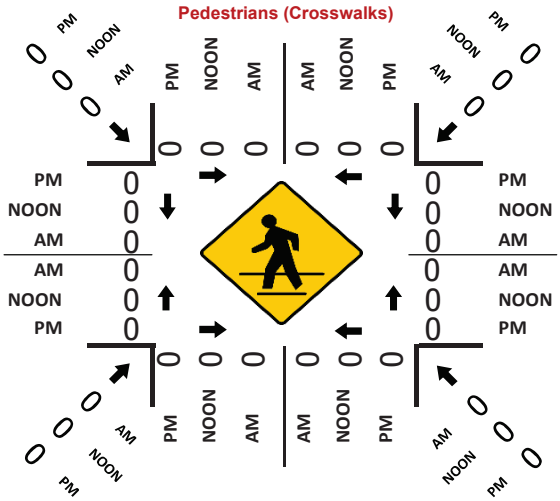
Cars (NOON)



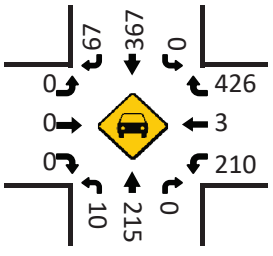
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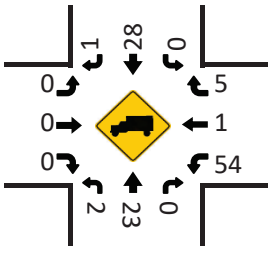
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

International Pkwy & I-205 EB Ramps

Peak Hour Turning Movement Count

ID: 23-080214-014
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	7:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	4:00 PM - 06:00 PM

SOUTHBOUND (International Pkwy)

AM	294	868	0	0	151	AM
NOON	0	0	0	0	0	NOON
PM	303	360	0	0	259	PM

EASTBOUND (I-205 EB Ramps)

AM	NOON	PM	
294	0	303	
0	0	0	0
26	0	80	1.5
0	0	2	0.5
54	0	26	1

WESTBOUND (I-205 EB Ramps)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
543	0	282	

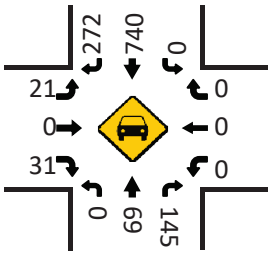
NORTHBOUND (International Pkwy)

PM	386	0	0	179	541	PM
NOON	0	0	0	0	0	NOON
AM	922	0	0	125	282	AM

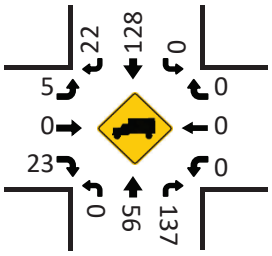
	2	2	0	0
	0	0	2	1

CONTROL			
Signalized			
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PHF	0.97		0.89

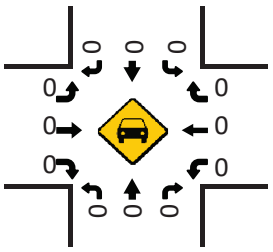
Cars (AM)



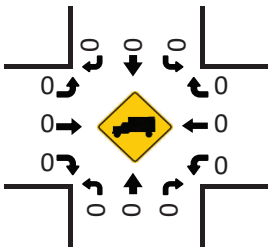
HT (AM)



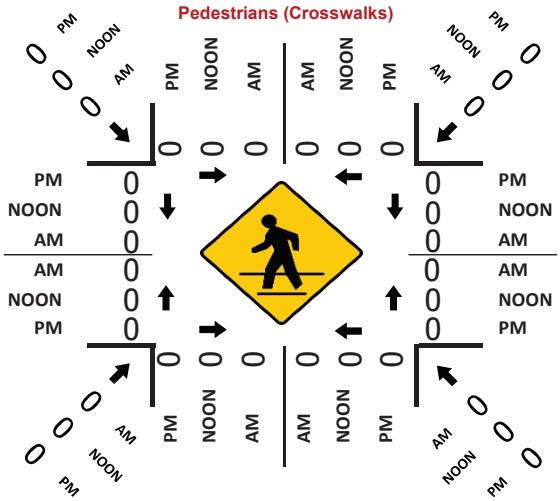
Cars (NOON)



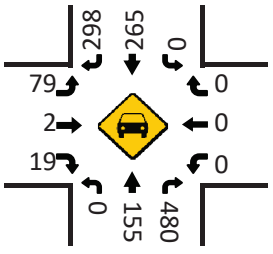
HT (NOON)



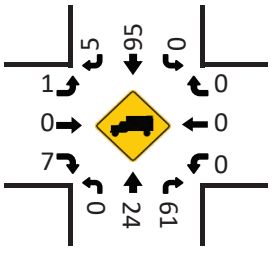
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

International Pkwy & Promontory Pkwy

Peak Hour Turning Movement Count

ID: 23-080214-006
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 7:00 AM - 09:00 AM
NOON: NONE
PM: 4:00 PM - 06:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	1419	0	1150
PHF	0.93		0.87

SOUTHBOUND (International Pkwy)

AM	11	707	218	1	408	AM
NOON	0	0	0	0	0	NOON
PM	6	287	102	1	707	PM
	1	1	2	0		

EASTBOUND (Promontory Pkwy)

AM	NOON	PM	
18	0	14	
0	0	0	0
7	0	19	1
0	0	1	1
4	0	9	1
AM	NOON	PM	

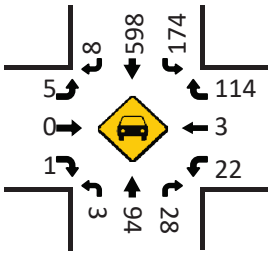
WESTBOUND (Promontory Pkwy)

PM	NOON	AM	
94	0	178	2
1	0	3	1
14	0	28	1
0	0	1	0
119	0	254	
PM	NOON	AM	

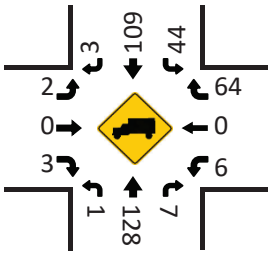
NORTHBOUND (International Pkwy)

PM	310	0	7	593	16	PM
NOON	0	0	0	0	0	NOON
AM	739	0	4	222	35	AM
		0	1	2	1	

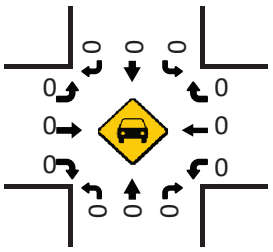
Cars (AM)



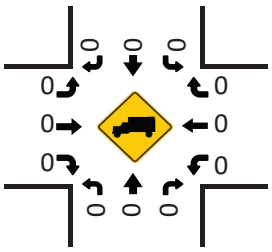
HT (AM)



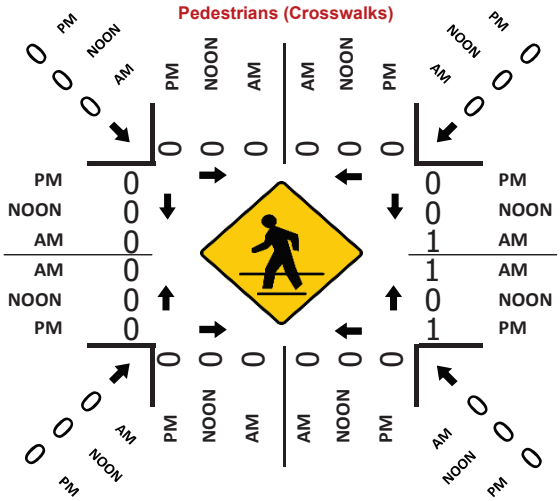
Cars (NOON)



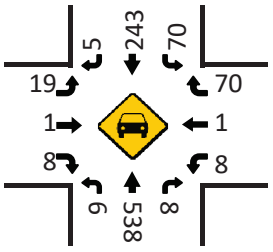
HT (NOON)



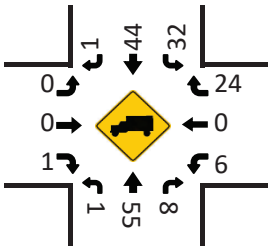
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

International Pkwy & S Schulte Rd/W Schulte Rd

Peak Hour Turning Movement Count

ID: 23-080214-001
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	7:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	4:00 PM - 06:00 PM

SOUTHBOUND (International Pkwy)

AM	28	590	93	0	234	AM
NOON	0	0	0	0	0	NOON
PM	19	131	95	0	548	PM
	1	2	2	0		

EASTBOUND (S Schulte Rd/W Schulte Rd)

AM	NOON	PM	
126	0	97	
0	0	0	0
24	0	42	1
16	0	40	1.5
63	0	53	0.5

WESTBOUND (S Schulte Rd/W Schulte Rd)

PM	NOON	AM	
92	0	96	1
36	0	53	1
114	0	482	2
0	0	1	0
453	0	305	

CONTROL

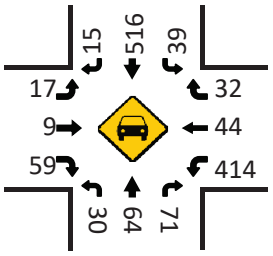
Signalized

TEV	1802 AM	0 NOON	1396 PM
PHF	0.97		0.93

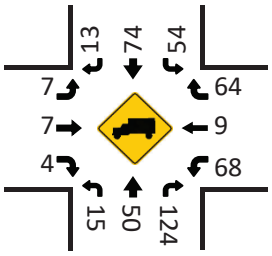
NORTHBOUND (International Pkwy)

PM	298	0	42	414	318	PM
NOON	0	0	0	0	0	NOON
AM	1137	2	45	114	195	AM
		0	1	2	1	

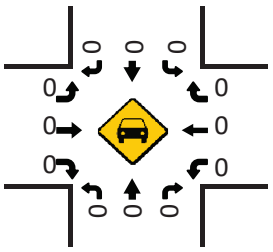
Cars (AM)



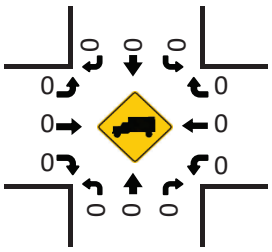
HT (AM)



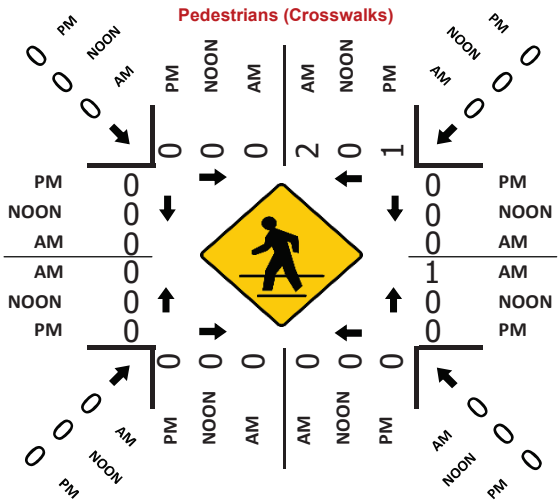
Cars (NOON)



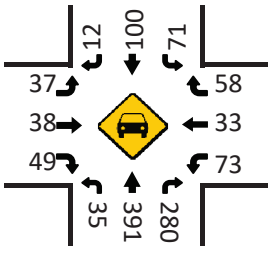
HT (NOON)



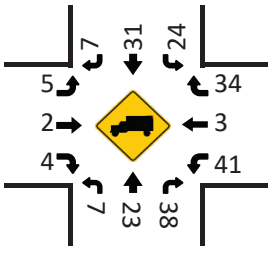
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

I 580 NB Ramps & International Pkwy

Peak Hour Turning Movement Count

ID: 23-080214-008
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS

AM	07:00 AM - 08:00 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	4:00 PM - 06:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	1768	0	1102
PHF	0.94		0.93

SOUTHBOUND (I 580 NB Ramps)

	L	T	R	U	Total	
AM	0	0	0	0	620	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	88	PM

EASTBOUND (International Pkwy)

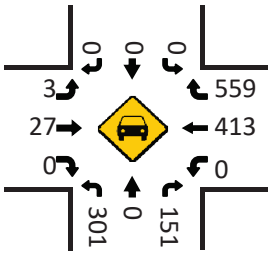
	L	T	R	U
AM	0	4	72	0
NOON	0	0	0	0
PM	0	11	585	0
U	0	0	1	0

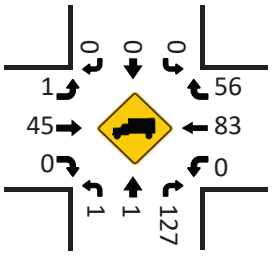
WESTBOUND (International Pkwy)

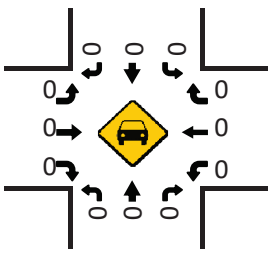
	L	T	R	U
AM	1	232	773	0
NOON	0	0	0	0
PM	77	232	0	0
U	0	0	0	0

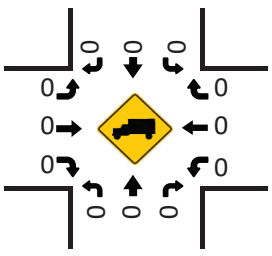
NORTHBOUND (I 580 NB Ramps)

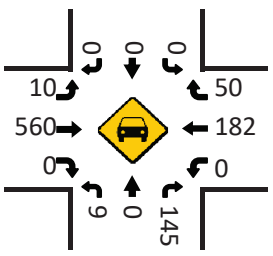
	L	T	R	U	Total	
AM	0	0	302	1	278	AM
NOON	0	0	0	0	0	NOON
PM	0	0	9	0	188	PM

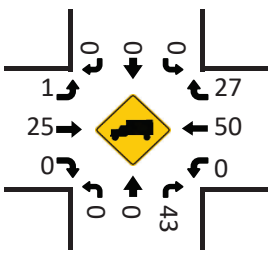


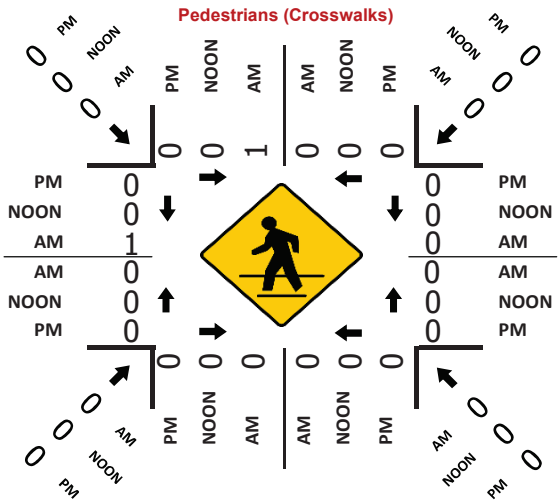












Prepared by National Data & Surveying Services

I-580 SB Ramps & Patterson Pass Rd

Peak Hour Turning Movement Count

ID: 23-080214-009
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS	COUNT PERIODS
07:00 AM - 08:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	4:00 PM - 06:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	910	0	1348
PHF	0.92		0.98

I-580 SB Ramps — SOUTHBOUND

AM	14	0	68	0	0	AM
NOON	0	0	0	0	0	NOON
PM	69	2	95	0	0	PM
	1	0.5	0.5	0		

EASTBOUND — Patterson Pass Rd

AM	NOON	PM	
676	0	93	
0	0	0	0
0	0	0	0
11	0	451	1
18	0	463	1
AM	NOON	PM	

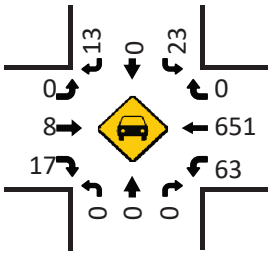
WESTBOUND — Patterson Pass Rd

PM	NOON	AM	
0	0	0	0
24	0	662	1
244	0	137	0
0	0	0	0
PM	NOON	AM	
546	0	79	

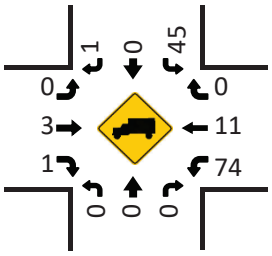
NORTHBOUND — I-580 SB Ramps

PM	709	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	155	0	0	0	0	AM
		0	0	0	0	

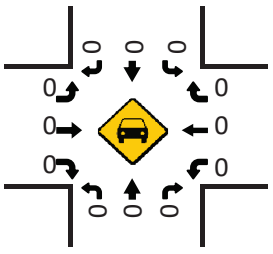
Cars (AM)



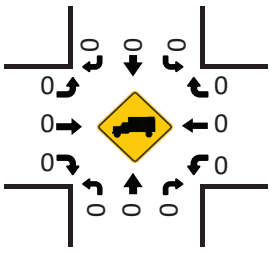
HT (AM)



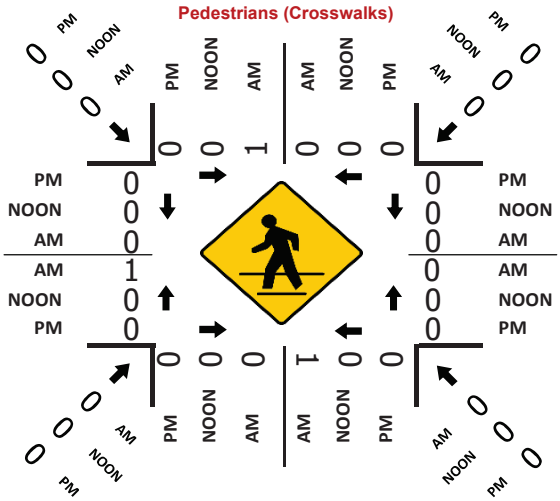
Cars (NOON)



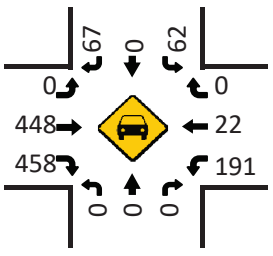
HT (NOON)



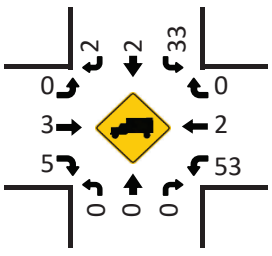
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Hansen Rd & Promontory Pkwy

Peak Hour Turning Movement Count

ID: 23-080214-007
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS		COUNT PERIODS
AM	07:45 AM - 08:45 AM	7:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:15 PM - 05:15 PM	4:00 PM - 06:00 PM

SOUTHBOUND (Hansen Rd)

	Right	Through	Left	U-turn	Exiting
AM	3	1	1	0	30
NOON	0	0	0	0	0
PM	1	2	0	0	94
Lanes	1	2	1	0	

EASTBOUND (Promontory Pkwy)

	AM	NOON	PM	Lanes
Exiting	154	0	95	
U-turn	0	0	0	0
Left	9	0	13	1
Through	28	0	26	2
Right	55	0	28	1

WESTBOUND (Promontory Pkwy)

	Lanes	PM	NOON	AM
Right	1	9	0	0
Through	2	21	0	18
Left	1	5	0	3
U-turn	0	0	0	0
Exiting		34	0	43

NORTHBOUND (Hansen Rd)

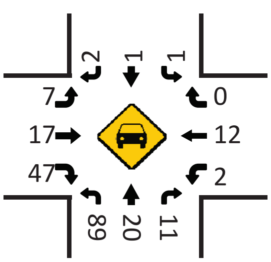
	Exiting	U-turn	Left	Through	Right
Lanes		0	1	2	1
PM	35	0	73	72	8
NOON	0	0	0	0	0
AM	59	0	133	21	14

CONTROL

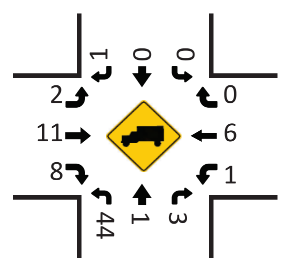
Signalized

	AM	NOON	PM
TEV	286	0	258
PHF	0.91		0.78

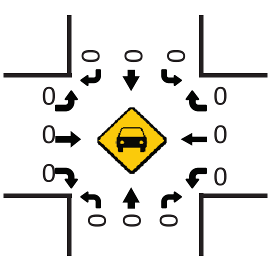
Cars (AM)



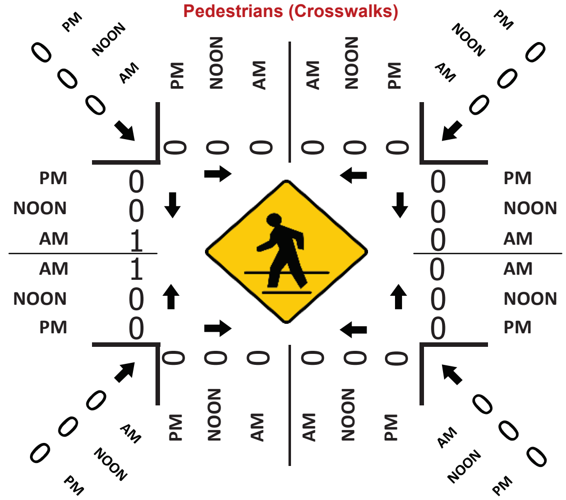
HT (AM)



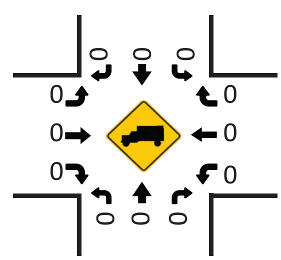
Cars (NOON)



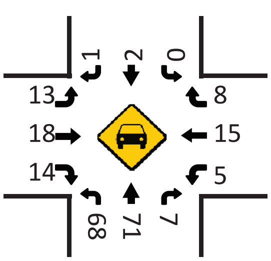
Pedestrians (Crosswalks)



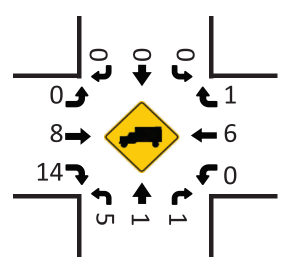
HT (NOON)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Hansen Rd & W Schulte Rd

Peak Hour Turning Movement Count

ID: 23-080214-002
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS	COUNT PERIODS
07:00 AM - 08:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	4:00 PM - 06:00 PM

CONTROL: Signalized

	TEV	AM	NOON	PM
	781	0	623	
PHF	0.93			0.83

SOUTHBOUND (Hansen Rd)

AM	24	7	6	0	72	AM
NOON	0	0	0	0	0	NOON
PM	34	6	16	0	84	PM

EASTBOUND (W Schulte Rd)

AM	NOON	PM	
603	0	124	
0	0	0	0
31	0	33	1
51	0	304	1
23	0	27	1
AM	NOON	PM	

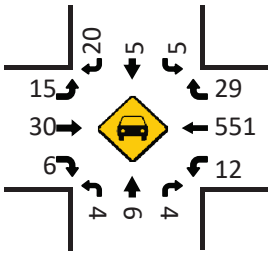
WESTBOUND (W Schulte Rd)

PM	NOON	AM	
16	0	31	1
52	0	565	1
10	0	13	1
0	0	0	0
372	0	63	
PM	NOON	AM	

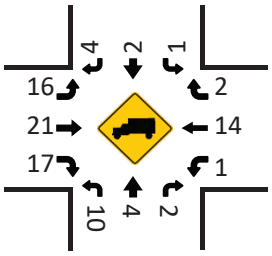
NORTHBOUND (Hansen Rd)

PM	43	0	38	35	52	PM
NOON	0	0	0	0	0	NOON
AM	43	0	14	10	6	AM

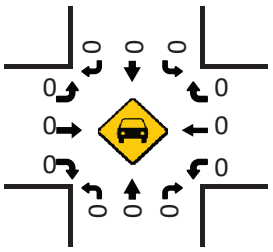
Cars (AM)



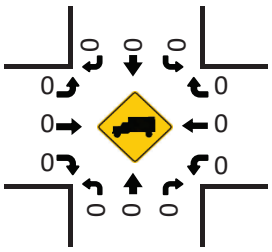
HT (AM)



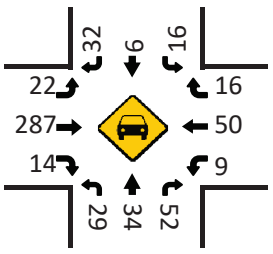
Cars (NOON)



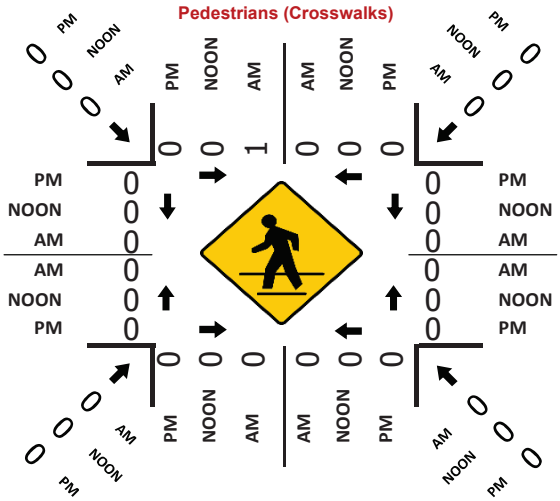
HT (NOON)



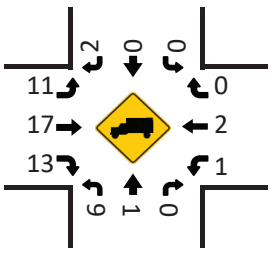
Cars (PM)



Pedestrians (Crosswalks)



HT (PM)



Prepared by National Data & Surveying Services

Naglee Rd & CR J4/Grant Line Rd

Peak Hour Turning Movement Count

ID: 23-080214-012
City: Tracy

Day: Thursday
Date: 6/29/2023

	PEAK HOURS	COUNT PERIODS
AM	08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:15 PM - 05:15 PM	4:00 PM - 06:00 PM

SOUTHBOUND – Naglee Rd

	Right	Thru	Left	U-Turn	Departing
Lanes	1	0.5	1.5	0	
AM	342	16	334	3	400
NOON	0	0	0	0	0
PM	486	8	763	1	764

WESTBOUND – CR J4/Grant Line Rd

	Lanes	PM	NOON	AM
Right	1	522	0	292
Thru	3	759	0	437
Left	0	0	0	0
U-Turn	0	0	0	0
Departing		1692	0	789

EASTBOUND – CR J4/Grant Line Rd

	AM	NOON	PM	Lanes
Departing	823	0	1346	
U-Turn	44	0	101	0
Left	105	0	241	2
Thru	455	0	929	2
Right	23	0	36	1

NORTHBOUND – Naglee Rd

	Departing	U-Turn	Left	Thru	Right
Lanes		0	0	0	0
PM	44	0	0	0	0
NOON	0	0	0	0	0
AM	39	0	0	0	0

CONTROL

Signalized

	AM	NOON	PM
TEV	2051	0	3846
PHF	0.89		0.99

Cars and HT by Movement

	Cars (AM)	Cars (NOON)	Cars (PM)	HT (AM)	HT (NOON)	HT (PM)
SB Right	288	0	466	54	0	20
SB Thru	14	0	8	2	0	0
SB Left	319	0	755	15	0	8
WB Right	288	0	515	4	0	7
WB Thru	416	0	746	21	0	13
WB Left	0	0	0	0	0	0
EB Left	101	0	237	4	0	4
EB Thru	416	0	896	39	0	33
EB Right	21	0	35	2	0	1
NB Left	0	0	0	0	0	0
NB Thru	0	0	0	0	0	0
NB Right	0	0	0	0	0	0

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North	Eastbound	0	0	1
North	Westbound	0	0	1
West	Southbound	0	0	3
West	Northbound	0	0	2
East	Southbound	0	0	0
East	Northbound	0	0	0
South	Eastbound	0	0	0
South	Westbound	0	0	2
NW diagonal		0	0	0
NE diagonal		0	0	0
SW diagonal		0	0	0
SE diagonal		0	0	0

Prepared by National Data & Surveying Services

S Lammers Rd & Byron Rd

Peak Hour Turning Movement Count

ID: 23-080214-011
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	7:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	4:00 PM - 06:00 PM

SOUTHBOUND (S Lammers Rd)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Byron Rd)

AM	NOON	PM	
446	0	509	
0	0	0	0
0	0	0	0
174	0	350	1
125	0	255	0
AM	NOON	PM	

WESTBOUND (Byron Rd)

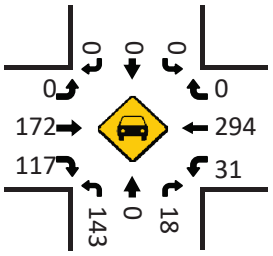
PM	NOON	AM	
0	0	0	0
295	0	298	1
25	0	31	1
0	0	0	0
385	0	192	
PM	NOON	AM	

NORTHBOUND (S Lammers Rd)

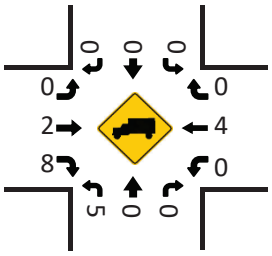
PM	280	0	214	0	35	PM
NOON	0	0	0	0	0	NOON
AM	156	0	148	0	18	AM

CONTROL			
Signalized			
TEV	794 AM	0 NOON	1174 PM
PHF	0.87		0.99

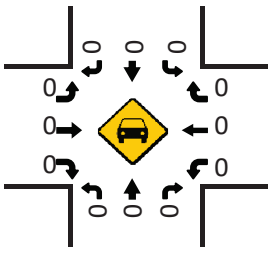
Cars (AM)



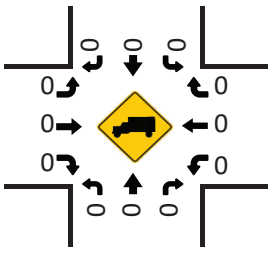
HT (AM)



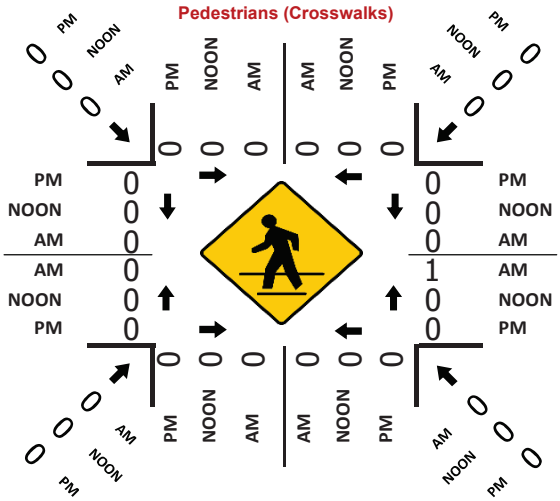
Cars (NOON)



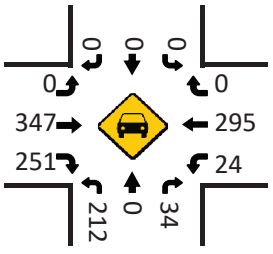
HT (NOON)



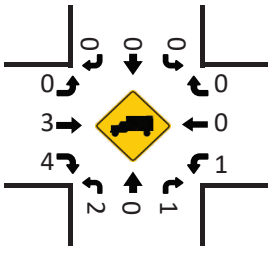
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

S Lammers Rd & I 205/11th St

Peak Hour Turning Movement Count

ID: 23-080214-004
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS		COUNT PERIODS
AM	07:15 AM - 08:15 AM	7:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	4:00 PM - 06:00 PM

S Lammers Rd — SOUTHBOUND

	Right	Through	Left	U-Turn	Exiting (north leg)
AM	53	164	24	0	161
NOON	0	0	0	0	0
PM	45	137	59	0	292
Lanes	1	2	2	0	

I 205/11th St — WESTBOUND

	Lanes	PM	NOON	AM
Right	1	77	0	46
Through	3	348	0	449
Left	2	102	0	319
U-Turn	0	0	0	0
Exiting (east leg)		1100	0	399

I 205/11th St — EASTBOUND

	AM	NOON	PM	Lanes
Exiting (west leg)	527	0	481	
U-Turn	0	0	0	0
Left	18	0	111	2
Through	228	0	866	3
Right	67	0	124	1

S Lammers Rd — NORTHBOUND

	Exiting (south leg)	U-Turn	Left	Through	Right
Lanes		0	2	2	1
PM	365	2	88	104	175
NOON	0	0	0	0	0
AM	551	1	25	97	147

CONTROL

Signalized

	AM	NOON	PM
TEV	1638	0	2238
PHF	0.91		0.93

Cars (AM)

Approach	Left	Through	Right
Southbound	22	155	52
Eastbound	17	213	60
Westbound	309	440	40
Northbound	25	94	137

HT (AM)

Approach	Left	Through	Right
Southbound	2	6	1
Eastbound	1	15	7
Westbound	10	9	6
Northbound	0	3	10

Cars (NOON)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	0	0
Westbound	0	0	0
Northbound	0	0	0

HT (NOON)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	0	0
Westbound	0	0	0
Northbound	0	0	0

Cars (PM)

Approach	Left	Through	Right
Southbound	57	133	45
Eastbound	108	855	124
Westbound	99	344	75
Northbound	87	103	172

HT (PM)

Approach	Left	Through	Right
Southbound	2	4	0
Eastbound	3	11	0
Westbound	3	4	2
Northbound	1	1	3

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North	Eastbound	0	0	0
North	Westbound	0	0	0
West	Southbound	0	0	0
West	Northbound	0	0	0
East	Southbound	3	0	0
East	Northbound	2	0	0
South	Eastbound	0	0	0
South	Westbound	1	0	0
Diagonal NW–SE		0	0	0
Diagonal NE–SW		0	0	0
Diagonal SW–NE		0	0	0
Diagonal SE–NW		0	0	0

Prepared by National Data & Surveying Services

S Lammers Rd & 11th St

Peak Hour Turning Movement Count

ID: 23-080256-001
City: Tracy

Day: Thursday
Date: 8/24/2023

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 05:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	4:00 PM - 06:00 PM

SOUTHBOUND (S Lammers Rd)

AM	48	196	30	0	263	AM
NOON	0	0	0	0	0	NOON
PM	35	142	67	1	395	PM

1 2 2 0

EASTBOUND (11th St)

AM	NOON	PM	
685	0	501	
1	0	0	0
21	0	79	2
266	0	894	3
70	0	94	1

WESTBOUND (11th St)

PM	NOON	AM	
91	0	74	1
410	0	576	3
163	0	450	2
2	0	3	0
1571	0	754	

CONTROL

Signalized

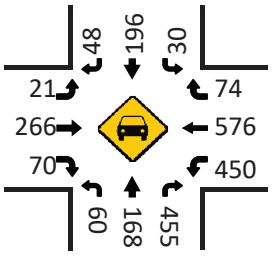
TEV	2419 AM	0 NOON	2885 PM
PHF	0.80		0.82

0 2 2 1

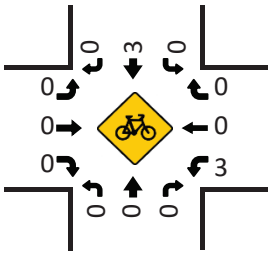
NORTHBOUND (S Lammers Rd)

PM	418	19	56	224	608	PM
NOON	0	0	0	0	0	NOON
AM	717	1	60	168	455	AM

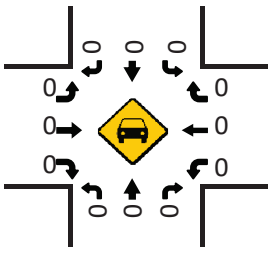
Totals (AM)



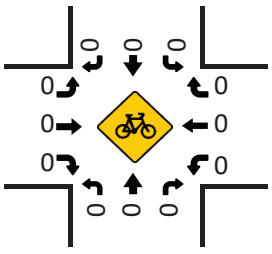
Total Bikes (AM)



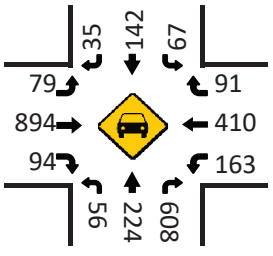
Totals (NOON)



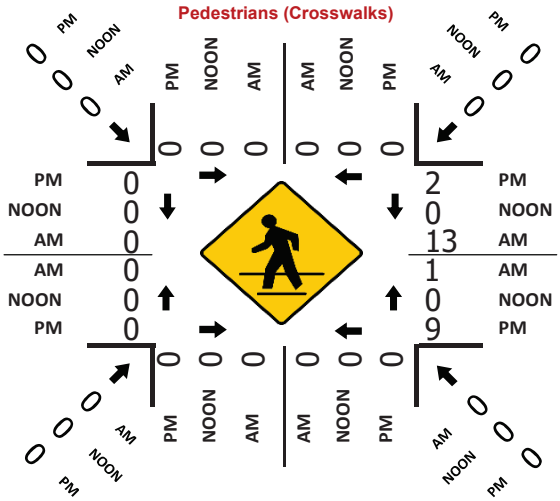
Total Bikes (NOON)



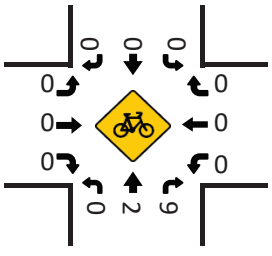
Totals (PM)



Pedestrians (Crosswalks)



Total Bikes (PM)



Prepared by National Data & Surveying Services

S Lammers Rd & Capital Park Dr

Peak Hour Turning Movement Count

ID: 23-080214-015
City: Tracy

Day: Thursday
Date: 6/29/2023

	PEAK HOURS	COUNT PERIODS
AM	07:15 AM - 08:15 AM	7:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	4:00 PM - 06:00 PM

SOUTHBOUND (S Lammers Rd)

	Right	Thru	Left	U-Turn	Exit (northbound direction)
AM	0	397	153	0	269
NOON	0	0	0	0	0
PM	0	345	20	0	371
Lanes	2	2	2	0	

WESTBOUND (Capital Park Dr)

	Lanes	PM	NOON	AM
Right	1	14	0	77
Thru	0	0	0	0
Left	2	6	0	23
U-Turn	0	0	0	0
Exit		35	0	171

EASTBOUND (Capital Park Dr)

	AM	NOON	PM	Lanes
Exit	0	0	0	
U-Turn	0	0	0	0
Left	0	0	0	0
Thru	0	0	0	0
Right	0	0	0	0

NORTHBOUND (S Lammers Rd)

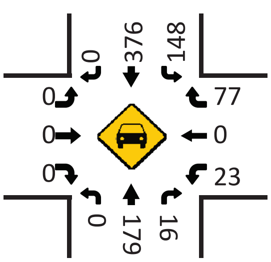
	Exit (southbound direction)	U-Turn	Left	Thru	Right
Lanes		0	3	3	1
PM	351	0	0	357	15
NOON	0	0	0	0	0
AM	446	26	0	192	18

CONTROL

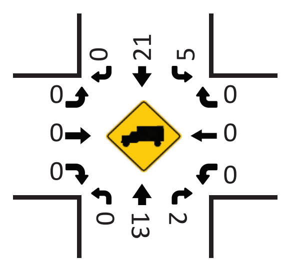
Signalized

	AM	NOON	PM
TEV	886	0	757
PHF	0.77		0.88

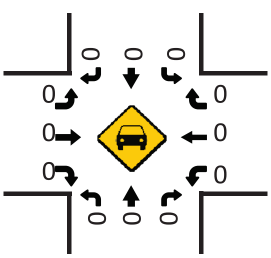
Cars (AM)



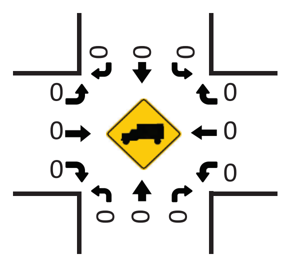
HT (AM)



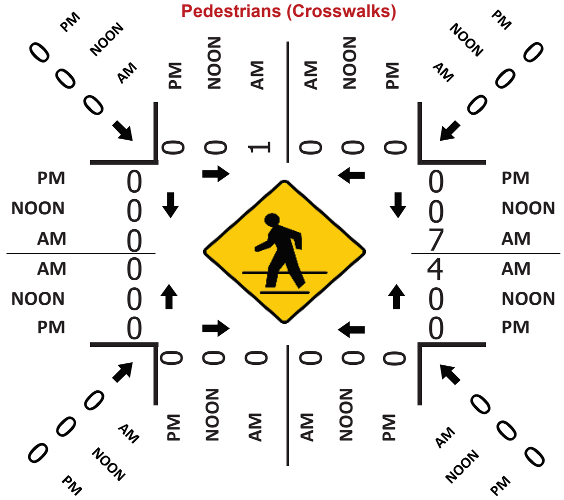
Cars (NOON)



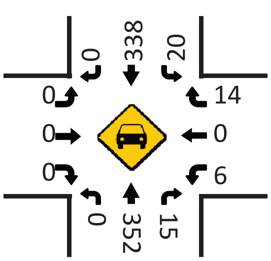
HT (NOON)



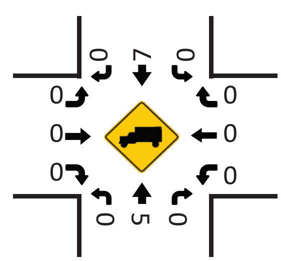
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

S Lammers Rd & Capital Park Dr

Peak Hour Turning Movement Count

ID: 23-080256-002
City: Tracy

Day: Thursday
Date: 8/24/2023

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	4:00 PM - 06:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	1855	0	1638
PHF	0.67		0.56

SOUTHBOUND (S Lammers Rd)

	L	T	R	U	Total	
AM	0	269	442	1	684	AM
NOON	0	0	0	0	0	NOON
PM	0	321	101	3	907	PM

EASTBOUND (Capital Park Dr)

	L	T	R	
AM	0	0	0	
NOON	0	0	0	
PM	0	0	0	
AM	0	0	0	
NOON	0	0	0	
PM	0	0	0	
AM	0	0	0	
NOON	0	0	0	
PM	0	0	0	

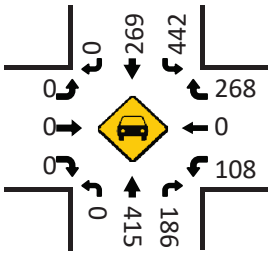
WESTBOUND (Capital Park Dr)

	L	T	R	
PM	267	0	268	
NOON	0	0	0	
PM	137	0	108	
NOON	0	0	0	
PM	150	0	628	
NOON				
AM				

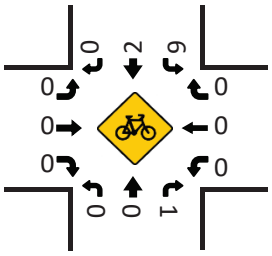
NORTHBOUND (S Lammers Rd)

	L	T	R	U	Total	
PM	581	123	0	637	49	PM
NOON	0	0	0	0	0	NOON
AM	543	166	0	415	186	AM

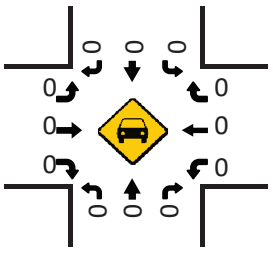
Totals (AM)



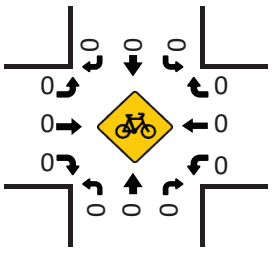
Total Bikes (AM)



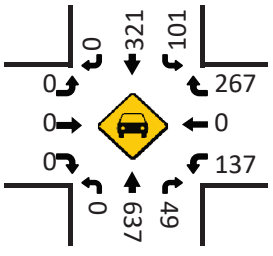
Totals (NOON)



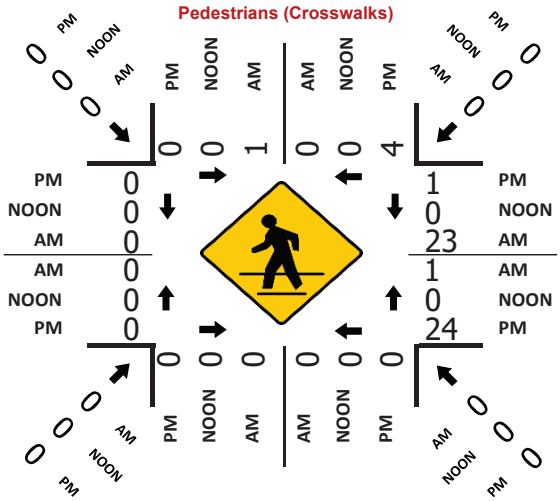
Total Bikes (NOON)



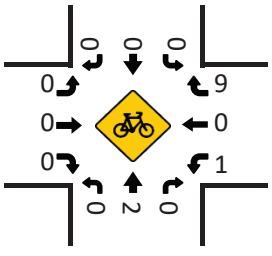
Totals (PM)



Pedestrians (Crosswalks)



Total Bikes (PM)



Prepared by National Data & Surveying Services

S Lammers Rd & W Schulte Rd

Peak Hour Turning Movement Count

ID: 23-080214-003
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS

AM	07:00 AM - 08:00 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	4:00 PM - 06:00 PM

SOUTHBOUND (S Lammers Rd)

AM	361	117	0	0	145	AM
NOON	0	0	0	0	0	NOON
PM	50	218	0	0	350	PM

Turning movements: 0 | 1 | 0 | 0

EASTBOUND (W Schulte Rd)

AM	NOON	PM	
695	0	93	
0	0	0	0
25	0	170	1
0	0	0	0
29	0	275	1

WESTBOUND (W Schulte Rd)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	

CONTROL

Signalized

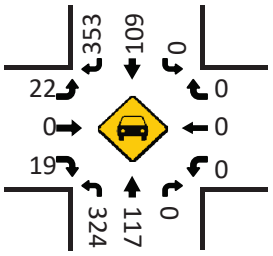
TEV	986 AM	0 NOON	936 PM
PHF	0.90		0.89

NORTHBOUND (S Lammers Rd)

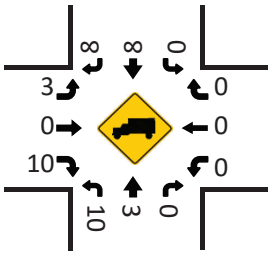
PM	493	0	43	180	0	PM
NOON	0	0	0	0	0	NOON
AM	146	0	334	120	0	AM

Turning movements: 0 | 1 | 1 | 0

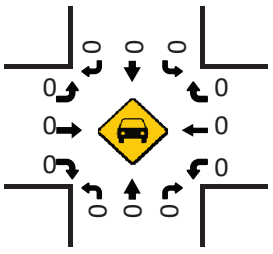
Cars (AM)



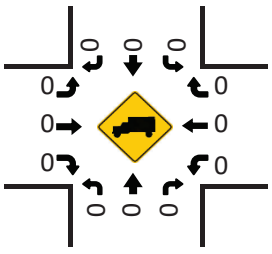
HT (AM)



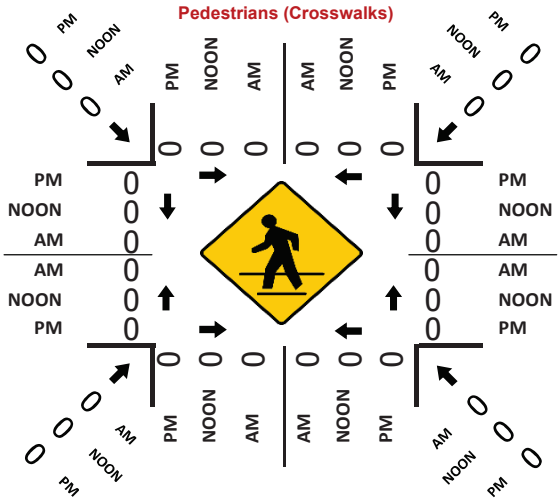
Cars (NOON)



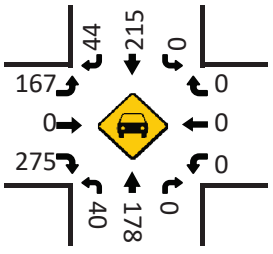
HT (NOON)



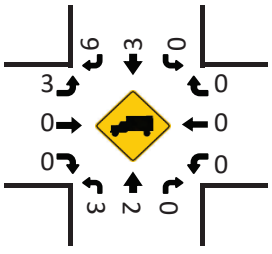
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

S Lammers Rd & Valpico Rd

Peak Hour Turning Movement Count

ID: 23-080214-010
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	7:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	4:00 PM - 06:00 PM

CONTROL: 1-Way Stop(WB)

	AM	NOON	PM
TEV	443	0	584
PHF	0.80		0.84

SOUTHBOUND (S Lammers Rd)

AM	0	28	130	0	252	AM
NOON	0	0	0	0	0	NOON
PM	0	69	267	0	228	PM

EASTBOUND (Valpico Rd)

AM	NOON	PM	
0	0	2	⇦
0	0	0	↶ 0
0	0	0	↱ 0
0	0	1	→ 0
0	0	0	↷ 0
AM	NOON	PM	

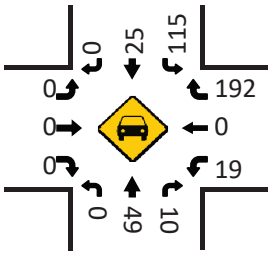
WESTBOUND (Valpico Rd)

PM	NOON	AM	
166	0	200	0 ↷
2	0	0	1 ←
10	0	20	0 ↶
0	0	0	0 ↶
275	0	143	⇨
PM	NOON	AM	

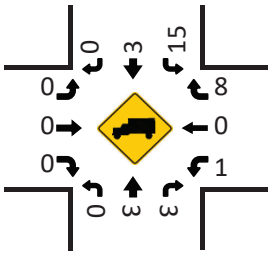
NORTHBOUND (S Lammers Rd)

PM	79	0	0	62	7	PM
NOON	0	0	0	0	0	NOON
AM	48	0	0	52	13	AM

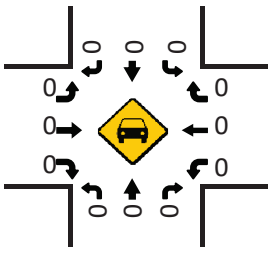
Cars (AM)



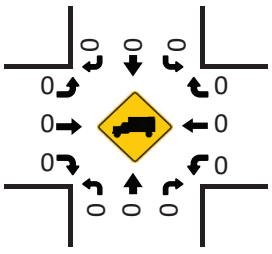
HT (AM)



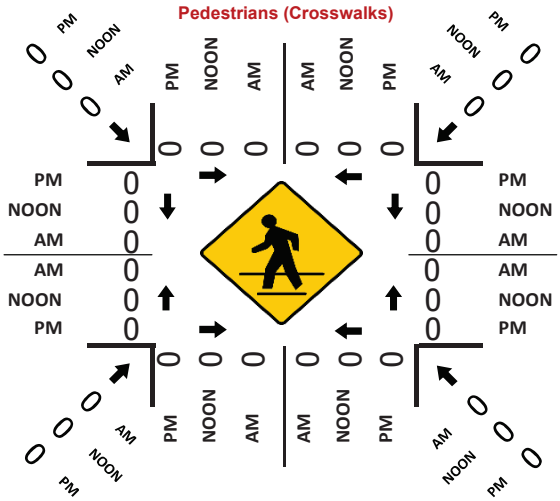
Cars (NOON)



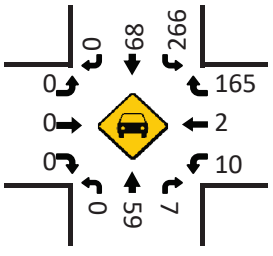
HT (NOON)



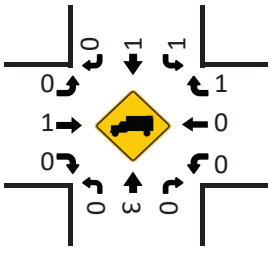
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

CR J2/Corral Hallow Rd & I 205/11th St

Peak Hour Turning Movement Count

ID: 23-080214-005
City: Tracy

Day: Thursday
Date: 6/29/2023

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	4:00 PM - 06:00 PM

SOUTHBOUND — CR J2/Corral Hallow Rd

AM	128	307	195	1	972	AM
NOON	0	0	0	0	0	NOON
PM	113	748	340	3	1256	PM
	1	2	2	0		

EASTBOUND — I 205/11th St

AM	NOON	PM	
688	0	723	
0	0	0	0
143	0	224	2
284	0	583	3
121	0	355	1
AM	NOON	PM	

WESTBOUND — I 205/11th St

PM	NOON	AM	
317	0	159	1
413	0	331	3
245	0	119	2
12	0	5	0
1038	0	573	
PM	NOON	AM	

NORTHBOUND — CR J2/Corral Hallow Rd

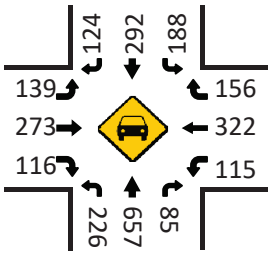
	0	2	3	1		
PM	1355	7	197	712	103	PM
NOON	0	0	0	0	0	NOON
AM	549	2	229	669	89	AM

CONTROL

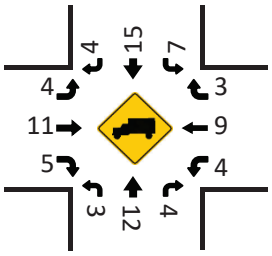
Signalized

TEV	2782 AM	0 NOON	4372 PM
PHF	0.91		0.97

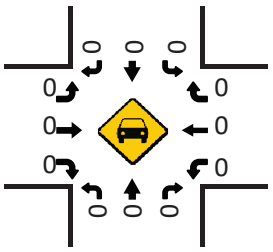
Cars (AM)



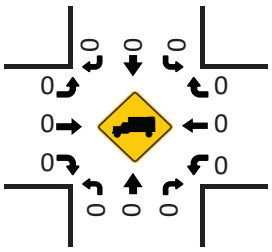
HT (AM)



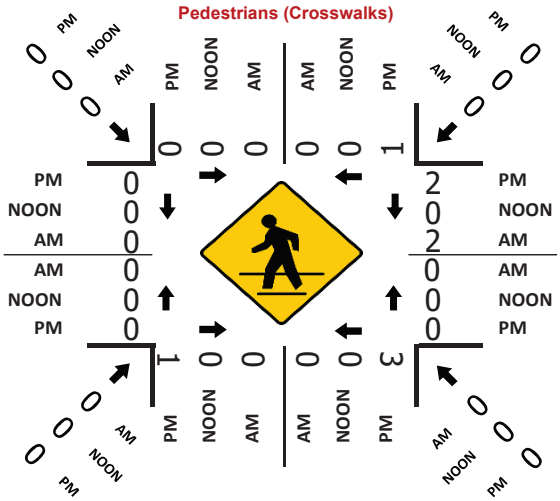
Cars (NOON)



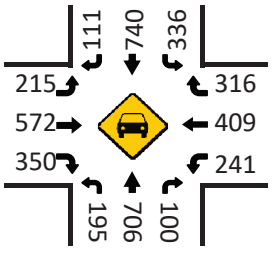
HT (NOON)



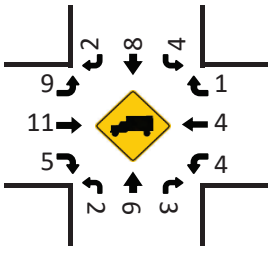
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Byron Rd/CR J4 & W Grant Line Rd

Peak Hour Turning Movement Count

ID: 23-080256-003
City: Tracy

Day: Thursday
Date: 8/24/2023

PEAK HOURS	COUNT PERIODS
07:00 AM - 08:00 AM	7:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	4:00 PM - 06:00 PM

SOUTHBOUND — Byron Rd/CR J4

AM	0	173	336	0	951	AM
NOON	0	0	0	0	0	NOON
PM	3	231	510	0	666	PM

EASTBOUND — W Grant Line Rd

AM	NOON	PM	
0	0	4	⇦
0	0	0	↶ 0
0	0	0	↱ 0
0	0	1	→ 0
0	0	4	↷ 0
AM	NOON	PM	

WESTBOUND — W Grant Line Rd

PM	NOON	AM	
464	0	671	1 ↰
0	0	0	0 ←
309	0	230	1 ↰
0	0	0	0 ↶
861	0	501	⇨
PM	NOON	AM	

NORTHBOUND — Byron Rd/CR J4

PM	544	0	1	202	350	PM
NOON	0	0	0	0	0	NOON
AM	403	0	0	280	165	AM

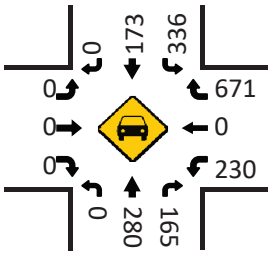
	0	1	1	0
	0	0	1	1

CONTROL

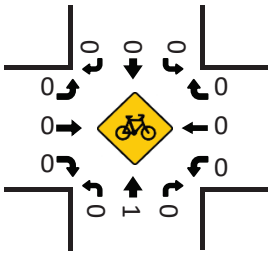
Signalized

TEV	1855 AM	0 NOON	2075 PM
PHF	0.93		0.96

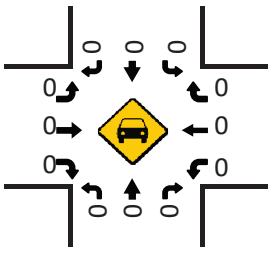
Totals (AM)



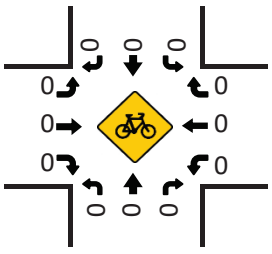
Total Bikes (AM)



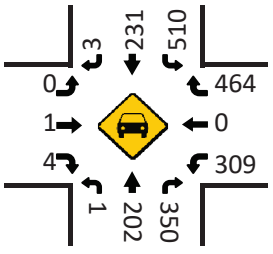
Totals (NOON)



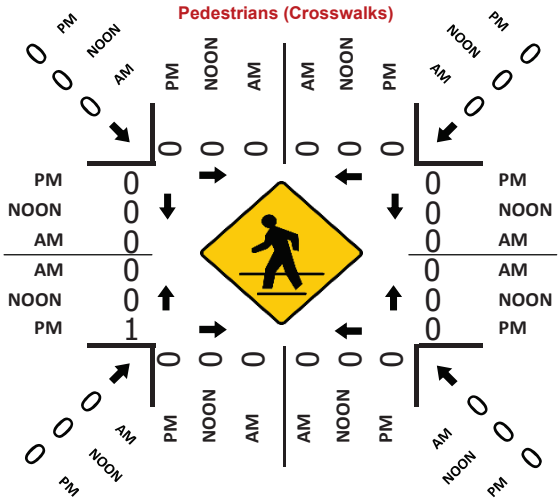
Total Bikes (NOON)



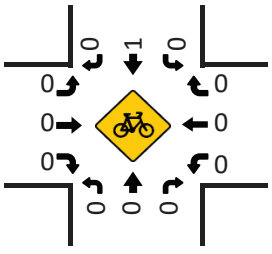
Totals (PM)



Pedestrians (Crosswalks)



Total Bikes (PM)



Appendix B.
Level of Service (LOS) Technical Calculations



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	720	250	268	12	209	0	0	544	220
Future Volume (veh/h)	0	0	0	720	250	268	12	209	0	0	544	220
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				742	258	219	12	215	0	0	561	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				726	252	1513	43	994	0	0	949	
Arrive On Green				0.54	0.54	0.54	0.02	0.28	0.00	0.00	0.19	0.00
Sat Flow, veh/h				1338	465	2790	1781	3647	0	0	5274	1585
Grp Volume(v), veh/h				1000	0	219	12	215	0	0	561	0
Grp Sat Flow(s),veh/h/ln				1803	0	1395	1781	1777	0	0	1702	1585
Q Serve(g_s), s				35.0	0.0	2.5	0.4	3.0	0.0	0.0	6.5	0.0
Cycle Q Clear(g_c), s				35.0	0.0	2.5	0.4	3.0	0.0	0.0	6.5	0.0
Prop In Lane				0.74		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				978	0	1513	43	994	0	0	949	
V/C Ratio(X)				1.02	0.00	0.14	0.28	0.22	0.00	0.00	0.59	
Avail Cap(c_a), veh/h				978	0	1513	966	1927	0	0	2769	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				14.8	0.0	7.3	31.0	17.8	0.0	0.0	24.0	0.0
Incr Delay (d2), s/veh				34.6	0.0	0.0	1.3	0.0	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				20.8	0.0	0.6	0.2	1.1	0.0	0.0	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				49.4	0.0	7.4	32.3	17.9	0.0	0.0	24.2	0.0
LnGrp LOS				F	A	A	C	B	A	A	C	
Approach Vol, veh/h					1219			227			561	A
Approach Delay, s/veh					41.9			18.6			24.2	
Approach LOS					D			B			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	23.7		6.0	17.7		40.8						
Change Period (Y+Rc), s	5.7		4.5	5.7		5.8						
Max Green Setting (Gmax), s	35.0		35.0	35.0		35.0						
Max Q Clear Time (g_c+I1), s	5.0		2.4	8.5		37.0						
Green Ext Time (p_c), s	0.8		0.0	2.3		0.0						

Intersection Summary		
HCM 6th Ctrl Delay	34.3	
HCM 6th LOS	C	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	0	91	0	0	0	0	230	520	0	1225	415
Future Volume (veh/h)	44	0	91	0	0	0	0	230	520	0	1225	415
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	45	0	68				0	237	409	0	1263	413
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	497	0	221				0	2142	955	0	1599	508
Arrive On Green	0.14	0.00	0.14				0.00	0.60	0.60	0.00	0.60	0.60
Sat Flow, veh/h	3563	0	1585				0	3647	1585	0	2746	843
Grp Volume(v), veh/h	45	0	68				0	237	409	0	834	842
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	0	1777	1719
Q Serve(g_s), s	0.5	0.0	1.6				0.0	1.2	5.8	0.0	14.7	16.0
Cycle Q Clear(g_c), s	0.5	0.0	1.6				0.0	1.2	5.8	0.0	14.7	16.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.49
Lane Grp Cap(c), veh/h	497	0	221				0	2142	955	0	1071	1036
V/C Ratio(X)	0.09	0.00	0.31				0.00	0.11	0.43	0.00	0.78	0.81
Avail Cap(c_a), veh/h	2889	0	1285				0	2967	1323	0	1483	1435
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	0.0	16.2				0.0	3.5	4.5	0.0	6.2	6.5
Incr Delay (d2), s/veh	0.0	0.0	0.3				0.0	0.0	0.1	0.0	1.1	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.5				0.0	0.1	0.6	0.0	2.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.7	0.0	16.5				0.0	3.6	4.6	0.0	7.4	8.3
LnGrp LOS	B	A	B				A	A	A	A	A	A
Approach Vol, veh/h		113						646			1676	
Approach Delay, s/veh		16.2						4.2			7.8	
Approach LOS		B						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	31.0	11.0	31.0
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	7.8	3.6	18.0
Green Ext Time (p_c), s	1.6	0.0	7.3

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	0	8	49	5	296	8	423	66	319	1031	16
Future Volume (veh/h)	13	0	8	49	5	296	8	423	66	319	1031	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	14	0	0	53	5	28	9	455	32	343	1109	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	109	92	82	163	242	20	1777	791	460	1162	985
Arrive On Green	0.02	0.00	0.00	0.05	0.09	0.09	0.01	0.50	0.50	0.13	0.62	0.62
Sat Flow, veh/h	1781	1870	1585	1781	1870	2773	1781	3554	1582	3456	1870	1585
Grp Volume(v), veh/h	14	0	0	53	5	28	9	455	32	343	1109	9
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1386	1781	1777	1582	1728	1870	1585
Q Serve(g_s), s	0.5	0.0	0.0	2.0	0.2	0.7	0.4	5.1	0.7	6.7	38.6	0.2
Cycle Q Clear(g_c), s	0.5	0.0	0.0	2.0	0.2	0.7	0.4	5.1	0.7	6.7	38.6	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	109	92	82	163	242	20	1777	791	460	1162	985
V/C Ratio(X)	0.46	0.00	0.00	0.65	0.03	0.12	0.44	0.26	0.04	0.75	0.95	0.01
Avail Cap(c_a), veh/h	382	935	792	382	935	1386	382	1777	791	740	1162	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	0.0	0.0	32.8	29.2	29.5	34.4	10.0	8.9	29.2	12.3	5.0
Incr Delay (d2), s/veh	10.5	0.0	0.0	8.3	0.1	0.2	14.2	0.3	0.1	2.4	17.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	1.0	0.1	0.2	0.2	1.7	0.2	2.7	16.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	0.0	41.1	29.3	29.7	48.6	10.4	9.0	31.6	29.8	5.1
LnGrp LOS	D	A	A	D	C	C	D	B	A	C	C	A
Approach Vol, veh/h		14			86			496			1461	
Approach Delay, s/veh		44.6			36.7			11.0			30.1	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	49.3	7.2	8.7	13.3	40.8	5.2	10.7
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	15.0	35.0	15.0	35.0	15.0	35.0	15.0	35.0
Max Q Clear Time (g_c+I1), s	2.4	40.6	4.0	0.0	8.7	7.1	2.5	2.7
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.6	2.9	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	24	93	740	81	148	90	219	374	139	884	43
Future Volume (veh/h)	35	24	93	740	81	148	90	219	374	139	884	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	25	0	763	84	60	93	226	130	143	911	14
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	203		953	512	560	144	1163	518	292	1175	510
Arrive On Green	0.06	0.06	0.00	0.28	0.27	0.27	0.08	0.33	0.33	0.08	0.33	0.33
Sat Flow, veh/h	1781	3647	0	3456	1870	1556	1781	3554	1583	3456	3554	1542
Grp Volume(v), veh/h	36	25	0	763	84	60	93	226	130	143	911	14
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1556	1781	1777	1583	1728	1777	1542
Q Serve(g_s), s	2.3	0.8	0.0	24.1	4.0	3.0	5.9	5.4	7.1	4.6	27.1	0.7
Cycle Q Clear(g_c), s	2.3	0.8	0.0	24.1	4.0	3.0	5.9	5.4	7.1	4.6	27.1	0.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	203		953	512	560	144	1163	518	292	1175	510
V/C Ratio(X)	0.34	0.12		0.80	0.16	0.11	0.64	0.19	0.25	0.49	0.78	0.03
Avail Cap(c_a), veh/h	152	363		1369	773	777	241	1805	804	350	1684	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	52.5	0.0	39.5	32.4	25.1	52.3	28.4	28.9	51.3	35.4	26.5
Incr Delay (d2), s/veh	2.7	0.4	0.0	3.8	0.2	0.1	6.7	0.1	0.3	1.8	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.4	0.0	10.4	1.8	1.1	2.9	2.2	2.7	2.0	11.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	52.9	0.0	43.3	32.6	25.2	58.9	28.4	29.2	53.1	37.3	26.6
LnGrp LOS	E	D		D	C	C	E	C	C	D	D	C
Approach Vol, veh/h		61	A		907			449			1068	
Approach Delay, s/veh		54.6			41.1			35.0			39.2	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	45.9	39.9	14.2	17.0	46.3	14.4	39.6
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	11.3	59.6	46.5	12.0	15.9	55.6	10.0	48.5
Max Q Clear Time (g_c+I1), s	6.6	9.1	26.1	2.8	7.9	29.1	4.3	6.0
Green Ext Time (p_c), s	0.3	1.8	6.3	0.0	0.2	9.1	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	461	1	425	8	145	0	0	698	865
Future Volume (veh/h)	0	0	0	461	1	425	8	145	0	0	698	865
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				490	1	0	9	154	0	0	743	582
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				515	1		12	210	0	0	845	699
Arrive On Green				0.29	0.29	0.00	0.12	0.12	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1778	4	1585	103	1762	0	0	1870	1549
Grp Volume(v), veh/h				491	0	0	163	0	0	0	743	582
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1865	0	0	0	1870	1549
Q Serve(g_s), s				32.4	0.0	0.0	10.1	0.0	0.0	0.0	43.4	39.6
Cycle Q Clear(g_c), s				32.4	0.0	0.0	10.1	0.0	0.0	0.0	43.4	39.6
Prop In Lane				1.00		1.00	0.06		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				517	0		222	0	0	0	845	699
V/C Ratio(X)				0.95	0.00		0.73	0.00	0.00	0.00	0.88	0.83
Avail Cap(c_a), veh/h				548	0		222	0	0	0	845	699
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.99	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				41.8	0.0	0.0	51.0	0.0	0.0	0.0	29.9	28.9
Incr Delay (d2), s/veh				25.3	0.0	0.0	10.3	0.0	0.0	0.0	12.6	11.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				17.7	0.0	0.0	5.2	0.0	0.0	0.0	21.1	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				67.1	0.0	0.0	61.3	0.0	0.0	0.0	42.5	40.0
LnGrp LOS				E	A		E	A	A	A	D	D
Approach Vol, veh/h					491	A		163			1325	
Approach Delay, s/veh					67.1			61.3			41.4	
Approach LOS					E			E			D	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	20.1		60.0		39.9			
Change Period (Y+Rc), s	5.8		5.8		5.1			
Max Green Setting (Gmax), s	12.2		54.2		36.9			
Max Q Clear Time (g_c+I1), s	12.1		45.4		34.4			
Green Ext Time (p_c), s	0.0		1.5		0.4			

Intersection Summary		
HCM 6th Ctrl Delay	49.4	
HCM 6th LOS	D	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	0	28	0	0	0	0	16	25	190	915	0
Future Volume (veh/h)	133	0	28	0	0	0	0	16	25	190	915	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	145	0	0				0	17	0	207	995	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	172	0					0	182	154	213	1024	0
Arrive On Green	0.10	0.00	0.00				0.00	0.10	0.00	0.67	0.67	0.00
Sat Flow, veh/h	1781	0	1585				0	1870	1585	319	1535	0
Grp Volume(v), veh/h	145	0	0				0	17	0	1202	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1870	1585	1854	0	0
Q Serve(g_s), s	9.6	0.0	0.0				0.0	1.0	0.0	73.6	0.0	0.0
Cycle Q Clear(g_c), s	9.6	0.0	0.0				0.0	1.0	0.0	73.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.17		0.00
Lane Grp Cap(c), veh/h	172	0					0	182	154	1237	0	0
V/C Ratio(X)	0.84	0.00					0.00	0.09	0.00	0.97	0.00	0.00
Avail Cap(c_a), veh/h	227	0					0	182	154	1267	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	0.41	0.00	0.00
Uniform Delay (d), s/veh	53.3	0.0	0.0				0.0	49.3	0.0	18.9	0.0	0.0
Incr Delay (d2), s/veh	15.3	0.0	0.0				0.0	0.1	0.0	11.0	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	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	0.0				0.0	0.5	0.0	29.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.6	0.0	0.0				0.0	49.4	0.0	30.0	0.0	0.0
LnGrp LOS	E	A					A	D	A	C	A	A
Approach Vol, veh/h		145	A					17			1202	
Approach Delay, s/veh		68.6						49.4			30.0	
Approach LOS		E						D			C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	17.5	16.7	85.8
Change Period (Y+Rc), s	5.8	5.1	5.8
Max Green Setting (Gmax), s	6.0	15.3	82.0
Max Q Clear Time (g_c+I1), s	3.0	11.6	75.6
Green Ext Time (p_c), s	0.0	0.1	4.4

Intersection Summary	
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	43	85	5	30	0	214	34	23	1	1	5
Future Volume (veh/h)	14	43	85	5	30	0	214	34	23	1	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	47	24	5	33	0	235	37	11	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	831	370	12	786	351	318	655	292	6	25	11
Arrive On Green	0.02	0.23	0.23	0.01	0.22	0.00	0.18	0.18	0.18	0.00	0.01	0.00
Sat Flow, veh/h	1781	3554	1583	1781	3554	1585	1781	3554	1584	1781	3554	1585
Grp Volume(v), veh/h	15	47	24	5	33	0	235	37	11	1	1	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1777	1585	1781	1777	1584	1781	1777	1585
Q Serve(g_s), s	0.3	0.3	0.4	0.1	0.2	0.0	4.0	0.3	0.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.3	0.4	0.1	0.2	0.0	4.0	0.3	0.2	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	35	831	370	12	786	351	318	655	292	6	25	11
V/C Ratio(X)	0.43	0.06	0.06	0.41	0.04	0.00	0.74	0.06	0.04	0.18	0.04	0.00
Avail Cap(c_a), veh/h	1105	4407	1963	1105	4407	1966	1105	4407	1964	1105	4407	1966
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.6	9.6	9.6	16.0	9.9	0.0	12.5	10.8	10.8	16.1	15.9	0.0
Incr Delay (d2), s/veh	8.3	0.0	0.1	21.0	0.0	0.0	3.4	0.0	0.1	15.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.1	0.1	0.1	0.0	1.4	0.1	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	9.6	9.7	36.9	9.9	0.0	15.9	10.9	10.9	31.0	16.6	0.0
LnGrp LOS	C	A	A	D	A	A	B	B	B	C	B	A
Approach Vol, veh/h		86			38			283			2	
Approach Delay, s/veh		12.1			13.5			15.0			23.8	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.2	12.2	4.0	11.7	4.6	11.8	9.8	6.0
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.1	2.4	2.0	2.3	2.3	2.2	6.0	2.0
Green Ext Time (p_c), s	0.0	0.3	0.0	0.2	0.0	0.1	0.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.3
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)	59	96	44	16	726	40	26	19	11	9	10	36
Future Volume (veh/h)	59	96	44	16	726	40	26	19	11	9	10	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	63	103	33	17	781	30	28	20	2	10	11	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	1225	1038	62	1142	967	90	105	11	39	65	55
Arrive On Green	0.08	0.66	0.66	0.03	0.61	0.61	0.05	0.06	0.06	0.02	0.03	0.03
Sat Flow, veh/h	1781	1870	1585	1781	1870	1584	1781	1672	167	1781	1870	1585
Grp Volume(v), veh/h	63	103	33	17	781	30	28	0	22	10	11	4
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1584	1781	0	1840	1781	1870	1585
Q Serve(g_s), s	3.0	1.8	0.7	0.8	25.2	0.7	1.4	0.0	1.0	0.5	0.5	0.2
Cycle Q Clear(g_c), s	3.0	1.8	0.7	0.8	25.2	0.7	1.4	0.0	1.0	0.5	0.5	0.2
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	141	1225	1038	62	1142	967	90	0	116	39	65	55
V/C Ratio(X)	0.45	0.08	0.03	0.28	0.68	0.03	0.31	0.00	0.19	0.25	0.17	0.07
Avail Cap(c_a), veh/h	297	1225	1038	297	1142	967	297	0	817	297	1142	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	5.7	5.5	42.4	11.7	7.0	41.3	0.0	40.0	43.3	42.2	42.1
Incr Delay (d2), s/veh	2.2	0.1	0.1	2.4	3.3	0.1	2.0	0.0	1.1	3.3	1.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.6	0.2	0.4	9.1	0.2	0.6	0.0	0.5	0.2	0.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	5.8	5.5	44.8	15.1	7.0	43.2	0.0	41.2	46.6	44.0	42.9
LnGrp LOS	D	A	A	D	B	A	D	A	D	D	D	D
Approach Vol, veh/h		199			828			50			25	
Approach Delay, s/veh		17.2			15.4			42.3			44.9	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	65.5	6.0	11.5	11.1	61.5	8.5	8.9
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	15.0	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	2.8	3.8	2.5	3.0	5.0	27.2	3.4	2.5
Green Ext Time (p_c), s	0.0	1.0	0.0	0.1	0.1	8.2	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	17.6
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)	184	561	29	0	520	347	0	0	0	427	21	434
Future Volume (veh/h)	184	561	29	0	520	347	0	0	0	427	21	434
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	207	630	17	0	584	0				497	0	128
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	389	1779	777	0	1395					863	0	376
Arrive On Green	0.11	0.50	0.50	0.00	0.27	0.00				0.24	0.00	0.24
Sat Flow, veh/h	3456	3554	1551	0	5274	1585				3563	0	1551
Grp Volume(v), veh/h	207	630	17	0	584	0				497	0	128
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	0	1702	1585				1781	0	1551
Q Serve(g_s), s	2.3	4.4	0.2	0.0	3.8	0.0				5.0	0.0	2.8
Cycle Q Clear(g_c), s	2.3	4.4	0.2	0.0	3.8	0.0				5.0	0.0	2.8
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	389	1779	777	0	1395					863	0	376
V/C Ratio(X)	0.53	0.35	0.02	0.00	0.42					0.58	0.00	0.34
Avail Cap(c_a), veh/h	2537	3479	1518	0	4999					2616	0	1139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	17.1	6.2	5.2	0.0	12.2	0.0				13.6	0.0	12.8
Incr Delay (d2), s/veh	1.3	0.2	0.0	0.0	0.3	0.0				0.7	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.9	0.0	0.0	1.1	0.0				1.7	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	6.3	5.2	0.0	12.4	0.0				14.4	0.0	13.4
LnGrp LOS	B	A	A	A	B					B	A	B
Approach Vol, veh/h		854			584	A					625	
Approach Delay, s/veh		9.2			12.4						14.2	
Approach LOS		A			B						B	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		25.9		15.0	9.3	16.6						
Change Period (Y+Rc), s		5.4		5.1	* 4.7	5.4						
Max Green Setting (Gmax), s		40.0		30.0	* 30	40.0						
Max Q Clear Time (g_c+I1), s		6.4		7.0	4.3	5.8						
Green Ext Time (p_c), s		5.9		2.9	0.8	5.3						

Intersection Summary												
HCM 6th Ctrl Delay			11.6									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	207	148	36	347	175	22
Future Volume (veh/h)	207	148	36	347	175	22
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	238	145	41	399	201	22
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	356	217	166	961	303	33
Arrive On Green	0.33	0.33	0.09	0.51	0.19	0.19
Sat Flow, veh/h	1088	663	1781	1870	1579	173
Grp Volume(v), veh/h	0	383	41	399	224	0
Grp Sat Flow(s),veh/h/ln	0	1751	1781	1870	1759	0
Q Serve(g_s), s	0.0	6.1	0.7	4.3	3.8	0.0
Cycle Q Clear(g_c), s	0.0	6.1	0.7	4.3	3.8	0.0
Prop In Lane		0.38	1.00		0.90	0.10
Lane Grp Cap(c), veh/h	0	574	166	961	338	0
V/C Ratio(X)	0.00	0.67	0.25	0.42	0.66	0.00
Avail Cap(c_a), veh/h	0	2171	938	2319	2181	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	9.3	13.6	4.9	12.1	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.3	0.3	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	0.2	0.5	1.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	11.0	13.9	5.2	14.8	0.0
LnGrp LOS	A	B	B	A	B	A
Approach Vol, veh/h	383			440	224	
Approach Delay, s/veh	11.0			6.0	14.8	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		21.1		11.2	6.0	15.1
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		40.0		40.0	17.0	40.0
Max Q Clear Time (g_c+I1), s		6.3		5.8	2.7	8.1
Green Ext Time (p_c), s		2.9		0.8	0.0	2.9

Intersection Summary		
HCM 6th Ctrl Delay		9.7
HCM 6th LOS		A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	266	70	453	576	74	61	168	455	30	196	48
Future Volume (veh/h)	22	266	70	453	576	74	61	168	455	30	196	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	28	332	0	566	720	0	76	210	0	38	245	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	1065		710	1833		253	424		219	389	
Arrive On Green	0.04	0.21	0.00	0.21	0.36	0.00	0.07	0.12	0.00	0.06	0.11	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	28	332	0	566	720	0	76	210	0	38	245	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	0.5	3.2	0.0	9.0	6.1	0.0	1.2	3.2	0.0	0.6	3.8	0.0
Cycle Q Clear(g_c), s	0.5	3.2	0.0	9.0	6.1	0.0	1.2	3.2	0.0	0.6	3.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	1065		710	1833		253	424		219	389	
V/C Ratio(X)	0.22	0.31		0.80	0.39		0.30	0.49		0.17	0.63	
Avail Cap(c_a), veh/h	721	4438		901	4438		901	741		721	741	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.9	19.3	0.0	21.7	13.8	0.0	25.3	23.7	0.0	25.5	24.5	0.0
Incr Delay (d2), s/veh	0.3	0.2	0.0	4.0	0.2	0.0	0.7	0.9	0.0	0.4	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.0	0.0	3.5	1.9	0.0	0.5	1.2	0.0	0.2	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	19.5	0.0	25.7	14.0	0.0	25.9	24.6	0.0	25.9	26.2	0.0
LnGrp LOS	C	B		C	B		C	C		C	C	
Approach Vol, veh/h		360	A		1286	A		286	A		283	A
Approach Delay, s/veh		20.1			19.1			24.9			26.2	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	26.7	9.7	12.4	17.3	18.1	9.1	13.0
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	12.0	50.0	15.0	12.0	15.0	50.0	12.0	12.0
Max Q Clear Time (g_c+I1), s	2.5	8.1	3.2	5.8	11.0	5.2	2.6	5.2
Green Ext Time (p_c), s	0.0	7.6	0.1	0.6	0.9	3.0	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	108	268	415	186	443	269
Future Volume (veh/h)	108	268	415	186	443	269
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.95	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	144	0	553	65	591	359
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	620	284	1385	408	584	2015
Arrive On Green	0.18	0.00	0.27	0.27	0.17	0.57
Sat Flow, veh/h	3456	1585	5274	1506	3456	3647
Grp Volume(v), veh/h	144	0	553	65	591	359
Grp Sat Flow(s),veh/h/ln	1728	1585	1702	1506	1728	1777
Q Serve(g_s), s	1.7	0.0	4.2	1.6	8.0	2.3
Cycle Q Clear(g_c), s	1.7	0.0	4.2	1.6	8.0	2.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	620	284	1385	408	584	2015
V/C Ratio(X)	0.23	0.00	0.40	0.16	1.01	0.18
Avail Cap(c_a), veh/h	2336	1072	2697	795	584	2015
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	14.1	13.1	19.7	4.9
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.1	40.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.2	0.0	5.8	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.9	0.0	14.2	13.2	59.9	5.0
LnGrp LOS	B	A	B	B	F	A
Approach Vol, veh/h	144		618			950
Approach Delay, s/veh	16.9		14.1			39.1
Approach LOS	B		B			D

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	32.8		14.5	14.0	18.8
Change Period (Y+Rc), s	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s	10.0		32.0	8.0	25.0
Max Q Clear Time (g_c+I1), s	4.3		3.7	10.0	6.2
Green Ext Time (p_c), s	0.4		0.8	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	36	41	396	141	139	429
Future Volume (veh/h)	36	41	396	141	139	429
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	-4	440	157	154	407
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	105	94	499	1441	189	500
Arrive On Green	0.06	0.00	0.28	0.77	0.42	0.42
Sat Flow, veh/h	1781	1585	1781	1870	454	1200
Grp Volume(v), veh/h	40	-4	440	157	0	561
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1654
Q Serve(g_s), s	1.4	0.0	15.1	1.3	0.0	19.1
Cycle Q Clear(g_c), s	1.4	0.0	15.1	1.3	0.0	19.1
Prop In Lane	1.00	1.00	1.00			0.73
Lane Grp Cap(c), veh/h	105	94	499	1441	0	690
V/C Ratio(X)	0.38	-0.04	0.88	0.11	0.00	0.81
Avail Cap(c_a), veh/h	1115	993	837	1464	0	1295
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.9	0.0	22.0	1.8	0.0	16.4
Incr Delay (d2), s/veh	2.2	0.0	5.1	0.0	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	6.0	0.1	0.0	6.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.2	0.0	27.0	1.9	0.0	19.8
LnGrp LOS	C	A	C	A	A	B
Approach Vol, veh/h	36			597	561	
Approach Delay, s/veh	34.6			20.4	19.8	
Approach LOS	C			C	B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	55.4		8.5	22.6	32.8
Change Period (Y+Rc), s	6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	50.0		* 40	* 30	50.0
Max Q Clear Time (g_c+I1), s	3.3		3.4	17.1	21.1
Green Ext Time (p_c), s	1.2		0.1	0.8	5.5

Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	239	66	16	167	36
Future Vol, veh/h	24	239	66	16	167	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	299	83	20	209	45

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	556	93	0	0	103	0
Stage 1	93	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	492	964	-	-	1489	-
Stage 1	931	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	421	964	-	-	1489	-
Mov Cap-2 Maneuver	421	-	-	-	-	-
Stage 1	931	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	6.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	862	1489	-
HCM Lane V/C Ratio	-	-	0.381	0.14	-
HCM Control Delay (s)	-	-	11.7	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.8	0.5	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	338	144	146	391	187	270	784	105	235	368	153
Future Volume (veh/h)	170	338	144	146	391	187	270	784	105	235	368	153
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	187	371	0	160	430	39	297	862	56	258	404	57
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	431	848		423	836	254	425	1409	430	425	980	431
Arrive On Green	0.12	0.17	0.00	0.12	0.16	0.16	0.12	0.28	0.28	0.12	0.28	0.28
Sat Flow, veh/h	3456	5106	1585	3456	5106	1552	3456	5106	1558	3456	3554	1563
Grp Volume(v), veh/h	187	371	0	160	430	39	297	862	56	258	404	57
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1552	1728	1702	1558	1728	1777	1563
Q Serve(g_s), s	3.5	4.6	0.0	3.0	5.4	1.5	5.8	10.3	1.9	5.0	6.5	1.9
Cycle Q Clear(g_c), s	3.5	4.6	0.0	3.0	5.4	1.5	5.8	10.3	1.9	5.0	6.5	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	431	848		423	836	254	425	1409	430	425	980	431
V/C Ratio(X)	0.43	0.44		0.38	0.51	0.15	0.70	0.61	0.13	0.61	0.41	0.13
Avail Cap(c_a), veh/h	1228	3267		1228	3267	993	1228	3267	996	1228	2273	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	26.4	0.0	28.4	26.9	25.2	29.6	22.2	19.1	29.2	20.8	19.1
Incr Delay (d2), s/veh	0.7	0.4	0.0	0.6	0.5	0.3	2.1	0.4	0.1	3.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.7	0.0	1.2	2.1	0.5	2.3	3.7	0.6	2.1	2.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	26.7	0.0	29.0	27.3	25.5	31.7	22.6	19.3	32.2	21.1	19.3
LnGrp LOS	C	C		C	C	C	C	C	B	C	C	B
Approach Vol, veh/h		558	A		629			1215			719	
Approach Delay, s/veh		27.6			27.6			24.7			24.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	17.7	13.6	25.4	13.8	17.5	13.7	25.4
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	5.0	6.6	7.0	12.3	5.5	7.4	7.8	8.5
Green Ext Time (p_c), s	0.5	2.4	1.7	6.4	0.5	3.2	0.9	2.9

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	230	671	280	165	336	173	
Future Volume (veh/h)	230	671	280	165	336	173	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	247	220	301	42	361	186	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	363	323	404	335	422	1042	
Arrive On Green	0.20	0.20	0.22	0.22	0.24	0.56	
Sat Flow, veh/h	1781	1585	1870	1551	1781	1870	
Grp Volume(v), veh/h	247	220	301	42	361	186	
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1551	1781	1870	
Q Serve(g_s), s	5.8	5.8	6.8	1.0	8.8	2.2	
Cycle Q Clear(g_c), s	5.8	5.8	6.8	1.0	8.8	2.2	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	363	323	404	335	422	1042	
V/C Ratio(X)	0.68	0.68	0.74	0.13	0.86	0.18	
Avail Cap(c_a), veh/h	733	652	604	501	642	1473	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	16.6	16.6	16.6	14.3	16.5	4.9	
Incr Delay (d2), s/veh	2.7	3.0	3.3	0.2	4.6	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.2	2.0	2.6	0.3	3.3	0.4	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	19.3	19.7	19.8	14.5	21.1	5.0	
LnGrp LOS	B	B	B	B	C	A	
Approach Vol, veh/h	467		343			547	
Approach Delay, s/veh	19.5		19.2			15.6	
Approach LOS	B		B			B	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	15.4	15.2			30.6	14.6
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 16	14.6			35.6	18.6
Max Q Clear Time (g_c+I1), s	10.8	8.8			4.2	7.8
Green Ext Time (p_c), s	0.1	1.0			1.2	1.4

Intersection Summary	
HCM 6th Ctrl Delay	17.8
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)	0	0	0	372	6	487	17	277	0	0	471	77
Future Volume (veh/h)	0	0	0	372	6	487	17	277	0	0	471	77
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				413	7	209	19	308	0	0	523	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				589	10	937	67	1446	0	0	1371	
Arrive On Green				0.34	0.34	0.34	0.04	0.41	0.00	0.00	0.27	0.00
Sat Flow, veh/h				1753	30	2790	1781	3647	0	0	5274	1585
Grp Volume(v), veh/h				420	0	209	19	308	0	0	523	0
Grp Sat Flow(s),veh/h/ln				1783	0	1395	1781	1777	0	0	1702	1585
Q Serve(g_s), s				9.1	0.0	2.4	0.5	2.5	0.0	0.0	3.7	0.0
Cycle Q Clear(g_c), s				9.1	0.0	2.4	0.5	2.5	0.0	0.0	3.7	0.0
Prop In Lane				0.98		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				598	0	937	67	1446	0	0	1371	
V/C Ratio(X)				0.70	0.00	0.22	0.28	0.21	0.00	0.00	0.38	
Avail Cap(c_a), veh/h				1396	0	2185	1395	2784	0	0	4000	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				12.9	0.0	10.7	20.9	8.6	0.0	0.0	13.3	0.0
Incr Delay (d2), s/veh				0.9	0.0	0.1	0.9	0.0	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.1	0.0	0.6	0.2	0.6	0.0	0.0	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				13.8	0.0	10.7	21.8	8.6	0.0	0.0	13.4	0.0
LnGrp LOS				B	A	B	C	A	A	A	B	
Approach Vol, veh/h					629			327			523	A
Approach Delay, s/veh					12.8			9.4			13.4	
Approach LOS					B			A			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		23.9			6.2	17.7		20.8				
Change Period (Y+Rc), s		5.7			4.5	5.7		5.8				
Max Green Setting (Gmax), s		35.0			35.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s		4.5			2.5	5.7		11.1				
Green Ext Time (p_c), s		1.2			0.0	2.2		2.7				

Intersection Summary												
HCM 6th Ctrl Delay			12.3									
HCM 6th LOS			B									

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	2	37	0	0	0	0	229	655	0	497	339
Future Volume (veh/h)	89	2	37	0	0	0	0	229	655	0	497	339
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	101	0	7				0	257	385	0	558	252
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	584	0	260				0	1564	697	0	1048	472
Arrive On Green	0.16	0.00	0.16				0.00	0.44	0.44	0.00	0.44	0.44
Sat Flow, veh/h	3563	0	1585				0	3647	1585	0	2475	1073
Grp Volume(v), veh/h	101	0	7				0	257	385	0	416	394
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	0	1777	1677
Q Serve(g_s), s	0.7	0.0	0.1				0.0	1.2	4.9	0.0	4.7	4.7
Cycle Q Clear(g_c), s	0.7	0.0	0.1				0.0	1.2	4.9	0.0	4.7	4.7
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.64
Lane Grp Cap(c), veh/h	584	0	260				0	1564	697	0	782	738
V/C Ratio(X)	0.17	0.00	0.03				0.00	0.16	0.55	0.00	0.53	0.53
Avail Cap(c_a), veh/h	4442	0	1976				0	4561	2034	0	2281	2153
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	9.8	0.0	9.6				0.0	4.6	5.6	0.0	5.6	5.6
Incr Delay (d2), s/veh	0.1	0.0	0.0				0.0	0.0	0.3	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0				0.0	0.1	0.4	0.0	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.9	0.0	9.6				0.0	4.6	5.9	0.0	5.8	5.8
LnGrp LOS	A	A	A				A	A	A	A	A	A
Approach Vol, veh/h		108						642			810	
Approach Delay, s/veh		9.8						5.4			5.8	
Approach LOS		A						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	17.7	9.6	17.7
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	6.9	2.7	6.7
Green Ext Time (p_c), s	1.6	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	2	11	19	1	134	9	711	25	156	383	9
Future Volume (veh/h)	23	2	11	19	1	134	9	711	25	156	383	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	2	2	22	1	15	10	817	12	179	440	7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	120	102	45	113	169	23	1927	859	287	1146	971
Arrive On Green	0.03	0.06	0.06	0.03	0.06	0.06	0.01	0.54	0.54	0.08	0.61	0.61
Sat Flow, veh/h	1781	1870	1585	1781	1870	2782	1781	3554	1584	3456	1870	1585
Grp Volume(v), veh/h	26	2	2	22	1	15	10	817	12	179	440	7
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1391	1781	1777	1584	1728	1870	1585
Q Serve(g_s), s	0.9	0.1	0.1	0.8	0.0	0.3	0.4	8.8	0.2	3.2	7.7	0.1
Cycle Q Clear(g_c), s	0.9	0.1	0.1	0.8	0.0	0.3	0.4	8.8	0.2	3.2	7.7	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	120	102	45	113	169	23	1927	859	287	1146	971
V/C Ratio(X)	0.51	0.02	0.02	0.49	0.01	0.09	0.44	0.42	0.01	0.62	0.38	0.01
Avail Cap(c_a), veh/h	414	1014	860	414	1014	1509	414	1927	859	803	1146	971
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	28.3	28.3	31.0	28.5	28.6	31.6	8.8	6.8	28.6	6.3	4.9
Incr Delay (d2), s/veh	7.5	0.1	0.1	8.0	0.0	0.2	12.9	0.7	0.0	2.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.4	0.0	0.1	0.2	2.6	0.1	1.3	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	28.3	28.4	39.0	28.5	28.9	44.5	9.5	6.8	30.8	7.3	4.9
LnGrp LOS	D	C	C	D	C	C	D	A	A	C	A	A
Approach Vol, veh/h		30			38			839			626	
Approach Delay, s/veh		37.0			34.7			9.8			14.0	
Approach LOS		D			C			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	45.3	5.6	8.7	9.4	40.8	5.9	8.5
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	15.0	35.0	15.0	35.0	15.0	35.0	15.0	35.0
Max Q Clear Time (g_c+I1), s	2.4	9.7	2.8	2.1	5.2	10.8	2.9	2.3
Green Ext Time (p_c), s	0.0	2.5	0.0	0.0	0.4	5.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	44	62	173	43	125	54	472	403	146	185	35
Future Volume (veh/h)	54	44	62	173	43	125	54	472	403	146	185	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	58	47	0	186	46	40	58	508	109	157	199	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	347		655	367	502	162	751	333	423	862	381
Arrive On Green	0.09	0.10	0.00	0.19	0.20	0.20	0.09	0.21	0.21	0.12	0.24	0.24
Sat Flow, veh/h	1781	3647	0	3456	1870	1573	1781	3554	1578	3456	3554	1572
Grp Volume(v), veh/h	58	47	0	186	46	40	58	508	109	157	199	10
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1573	1781	1777	1578	1728	1777	1572
Q Serve(g_s), s	2.4	1.0	0.0	3.6	1.6	1.4	2.4	10.4	4.6	3.3	3.6	0.4
Cycle Q Clear(g_c), s	2.4	1.0	0.0	3.6	1.6	1.4	2.4	10.4	4.6	3.3	3.6	0.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	347		655	367	502	162	751	333	423	862	381
V/C Ratio(X)	0.36	0.14		0.28	0.13	0.08	0.36	0.68	0.33	0.37	0.23	0.03
Avail Cap(c_a), veh/h	225	539		2031	1146	1158	358	2676	1188	520	2497	1104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	32.6	0.0	27.5	26.2	18.9	33.8	28.7	26.4	31.9	24.0	22.8
Incr Delay (d2), s/veh	1.9	0.2	0.0	0.5	0.2	0.1	1.9	1.1	0.6	0.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.4	0.0	1.5	0.7	0.5	1.1	4.2	1.7	1.3	1.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	32.9	0.0	28.0	26.4	19.0	35.7	29.8	27.0	32.7	24.2	22.9
LnGrp LOS	D	C		C	C	B	D	C	C	C	C	C
Approach Vol, veh/h		105	A		272			675			366	
Approach Delay, s/veh		34.4			26.4			29.8			27.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	24.2	22.5	15.2	14.7	26.7	14.7	23.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	11.3	59.6	46.5	12.0	15.9	55.6	10.0	48.5
Max Q Clear Time (g_c+I1), s	5.3	12.4	5.6	3.0	4.4	5.6	4.4	3.6
Green Ext Time (p_c), s	0.3	3.7	1.5	0.1	0.1	1.8	0.1	0.5

Intersection Summary	
HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	0	266	12	678	0	0	308	128
Future Volume (veh/h)	0	0	0	10	0	266	12	678	0	0	308	128
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				11	0	0	13	729	0	0	331	34
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				34	0		23	1273	0	0	354	297
Arrive On Green				0.02	0.00	0.00	0.23	0.23	0.00	0.00	0.19	0.19
Sat Flow, veh/h				1781	0	1585	33	1836	0	0	1870	1568
Grp Volume(v), veh/h				11	0	0	742	0	0	0	331	34
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1869	0	0	0	1870	1568
Q Serve(g_s), s				1.0	0.0	0.0	59.9	0.0	0.0	0.0	29.6	3.1
Cycle Q Clear(g_c), s				1.0	0.0	0.0	59.9	0.0	0.0	0.0	29.6	3.1
Prop In Lane				1.00		1.00	0.02		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				34	0		1296	0	0	0	354	297
V/C Ratio(X)				0.32	0.00		0.57	0.00	0.00	0.00	0.94	0.11
Avail Cap(c_a), veh/h				138	0		1296	0	0	0	574	482
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.91	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				82.3	0.0	0.0	43.2	0.0	0.0	0.0	67.9	57.1
Incr Delay (d2), s/veh				2.0	0.0	0.0	1.7	0.0	0.0	0.0	11.6	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.5	0.0	0.0	30.6	0.0	0.0	0.0	15.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				84.3	0.0	0.0	44.9	0.0	0.0	0.0	79.5	57.2
LnGrp LOS				F	A		D	A	A	A	E	E
Approach Vol, veh/h					11	A		742			365	
Approach Delay, s/veh					84.3			44.9			77.4	
Approach LOS					F			D			E	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	123.7		38.0		8.3			
Change Period (Y+Rc), s	5.8		5.8		5.1			
Max Green Setting (Gmax), s	87.9		52.2		13.2			
Max Q Clear Time (g_c+I1), s	61.9		31.6		3.0			
Green Ext Time (p_c), s	1.4		0.5		0.0			

Intersection Summary		
HCM 6th Ctrl Delay	55.9	
HCM 6th LOS	E	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	3	78	0	0	0	0	498	510	0	28	320
Future Volume (veh/h)	136	3	78	0	0	0	0	498	510	0	28	320
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	139	3	0				0	541	475	0	29	327
Peak Hour Factor	0.98	0.98	0.98				0.98	0.92	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	2
Cap, veh/h	134	3					0	1096	929	0	31	352
Arrive On Green	0.08	0.08	0.00				0.00	0.59	0.59	0.00	0.24	0.24
Sat Flow, veh/h	1745	38	1585				0	1870	1585	0	131	1474
Grp Volume(v), veh/h	142	0	0				0	541	475	0	0	356
Grp Sat Flow(s),veh/h/ln	1783	0	1585				0	1870	1585	0	0	1605
Q Serve(g_s), s	13.1	0.0	0.0				0.0	28.7	30.1	0.0	0.0	36.9
Cycle Q Clear(g_c), s	13.1	0.0	0.0				0.0	28.7	30.1	0.0	0.0	36.9
Prop In Lane	0.98		1.00				0.00		1.00	0.00		0.92
Lane Grp Cap(c), veh/h	137	0					0	1096	929	0	0	383
V/C Ratio(X)	1.03	0.00					0.00	0.49	0.51	0.00	0.00	0.93
Avail Cap(c_a), veh/h	137	0					0	1096	929	0	0	493
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.00	0.00	0.35
Uniform Delay (d), s/veh	78.5	0.0	0.0				0.0	20.5	20.8	0.0	0.0	63.3
Incr Delay (d2), s/veh	85.9	0.0	0.0				0.0	1.6	2.0	0.0	0.0	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	0.0	0.0				0.0	12.3	11.1	0.0	0.0	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	164.4	0.0	0.0				0.0	22.1	22.8	0.0	0.0	72.6
LnGrp LOS	F	A					A	C	C	A	A	E
Approach Vol, veh/h		142	A					1016			356	
Approach Delay, s/veh		164.4						22.4			72.6	
Approach LOS		F						C			E	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	105.4	18.2	46.4
Change Period (Y+Rc), s	5.8	5.1	5.8
Max Green Setting (Gmax), s	88.0	13.1	52.2
Max Q Clear Time (g_c+I1), s	32.1	15.1	38.9
Green Ext Time (p_c), s	1.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	47.6
HCM 6th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	41	47	8	31	10	86	80	12	0	2	1
Future Volume (veh/h)	14	41	47	8	31	10	86	80	12	0	2	1
Initial Q (Qb), veh	0	0	0	0	0	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	18	53	23	10	40	5	110	103	3	0	3	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	882	393	24	846	378	180	871	389	6	29	13
Arrive On Green	0.02	0.25	0.25	0.01	0.24	0.24	0.10	0.25	0.25	0.00	0.01	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	18	53	23	10	40	5	110	103	3	0	3	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.3	0.3	0.3	0.2	0.3	0.1	1.7	0.7	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.3	0.3	0.2	0.3	0.1	1.7	0.7	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	882	393	24	846	378	180	871	389	6	29	13
V/C Ratio(X)	0.43	0.06	0.06	0.42	0.05	0.01	0.61	0.12	0.01	0.00	0.10	0.00
Avail Cap(c_a), veh/h	1212	4837	2157	1212	4837	2157	1212	4837	2157	1212	4837	2157
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00
Uniform Delay (d), s/veh	14.2	8.4	8.4	14.4	8.6	8.6	12.7	8.6	8.4	0.0	14.5	0.0
Incr Delay (d2), s/veh	7.0	0.0	0.1	11.4	0.0	0.0	3.4	0.1	0.0	0.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.1	0.1	0.1	0.0	0.6	0.2	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	8.5	8.5	25.8	8.6	8.6	16.0	8.7	8.4	0.0	16.0	0.0
LnGrp LOS	C	A	A	C	A	A	B	A	A	A	B	A
Approach Vol, veh/h		94			55			216			3	
Approach Delay, s/veh		10.9			11.8			12.4			16.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	12.0	0.0	13.0	4.7	11.7	7.0	6.0
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.2	2.3	0.0	2.7	2.3	2.3	3.7	2.0
Green Ext Time (p_c), s	0.0	0.3	0.0	0.6	0.0	0.2	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.0
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)	33	334	43	14	76	17	61	40	58	26	4	44
Future Volume (veh/h)	33	334	43	14	76	17	61	40	58	26	4	44
Initial Q (Qb), veh	0	0	0	0	0	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	40	402	38	17	92	14	73	48	24	31	5	2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	1138	965	61	1087	921	145	106	53	94	115	98
Arrive On Green	0.06	0.61	0.61	0.03	0.58	0.58	0.08	0.09	0.09	0.05	0.06	0.06
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1176	588	1781	1870	1585
Grp Volume(v), veh/h	40	402	38	17	92	14	73	0	72	31	5	2
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1764	1781	1870	1585
Q Serve(g_s), s	2.0	10.1	0.9	0.9	2.1	0.4	3.7	0.0	3.7	1.6	0.2	0.1
Cycle Q Clear(g_c), s	2.0	10.1	0.9	0.9	2.1	0.4	3.7	0.0	3.7	1.6	0.2	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	110	1138	965	61	1087	921	145	0	158	94	115	98
V/C Ratio(X)	0.36	0.35	0.04	0.28	0.08	0.02	0.51	0.00	0.45	0.33	0.04	0.02
Avail Cap(c_a), veh/h	282	1138	965	282	1087	921	282	0	746	282	1087	921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	9.2	7.4	44.6	8.7	8.4	41.7	0.0	40.9	43.2	41.8	41.7
Incr Delay (d2), s/veh	2.0	0.9	0.1	2.4	0.2	0.0	2.7	0.0	2.9	2.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.8	0.3	0.4	0.7	0.1	1.7	0.0	1.7	0.7	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	10.1	7.5	47.0	8.9	8.4	44.4	0.0	43.8	45.2	42.0	41.9
LnGrp LOS	D	B	A	D	A	A	D	A	D	D	D	D
Approach Vol, veh/h		480			123			145			38	
Approach Delay, s/veh		12.8			14.1			44.1			44.6	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	64.1	9.0	14.3	9.9	61.5	11.7	11.6
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	15.0	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	2.9	12.1	3.6	5.7	4.0	4.1	5.7	2.2
Green Ext Time (p_c), s	0.0	4.0	0.0	0.5	0.0	0.7	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.3
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)	364	989	40	0	801	555	0	0	0	812	8	526
Future Volume (veh/h)	364	989	40	0	801	555	0	0	0	812	8	526
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	368	999	24	0	809	0				826	0	212
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	532	1837	813	0	1480					1138	0	499
Arrive On Green	0.15	0.52	0.52	0.00	0.29	0.00				0.32	0.00	0.32
Sat Flow, veh/h	3456	3554	1573	0	5274	1585				3563	0	1563
Grp Volume(v), veh/h	368	999	24	0	809	0				826	0	212
Grp Sat Flow(s),veh/h/ln	1728	1777	1573	0	1702	1585				1781	0	1563
Q Serve(g_s), s	6.5	12.1	0.5	0.0	8.6	0.0				13.2	0.0	6.9
Cycle Q Clear(g_c), s	6.5	12.1	0.5	0.0	8.6	0.0				13.2	0.0	6.9
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	532	1837	813	0	1480					1138	0	499
V/C Ratio(X)	0.69	0.54	0.03	0.00	0.55					0.73	0.00	0.42
Avail Cap(c_a), veh/h	1614	2213	980	0	3180					1664	0	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	25.7	10.4	7.6	0.0	19.2	0.0				19.4	0.0	17.2
Incr Delay (d2), s/veh	1.8	0.3	0.0	0.0	0.4	0.0				1.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.7	0.1	0.0	3.0	0.0				5.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	10.7	7.6	0.0	19.7	0.0				20.4	0.0	17.9
LnGrp LOS	C	B	A	A	B					C	A	B
Approach Vol, veh/h		1391			809	A					1038	
Approach Delay, s/veh		15.1			19.7						19.9	
Approach LOS		B			B						B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	38.6		25.6	14.6	24.0
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	14.1		15.2	8.5	10.6
Green Ext Time (p_c), s	9.6		4.5	1.4	7.5

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	377	272	26	310	227	38
Future Volume (veh/h)	377	272	26	310	227	38
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	984	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	381	257	26	313	229	31
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	322	217	79	1264	284	39
Arrive On Green	0.59	0.59	0.04	0.68	0.18	0.18
Sat Flow, veh/h	548	370	1781	1870	1541	209
Grp Volume(v), veh/h	0	638	26	313	261	0
Grp Sat Flow(s),veh/h/ln	0	918	1781	1870	1756	0
Q Serve(g_s), s	0.0	40.0	1.0	4.4	9.7	0.0
Cycle Q Clear(g_c), s	0.0	40.0	1.0	4.4	9.7	0.0
Prop In Lane		0.40	1.00		0.88	0.12
Lane Grp Cap(c), veh/h	0	539	79	1264	324	0
V/C Ratio(X)	0.00	1.18	0.33	0.25	0.81	0.00
Avail Cap(c_a), veh/h	0	539	445	1264	1032	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	14.0	31.6	4.3	26.6	0.0
Incr Delay (d2), s/veh	0.0	100.0	0.9	0.1	5.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	20.5	0.4	1.0	4.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	114.1	32.5	4.4	32.2	0.0
LnGrp LOS	A	F	C	A	C	A
Approach Vol, veh/h	638			339	261	
Approach Delay, s/veh	114.1			6.6	32.2	
Approach LOS	F			A	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		50.5		17.6	6.0	44.5
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		40.0		40.0	17.0	40.0
Max Q Clear Time (g_c+I1), s		6.4		11.7	3.0	42.0
Green Ext Time (p_c), s		2.1		1.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		67.4
HCM 6th LOS		E

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	905	94	168	416	92	76	224	612	69	145	36
Future Volume (veh/h)	80	905	94	168	416	92	76	224	612	69	145	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	91	1028	0	191	473	0	86	255	0	78	165	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	1821		303	1817		248	405		318	476	
Arrive On Green	0.07	0.36	0.00	0.09	0.36	0.00	0.07	0.11	0.00	0.09	0.13	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	91	1028	0	191	473	0	86	255	0	78	165	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	1.7	10.8	0.0	3.5	4.4	0.0	1.6	4.5	0.0	1.4	2.8	0.0
Cycle Q Clear(g_c), s	1.7	10.8	0.0	3.5	4.4	0.0	1.6	4.5	0.0	1.4	2.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	254	1821		303	1817		248	405		318	476	
V/C Ratio(X)	0.36	0.56		0.63	0.26		0.35	0.63		0.25	0.35	
Avail Cap(c_a), veh/h	625	3848		781	3848		781	643		625	643	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.2	17.2	0.0	29.2	15.2	0.0	29.3	28.1	0.0	28.0	26.1	0.0
Incr Delay (d2), s/veh	0.3	0.4	0.0	2.2	0.1	0.0	0.8	1.6	0.0	0.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.4	0.0	1.4	1.5	0.0	0.6	1.8	0.0	0.5	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	17.6	0.0	31.4	15.3	0.0	30.1	29.7	0.0	28.4	26.5	0.0
LnGrp LOS	C	B		C	B		C	C		C	C	
Approach Vol, veh/h		1119	A		664	A		341	A		243	A
Approach Delay, s/veh		18.6			19.9			29.8			27.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	29.7	10.3	15.0	11.3	29.8	11.6	13.7
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	12.0	50.0	15.0	12.0	15.0	50.0	12.0	12.0
Max Q Clear Time (g_c+I1), s	3.7	6.4	3.6	4.8	5.5	12.8	3.4	6.5
Green Ext Time (p_c), s	0.1	4.6	0.1	0.4	0.4	10.9	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	137	267	643	49	104	327
Future Volume (veh/h)	137	267	643	49	104	327
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	183	39	857	62	139	436
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	677	310	1498	445	482	1978
Arrive On Green	0.20	0.20	0.29	0.29	0.14	0.56
Sat Flow, veh/h	3456	1585	5274	1518	3456	3647
Grp Volume(v), veh/h	183	39	857	62	139	436
Grp Sat Flow(s),veh/h/ln	1728	1585	1702	1518	1728	1777
Q Serve(g_s), s	2.2	1.0	6.9	1.5	1.7	3.0
Cycle Q Clear(g_c), s	2.2	1.0	6.9	1.5	1.7	3.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	677	310	1498	445	482	1978
V/C Ratio(X)	0.27	0.13	0.57	0.14	0.29	0.22
Avail Cap(c_a), veh/h	2280	1046	2632	782	570	1979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	16.1	14.5	12.6	18.7	5.4
Incr Delay (d2), s/veh	0.3	0.3	0.1	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.0	2.0	1.4	0.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.9	16.3	14.7	12.7	18.8	5.5
LnGrp LOS	B	B	B	B	B	A
Approach Vol, veh/h	222		919			575
Approach Delay, s/veh	16.8		14.5			8.7
Approach LOS	B		B			A

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	33.0		15.5	12.8	20.2
Change Period (Y+Rc), s	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s	10.0		32.0	8.0	25.0
Max Q Clear Time (g_c+I1), s	5.0		4.2	3.7	8.9
Green Ext Time (p_c), s	0.5		1.2	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	192	284	49	183	254	43
Future Volume (veh/h)	192	284	49	183	254	43
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	216	52	55	206	285	46
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	363	323	146	933	454	73
Arrive On Green	0.20	0.20	0.08	0.50	0.29	0.29
Sat Flow, veh/h	1781	1585	1781	1870	1571	254
Grp Volume(v), veh/h	216	52	55	206	0	331
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1825
Q Serve(g_s), s	4.0	1.0	1.1	2.3	0.0	5.8
Cycle Q Clear(g_c), s	4.0	1.0	1.1	2.3	0.0	5.8
Prop In Lane	1.00	1.00	1.00			0.14
Lane Grp Cap(c), veh/h	363	323	146	933	0	527
V/C Ratio(X)	0.59	0.16	0.38	0.22	0.00	0.63
Avail Cap(c_a), veh/h	1943	1729	1457	2550	0	2488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	12.0	16.0	5.2	0.0	11.3
Incr Delay (d2), s/veh	1.6	0.2	1.2	0.2	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.0	0.4	0.3	0.0	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.8	12.2	17.1	5.3	0.0	13.1
LnGrp LOS	B	B	B	A	A	B
Approach Vol, veh/h	268			261	331	
Approach Delay, s/veh	14.3			7.8	13.1	
Approach LOS	B			A	B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	24.5		12.2	7.7	16.8
Change Period (Y+Rc), s	6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	50.0		* 40	* 30	50.0
Max Q Clear Time (g_c+I1), s	4.3		6.0	3.1	7.8
Green Ext Time (p_c), s	1.6		0.7	0.1	2.8

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.

Intersection	
Int Delay, s/veh	7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	176	68	7	281	74
Future Vol, veh/h	11	176	68	7	281	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	210	81	8	335	88

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	843	85	0	0	89	0
Stage 1	85	-	-	-	-	-
Stage 2	758	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	334	974	-	-	1506	-
Stage 1	938	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	256	974	-	-	1506	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	355	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	6.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	836	1506	-
HCM Lane V/C Ratio	-	-	0.266	0.222	-
HCM Control Delay (s)	-	-	10.9	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0.9	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	625	376	274	437	335	216	754	112	364	791	121
Future Volume (veh/h)	245	625	376	274	437	335	216	754	112	364	791	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	253	644	0	282	451	88	223	777	52	375	815	67
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	376	1089		391	1111	338	324	1281	390	539	1113	489
Arrive On Green	0.11	0.21	0.00	0.11	0.22	0.22	0.09	0.25	0.25	0.16	0.31	0.31
Sat Flow, veh/h	3456	5106	1585	3456	5106	1554	3456	5106	1556	3456	3554	1560
Grp Volume(v), veh/h	253	644	0	282	451	88	223	777	52	375	815	67
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1554	1728	1702	1556	1728	1777	1560
Q Serve(g_s), s	5.8	9.4	0.0	6.5	6.3	3.9	5.2	11.1	2.1	8.5	16.9	2.5
Cycle Q Clear(g_c), s	5.8	9.4	0.0	6.5	6.3	3.9	5.2	11.1	2.1	8.5	16.9	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	376	1089		391	1111	338	324	1281	390	539	1113	489
V/C Ratio(X)	0.67	0.59		0.72	0.41	0.26	0.69	0.61	0.13	0.70	0.73	0.14
Avail Cap(c_a), veh/h	1047	2785		1047	2785	848	1047	2785	848	1047	1938	851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	29.2	0.0	35.3	27.7	26.8	36.2	27.3	23.9	33.0	25.3	20.3
Incr Delay (d2), s/veh	2.1	0.5	0.0	2.5	0.2	0.4	2.6	0.5	0.2	3.4	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.6	0.0	2.8	2.5	1.4	2.2	4.2	0.8	3.6	6.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.5	29.7	0.0	37.9	27.9	27.2	38.8	27.8	24.1	36.4	26.2	20.5
LnGrp LOS	D	C		D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		897	A		821			1052			1257	
Approach Delay, s/veh		31.9			31.3			29.9			28.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	23.6	17.9	26.7	14.0	24.0	12.7	31.8
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	8.5	11.4	10.5	13.1	7.8	8.3	7.2	18.9
Green Ext Time (p_c), s	0.8	4.4	2.4	5.6	0.7	3.5	0.6	6.0

Intersection Summary	
HCM 6th Ctrl Delay	30.3
HCM 6th LOS	C

Notes

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



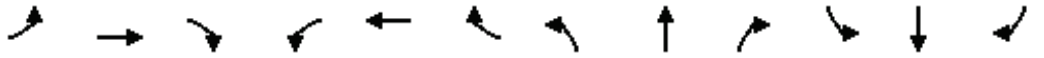
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	309	464	202	350	510	231
Future Volume (veh/h)	309	464	202	350	510	231
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.50	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	322	121	210	70	531	241
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	410	364	305	129	579	1073
Arrive On Green	0.23	0.23	0.16	0.16	0.32	0.57
Sat Flow, veh/h	1781	1585	1870	792	1781	1870
Grp Volume(v), veh/h	322	121	210	70	531	241
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	792	1781	1870
Q Serve(g_s), s	9.3	3.5	5.8	4.5	15.8	3.5
Cycle Q Clear(g_c), s	9.3	3.5	5.8	4.5	15.8	3.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	410	364	305	129	579	1073
V/C Ratio(X)	0.79	0.33	0.69	0.54	0.92	0.22
Avail Cap(c_a), veh/h	700	623	565	239	852	1620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	17.6	21.7	21.1	17.8	5.7
Incr Delay (d2), s/veh	4.0	0.6	3.3	4.2	8.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	1.2	2.5	0.9	6.5	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.9	18.3	25.0	25.3	26.4	5.9
LnGrp LOS	C	B	C	C	C	A
Approach Vol, veh/h	443		280			772
Approach Delay, s/veh	22.4		25.1			20.0
Approach LOS	C		C			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	22.6	14.4			36.9	18.0
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 26	16.6			47.6	21.6
Max Q Clear Time (g_c+I1), s	17.8	7.8			5.5	11.3
Green Ext Time (p_c), s	0.1	1.1			1.6	1.3

Intersection Summary	
HCM 6th Ctrl Delay	21.7
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)	0	0	0	948	250	268	19	218	0	0	580	220
Future Volume (veh/h)	0	0	0	948	250	268	19	218	0	0	580	220
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				977	258	228	20	225	0	0	598	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				761	201	1492	66	1028	0	0	936	
Arrive On Green				0.53	0.53	0.53	0.04	0.29	0.00	0.00	0.18	0.00
Sat Flow, veh/h				1423	376	2790	1781	3647	0	0	5274	1585
Grp Volume(v), veh/h				1235	0	228	20	225	0	0	598	0
Grp Sat Flow(s),veh/h/ln				1799	0	1395	1781	1777	0	0	1702	1585
Q Serve(g_s), s				35.0	0.0	2.7	0.7	3.1	0.0	0.0	7.1	0.0
Cycle Q Clear(g_c), s				35.0	0.0	2.7	0.7	3.1	0.0	0.0	7.1	0.0
Prop In Lane				0.79		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				962	0	1492	66	1028	0	0	936	
V/C Ratio(X)				1.28	0.00	0.15	0.30	0.22	0.00	0.00	0.64	
Avail Cap(c_a), veh/h				962	0	1492	953	1901	0	0	2731	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.2	0.0	7.7	30.7	17.6	0.0	0.0	24.7	0.0
Incr Delay (d2), s/veh				135.5	0.0	0.0	0.9	0.0	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				47.8	0.0	0.7	0.3	1.1	0.0	0.0	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				150.7	0.0	7.7	31.6	17.7	0.0	0.0	25.0	0.0
LnGrp LOS				F	A	A	C	B	A	A	C	
Approach Vol, veh/h					1463			245			598	A
Approach Delay, s/veh					128.4			18.8			25.0	
Approach LOS					F			B			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		24.6			6.9	17.7		40.8				
Change Period (Y+Rc), s		5.7			4.5	5.7		5.8				
Max Green Setting (Gmax), s		35.0			35.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s		5.1			2.7	9.1		37.0				
Green Ext Time (p_c), s		0.8			0.0	2.5		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		90.0
HCM 6th LOS		F

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	0	119	0	0	0	0	246	572	0	1489	415
Future Volume (veh/h)	44	0	119	0	0	0	0	246	572	0	1489	415
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	45	0	90				0	254	409	0	1535	412
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	488	0	217				0	2287	1020	0	1802	462
Arrive On Green	0.14	0.00	0.14				0.00	0.64	0.64	0.00	0.64	0.64
Sat Flow, veh/h	3563	0	1585				0	3647	1585	0	2893	718
Grp Volume(v), veh/h	45	0	90				0	254	409	0	949	998
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	0	1777	1741
Q Serve(g_s), s	0.5	0.0	2.6				0.0	1.3	6.1	0.0	20.1	23.6
Cycle Q Clear(g_c), s	0.5	0.0	2.6				0.0	1.3	6.1	0.0	20.1	23.6
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.41
Lane Grp Cap(c), veh/h	488	0	217				0	2287	1020	0	1144	1121
V/C Ratio(X)	0.09	0.00	0.41				0.00	0.11	0.40	0.00	0.83	0.89
Avail Cap(c_a), veh/h	2462	0	1095				0	2528	1127	0	1264	1238
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	0.0	19.4				0.0	3.4	4.2	0.0	6.7	7.3
Incr Delay (d2), s/veh	0.0	0.0	0.5				0.0	0.0	0.1	0.0	3.9	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.9				0.0	0.2	0.7	0.0	3.9	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	19.9				0.0	3.4	4.3	0.0	10.6	14.7
LnGrp LOS	B	A	B				A	A	A	A	B	B
Approach Vol, veh/h		135						663			1947	
Approach Delay, s/veh		19.5						3.9			12.7	
Approach LOS		B						A			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	37.4	11.8	37.4
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	8.1	4.6	25.6
Green Ext Time (p_c), s	1.6	0.0	6.1

Intersection Summary	
HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	0	8	49	5	331	8	458	66	460	1182	16
Future Volume (veh/h)	13	0	8	49	5	331	8	458	66	460	1182	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	14	0	0	53	5	34	9	492	34	495	1271	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	109	93	80	162	239	20	1686	750	597	1189	1008
Arrive On Green	0.02	0.00	0.00	0.04	0.09	0.09	0.01	0.47	0.47	0.17	0.64	0.64
Sat Flow, veh/h	1781	1870	1585	1781	1870	2772	1781	3554	1582	3456	1870	1585
Grp Volume(v), veh/h	14	0	0	53	5	34	9	492	34	495	1271	11
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1386	1781	1777	1582	1728	1870	1585
Q Serve(g_s), s	0.6	0.0	0.0	2.2	0.2	0.8	0.4	6.2	0.9	10.2	46.9	0.2
Cycle Q Clear(g_c), s	0.6	0.0	0.0	2.2	0.2	0.8	0.4	6.2	0.9	10.2	46.9	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	109	93	80	162	239	20	1686	750	597	1189	1008
V/C Ratio(X)	0.46	0.00	0.00	0.66	0.03	0.14	0.44	0.29	0.05	0.83	1.07	0.01
Avail Cap(c_a), veh/h	362	887	752	362	887	1315	362	1686	750	703	1189	1008
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	0.0	34.7	30.9	31.2	36.2	11.8	10.4	29.5	13.4	4.9
Incr Delay (d2), s/veh	10.7	0.0	0.0	9.0	0.1	0.3	14.4	0.4	0.1	7.2	46.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	1.1	0.1	0.3	0.2	2.2	0.3	4.5	28.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	0.0	0.0	43.7	30.9	31.4	50.6	12.3	10.5	36.6	60.0	4.9
LnGrp LOS	D	A	A	D	C	C	D	B	B	D	F	A
Approach Vol, veh/h		14			92			535			1777	
Approach Delay, s/veh		46.7			38.5			12.8			53.1	
Approach LOS		D			D			B			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	52.7	7.3	8.9	16.7	40.8	5.2	11.0
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	15.0	35.0	15.0	35.0	15.0	35.0	15.0	35.0
Max Q Clear Time (g_c+I1), s	2.6	48.9	4.2	0.0	12.2	8.2	2.6	2.8
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.5	3.2	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	43.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	24	93	925	81	183	90	219	1174	290	884	43
Future Volume (veh/h)	35	24	93	925	81	183	90	219	1174	290	884	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	25	0	954	84	75	93	226	697	299	911	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	181		1015	550	579	114	1367	609	265	1412	614
Arrive On Green	0.05	0.05	0.00	0.29	0.29	0.29	0.06	0.38	0.38	0.08	0.40	0.40
Sat Flow, veh/h	1781	3647	0	3456	1870	1557	1781	3554	1583	3456	3554	1544
Grp Volume(v), veh/h	36	25	0	954	84	75	93	226	697	299	911	16
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1557	1781	1777	1583	1728	1777	1544
Q Serve(g_s), s	3.0	1.0	0.0	41.7	5.1	4.9	8.0	6.5	59.6	11.9	32.2	1.0
Cycle Q Clear(g_c), s	3.0	1.0	0.0	41.7	5.1	4.9	8.0	6.5	59.6	11.9	32.2	1.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	181		1015	550	579	114	1367	609	265	1412	614
V/C Ratio(X)	0.40	0.14		0.94	0.15	0.13	0.81	0.17	1.14	1.13	0.65	0.03
Avail Cap(c_a), veh/h	115	275		1037	586	609	183	1367	609	265	1412	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.2	70.2	0.0	53.4	40.4	32.2	71.6	31.3	47.7	71.5	37.8	28.4
Incr Delay (d2), s/veh	4.0	0.5	0.0	15.9	0.2	0.1	18.2	0.1	83.3	93.6	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.5	0.0	20.1	2.4	1.9	4.2	2.8	37.0	8.6	13.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.2	70.7	0.0	69.3	40.6	32.4	89.7	31.4	131.0	165.1	39.0	28.4
LnGrp LOS	E	E		E	D	C	F	C	F	F	D	C
Approach Vol, veh/h		61	A		1113			1016			1226	
Approach Delay, s/veh		73.4			64.6			105.0			69.6	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.4	67.1	53.0	15.4	17.4	69.1	15.4	53.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	11.9	59.6	46.5	12.0	15.9	55.6	10.0	48.5
Max Q Clear Time (g_c+I1), s	13.9	61.6	43.7	3.0	10.0	34.2	5.0	7.1
Green Ext Time (p_c), s	0.0	0.0	1.8	0.0	0.1	8.3	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	78.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	461	1	831	8	539	0	0	812	936
Future Volume (veh/h)	0	0	0	461	1	831	8	539	0	0	812	936
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				490	1	0	9	573	0	0	864	615
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				515	1		3	219	0	0	845	699
Arrive On Green				0.29	0.29	0.00	0.12	0.12	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1778	4	1585	29	1840	0	0	1870	1549
Grp Volume(v), veh/h				491	0	0	582	0	0	0	864	615
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1869	0	0	0	1870	1549
Q Serve(g_s), s				32.4	0.0	0.0	14.3	0.0	0.0	0.0	54.2	43.3
Cycle Q Clear(g_c), s				32.4	0.0	0.0	14.3	0.0	0.0	0.0	54.2	43.3
Prop In Lane				1.00		1.00	0.02		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				517	0		223	0	0	0	845	699
V/C Ratio(X)				0.95	0.00		2.61	0.00	0.00	0.00	1.02	0.88
Avail Cap(c_a), veh/h				548	0		223	0	0	0	845	699
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.09	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				41.8	0.0	0.0	52.8	0.0	0.0	0.0	32.9	29.9
Incr Delay (d2), s/veh				25.3	0.0	0.0	726.6	0.0	0.0	0.0	36.9	14.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				17.7	0.0	0.0	51.5	0.0	0.0	0.0	31.3	17.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				67.1	0.0	0.0	779.4	0.0	0.0	0.0	69.8	44.7
LnGrp LOS				E	A		F	A	A	A	F	D
Approach Vol, veh/h					491	A		582			1479	
Approach Delay, s/veh					67.1			779.4			59.3	
Approach LOS					E			F			E	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	20.1		60.0		39.9			
Change Period (Y+Rc), s	5.8		5.8		5.1			
Max Green Setting (Gmax), s	12.2		54.2		36.9			
Max Q Clear Time (g_c+I1), s	16.3		56.2		34.4			
Green Ext Time (p_c), s	0.0		0.0		0.4			

Intersection Summary		
HCM 6th Ctrl Delay	225.0	
HCM 6th LOS	F	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	438	0	28	0	0	0	0	105	25	284	935	0
Future Volume (veh/h)	438	0	28	0	0	0	0	105	25	284	935	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	476	0	0				0	114	1	309	1016	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	227	0					0	94	78	295	969	0
Arrive On Green	0.13	0.00	0.00				0.00	0.05	0.05	0.68	0.68	0.00
Sat Flow, veh/h	1781	0	1585				0	1870	1569	431	1418	0
Grp Volume(v), veh/h	476	0	0				0	114	1	1325	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1870	1569	1849	0	0
Q Serve(g_s), s	15.3	0.0	0.0				0.0	6.0	0.1	82.0	0.0	0.0
Cycle Q Clear(g_c), s	15.3	0.0	0.0				0.0	6.0	0.1	82.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.23		0.00
Lane Grp Cap(c), veh/h	227	0					0	94	78	1263	0	0
V/C Ratio(X)	2.10	0.00					0.00	1.22	0.01	1.05	0.00	0.00
Avail Cap(c_a), veh/h	227	0					0	94	78	1263	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.09	0.00	0.00
Uniform Delay (d), s/veh	52.4	0.0	0.0				0.0	57.0	54.2	19.0	0.0	0.0
Incr Delay (d2), s/veh	507.9	0.0	0.0				0.0	163.2	0.0	24.4	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
%ile BackOfQ(50%),veh/ln	38.9	0.0	0.0				0.0	7.0	0.0	36.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	560.2	0.0	0.0				0.0	220.2	54.2	43.4	0.0	0.0
LnGrp LOS	F	A					A	F	D	F	A	A
Approach Vol, veh/h		476	A					115			1325	
Approach Delay, s/veh		560.2						218.8			43.4	
Approach LOS		F						F			D	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	11.8	20.4	87.8
Change Period (Y+Rc), s	5.8	5.1	5.8
Max Green Setting (Gmax), s	6.0	15.3	82.0
Max Q Clear Time (g_c+I1), s	8.0	17.3	84.0
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	182.3
HCM 6th LOS	F

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	169	100	5	60	0	219	46	23	1	52	5
Future Volume (veh/h)	14	169	100	5	60	0	219	46	23	1	52	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	186	22	5	66	0	241	51	11	1	57	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	716	319	12	671	299	320	1075	479	5	441	197
Arrive On Green	0.02	0.20	0.20	0.01	0.19	0.00	0.18	0.30	0.30	0.00	0.12	0.12
Sat Flow, veh/h	1781	3554	1583	1781	3554	1585	1781	3554	1583	1781	3554	1583
Grp Volume(v), veh/h	15	186	22	5	66	0	241	51	11	1	57	1
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1777	1585	1781	1777	1583	1781	1777	1583
Q Serve(g_s), s	0.3	1.7	0.4	0.1	0.6	0.0	4.9	0.4	0.2	0.0	0.5	0.0
Cycle Q Clear(g_c), s	0.3	1.7	0.4	0.1	0.6	0.0	4.9	0.4	0.2	0.0	0.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	34	716	319	12	671	299	320	1075	479	5	441	197
V/C Ratio(X)	0.44	0.26	0.07	0.41	0.10	0.00	0.75	0.05	0.02	0.21	0.13	0.01
Avail Cap(c_a), veh/h	940	3749	1670	940	3749	1672	940	3749	1670	940	3749	1670
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	12.8	12.3	18.8	12.7	0.0	14.7	9.4	9.3	18.9	14.8	14.6
Incr Delay (d2), s/veh	8.5	0.2	0.1	21.2	0.1	0.0	3.6	0.0	0.0	21.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.1	0.1	0.2	0.0	1.8	0.1	0.0	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	13.0	12.4	39.9	12.8	0.0	18.3	9.4	9.3	40.0	14.9	14.6
LnGrp LOS	C	B	B	D	B	A	B	A	A	D	B	B
Approach Vol, veh/h		223			71			303			59	
Approach Delay, s/veh		13.8			14.7			16.5			15.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	12.3	4.1	17.3	4.7	11.9	10.8	10.5
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.1	3.7	2.0	2.4	2.3	2.6	6.9	2.5
Green Ext Time (p_c), s	0.0	1.2	0.0	0.3	0.0	0.3	0.5	0.3

Intersection Summary	
HCM 6th Ctrl Delay	15.3
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)	59	1047	44	32	946	57	26	19	78	75	10	36
Future Volume (veh/h)	59	1047	44	32	946	57	26	19	78	75	10	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	63	1126	27	34	1017	33	28	20	9	81	11	6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	136	1107	938	99	1069	905	88	71	32	147	172	146
Arrive On Green	0.08	0.59	0.59	0.06	0.57	0.57	0.05	0.06	0.06	0.08	0.09	0.09
Sat Flow, veh/h	1781	1870	1585	1781	1870	1584	1781	1220	549	1781	1870	1585
Grp Volume(v), veh/h	63	1126	27	34	1017	33	28	0	29	81	11	6
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1584	1781	0	1770	1781	1870	1585
Q Serve(g_s), s	3.3	57.0	0.7	1.8	49.1	0.9	1.5	0.0	1.5	4.2	0.5	0.3
Cycle Q Clear(g_c), s	3.3	57.0	0.7	1.8	49.1	0.9	1.5	0.0	1.5	4.2	0.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	136	1107	938	99	1069	905	88	0	104	147	172	146
V/C Ratio(X)	0.46	1.02	0.03	0.34	0.95	0.04	0.32	0.00	0.28	0.55	0.06	0.04
Avail Cap(c_a), veh/h	278	1107	938	278	1069	905	278	0	736	278	1069	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	42.6	19.6	8.2	43.7	19.4	9.0	44.2	0.0	43.4	42.4	39.9	39.8
Incr Delay (d2), s/veh	2.5	31.4	0.1	2.0	18.0	0.1	2.1	0.0	2.1	3.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	30.2	0.2	0.8	22.5	0.3	0.7	0.0	0.7	1.9	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	51.0	8.2	45.7	37.4	9.1	46.2	0.0	45.4	45.6	40.1	40.0
LnGrp LOS	D	F	A	D	D	A	D	A	D	D	D	D
Approach Vol, veh/h		1216			1084			57			98	
Approach Delay, s/veh		49.8			36.8			45.8			44.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	63.5	12.0	11.4	11.3	61.5	8.7	14.7
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	5.0	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	3.8	59.0	6.2	3.5	5.3	51.1	3.5	2.5
Green Ext Time (p_c), s	0.0	0.0	0.1	0.1	0.1	2.8	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	43.8
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)	184	592	29	0	540	347	0	0	0	427	21	688
Future Volume (veh/h)	184	592	29	0	540	347	0	0	0	427	21	688
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	207	665	15	0	607	0				497	0	158
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	387	1791	782	0	1425					868	0	378
Arrive On Green	0.11	0.50	0.50	0.00	0.28	0.00				0.24	0.00	0.24
Sat Flow, veh/h	3456	3554	1551	0	5274	1585				3563	0	1551
Grp Volume(v), veh/h	207	665	15	0	607	0				497	0	158
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	0	1702	1585				1781	0	1551
Q Serve(g_s), s	2.4	4.7	0.2	0.0	4.0	0.0				5.1	0.0	3.6
Cycle Q Clear(g_c), s	2.4	4.7	0.2	0.0	4.0	0.0				5.1	0.0	3.6
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	387	1791	782	0	1425					868	0	378
V/C Ratio(X)	0.54	0.37	0.02	0.00	0.43					0.57	0.00	0.42
Avail Cap(c_a), veh/h	2492	3418	1492	0	4910					2570	0	1119
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	17.4	6.3	5.2	0.0	12.3	0.0				13.8	0.0	13.2
Incr Delay (d2), s/veh	1.3	0.2	0.0	0.0	0.3	0.0				0.7	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	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.0	0.0	0.0	1.2	0.0				1.7	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.7	6.5	5.2	0.0	12.5	0.0				14.6	0.0	14.1
LnGrp LOS	B	A	A	A	B					B	A	B
Approach Vol, veh/h		887			607	A					655	
Approach Delay, s/veh		9.3			12.5						14.5	
Approach LOS		A			B						B	

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		26.4		15.2	9.4	17.0			
Change Period (Y+Rc), s		5.4		5.1	* 4.7	5.4			
Max Green Setting (Gmax), s		40.0		30.0	* 30	40.0			
Max Q Clear Time (g_c+I1), s		6.7		7.1	4.4	6.0			
Green Ext Time (p_c), s		6.2		3.0	0.8	5.6			

Intersection Summary		
HCM 6th Ctrl Delay		11.8
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	207	422	36	298	257	28
Future Volume (veh/h)	207	422	36	298	257	28
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	238	434	41	343	295	29
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	285	519	105	1110	373	37
Arrive On Green	0.48	0.48	0.06	0.59	0.23	0.23
Sat Flow, veh/h	593	1082	1781	1870	1599	157
Grp Volume(v), veh/h	0	672	41	343	325	0
Grp Sat Flow(s),veh/h/ln	0	1676	1781	1870	1761	0
Q Serve(g_s), s	0.0	19.1	1.2	5.0	9.5	0.0
Cycle Q Clear(g_c), s	0.0	19.1	1.2	5.0	9.5	0.0
Prop In Lane		0.65	1.00		0.91	0.09
Lane Grp Cap(c), veh/h	0	804	105	1110	411	0
V/C Ratio(X)	0.00	0.84	0.39	0.31	0.79	0.00
Avail Cap(c_a), veh/h	0	1222	552	1364	1285	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	12.4	24.9	5.6	19.8	0.0
Incr Delay (d2), s/veh	0.0	3.6	0.9	0.2	4.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.5	1.2	3.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	16.0	25.7	5.7	23.9	0.0
LnGrp LOS	A	B	C	A	C	A
Approach Vol, veh/h	672			384	325	
Approach Delay, s/veh	16.0			7.9	23.9	
Approach LOS	B			A	C	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	37.0		17.8	6.2	30.8
Change Period (Y+Rc), s	4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s	40.0		40.0	17.0	40.0
Max Q Clear Time (g_c+I1), s	7.0		11.5	3.2	21.1
Green Ext Time (p_c), s	2.4		1.2	0.0	5.2

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	266	70	524	576	74	61	199	502	30	470	48
Future Volume (veh/h)	22	266	70	524	576	74	61	199	502	30	470	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	28	332	0	655	720	0	76	249	0	38	588	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	927		752	1774		236	672		210	645	
Arrive On Green	0.04	0.18	0.00	0.22	0.35	0.00	0.07	0.19	0.00	0.06	0.18	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	28	332	0	655	720	0	76	249	0	38	588	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	0.5	3.8	0.0	12.1	7.1	0.0	1.4	4.0	0.0	0.7	10.7	0.0
Cycle Q Clear(g_c), s	0.5	3.8	0.0	12.1	7.1	0.0	1.4	4.0	0.0	0.7	10.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	927		752	1774		236	672		210	645	
V/C Ratio(X)	0.22	0.36		0.87	0.41		0.32	0.37		0.18	0.91	
Avail Cap(c_a), veh/h	627	3863		784	3863		784	672		627	645	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.9	23.7	0.0	25.0	16.4	0.0	29.3	23.4	0.0	29.5	26.5	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.0	10.2	0.2	0.0	0.8	0.3	0.0	0.4	17.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.3	0.0	5.4	2.4	0.0	0.5	1.5	0.0	0.3	5.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	24.0	0.0	35.2	16.6	0.0	30.1	23.7	0.0	29.9	43.7	0.0
LnGrp LOS	C	C		D	B		C	C		C	D	
Approach Vol, veh/h		360	A		1375	A		325	A		626	A
Approach Delay, s/veh		24.6			25.5			25.2			42.9	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	29.1	10.0	18.1	19.9	18.1	9.5	18.6
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	12.0	50.0	15.0	12.0	15.0	50.0	12.0	12.0
Max Q Clear Time (g_c+I1), s	2.5	9.1	3.4	12.7	14.1	5.8	2.7	6.0
Green Ext Time (p_c), s	0.0	7.5	0.1	0.0	0.3	3.0	0.0	0.6

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

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	108	268	493	186	443	614
Future Volume (veh/h)	108	268	493	186	443	614
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.95	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	144	122	657	69	591	819
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	692	317	1352	398	569	1965
Arrive On Green	0.20	0.20	0.26	0.26	0.16	0.55
Sat Flow, veh/h	3456	1585	5274	1504	3456	3647
Grp Volume(v), veh/h	144	122	657	69	591	819
Grp Sat Flow(s),veh/h/ln	1728	1585	1702	1504	1728	1777
Q Serve(g_s), s	1.7	3.2	5.3	1.7	8.0	6.5
Cycle Q Clear(g_c), s	1.7	3.2	5.3	1.7	8.0	6.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	692	317	1352	398	569	1965
V/C Ratio(X)	0.21	0.38	0.49	0.17	1.04	0.42
Avail Cap(c_a), veh/h	2276	1044	2627	774	569	1965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	16.8	15.1	13.8	20.3	6.3
Incr Delay (d2), s/veh	0.2	1.1	0.1	0.1	48.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.1	1.6	1.6	6.4	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.4	17.9	15.2	13.8	68.4	6.4
LnGrp LOS	B	B	B	B	F	A
Approach Vol, veh/h	266		726			1410
Approach Delay, s/veh	17.1		15.0			32.4
Approach LOS	B		B			C

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	32.9		15.7	14.0	18.9
Change Period (Y+Rc), s	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s	10.0		32.0	8.0	25.0
Max Q Clear Time (g_c+I1), s	8.5		5.2	10.0	7.3
Green Ext Time (p_c), s	0.4		1.5	0.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	114	93	620	141	139	774
Future Volume (veh/h)	114	93	620	141	139	774
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	12	689	157	154	733
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	161	144	508	1507	134	640
Arrive On Green	0.09	0.09	0.29	0.81	0.48	0.48
Sat Flow, veh/h	1781	1585	1781	1870	283	1345
Grp Volume(v), veh/h	127	12	689	157	0	887
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1628
Q Serve(g_s), s	7.3	0.7	30.0	1.9	0.0	50.0
Cycle Q Clear(g_c), s	7.3	0.7	30.0	1.9	0.0	50.0
Prop In Lane	1.00	1.00	1.00			0.83
Lane Grp Cap(c), veh/h	161	144	508	1507	0	774
V/C Ratio(X)	0.79	0.08	1.36	0.10	0.00	1.15
Avail Cap(c_a), veh/h	678	603	508	1507	0	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.8	43.8	37.6	2.2	0.0	27.6
Incr Delay (d2), s/veh	8.2	0.2	172.4	0.0	0.0	80.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	36.5	0.3	0.0	34.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	55.0	44.0	210.0	2.2	0.0	107.9
LnGrp LOS	E	D	F	A	A	F
Approach Vol, veh/h	139			846	887	
Approach Delay, s/veh	54.1			171.4	107.9	
Approach LOS	D			F	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.9		14.2	34.7	56.2
Change Period (Y+Rc), s		6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s		50.0		* 40	* 30	50.0
Max Q Clear Time (g_c+I1), s		3.9		9.3	32.0	52.0
Green Ext Time (p_c), s		1.2		0.4	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		132.6
HCM 6th LOS		F

Notes

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

Intersection	
Int Delay, s/veh	12.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	463	66	16	219	36
Future Vol, veh/h	24	463	66	16	219	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	579	83	20	274	45

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	686	93	0	0	103	0
Stage 1	93	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	413	964	-	-	1489	-
Stage 1	931	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	335	964	-	-	1489	-
Mov Cap-2 Maneuver	335	-	-	-	-	-
Stage 1	931	-	-	-	-	-
Stage 2	448	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.6	0	6.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	882	1489	-
HCM Lane V/C Ratio	-	-	0.69	0.184	-
HCM Control Delay (s)	-	-	17.6	8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	5.7	0.7	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	269	490	202	146	529	187	316	784	105	235	368	179
Future Volume (veh/h)	269	490	202	146	529	187	316	784	105	235	368	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	296	538	0	160	581	42	347	862	55	258	404	60
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	416	1044		398	1018	310	472	1372	418	414	895	394
Arrive On Green	0.12	0.20	0.00	0.12	0.20	0.20	0.14	0.27	0.27	0.12	0.25	0.25
Sat Flow, veh/h	3456	5106	1585	3456	5106	1554	3456	5106	1557	3456	3554	1563
Grp Volume(v), veh/h	296	538	0	160	581	42	347	862	55	258	404	60
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1554	1728	1702	1557	1728	1777	1563
Q Serve(g_s), s	6.2	7.1	0.0	3.2	7.7	1.7	7.3	11.2	2.0	5.4	7.2	2.3
Cycle Q Clear(g_c), s	6.2	7.1	0.0	3.2	7.7	1.7	7.3	11.2	2.0	5.4	7.2	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	416	1044		398	1018	310	472	1372	418	414	895	394
V/C Ratio(X)	0.71	0.52		0.40	0.57	0.14	0.74	0.63	0.13	0.62	0.45	0.15
Avail Cap(c_a), veh/h	1146	3049		1146	3049	928	1146	3049	930	1146	2122	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	26.7	0.0	30.9	27.3	24.8	31.2	24.2	20.9	31.6	23.8	21.9
Incr Delay (d2), s/veh	2.3	0.4	0.0	0.7	0.5	0.2	2.3	0.5	0.1	3.3	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.7	0.0	1.3	3.0	0.6	2.9	4.1	0.7	2.3	2.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	27.1	0.0	31.6	27.8	25.0	33.5	24.7	21.0	34.8	24.2	22.1
LnGrp LOS	C	C		C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		834	A		783			1264			722	
Approach Delay, s/veh		29.6			28.4			27.0			27.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	21.4	14.0	26.2	14.1	21.0	15.3	25.0
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	5.2	9.1	7.4	13.2	8.2	9.7	9.3	9.2
Green Ext Time (p_c), s	0.5	3.6	1.7	6.4	0.9	4.4	1.0	2.9

Intersection Summary	
HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	504	671	280	196	336	173
Future Volume (veh/h)	504	671	280	196	336	173
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	542	257	301	46	361	186
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	556	495	371	307	409	948
Arrive On Green	0.31	0.31	0.20	0.20	0.23	0.51
Sat Flow, veh/h	1781	1585	1870	1550	1781	1870
Grp Volume(v), veh/h	542	257	301	46	361	186
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1550	1781	1870
Q Serve(g_s), s	17.9	7.9	9.2	1.5	11.7	3.2
Cycle Q Clear(g_c), s	17.9	7.9	9.2	1.5	11.7	3.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	556	495	371	307	409	948
V/C Ratio(X)	0.97	0.52	0.81	0.15	0.88	0.20
Avail Cap(c_a), veh/h	556	495	458	380	487	1117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	16.8	22.8	19.7	22.2	8.1
Incr Delay (d2), s/veh	31.7	1.1	9.3	0.3	13.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	2.6	4.4	0.5	5.7	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	52.0	18.0	32.1	20.0	36.0	8.2
LnGrp LOS	D	B	C	C	D	A
Approach Vol, veh/h	799		347			547
Approach Delay, s/veh	41.0		30.5			26.5
Approach LOS	D		C			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	18.4	17.2			35.6	24.0
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 16	14.6			35.6	18.6
Max Q Clear Time (g_c+I1), s	13.7	11.2			5.2	19.9
Green Ext Time (p_c), s	0.0	0.7			1.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.2
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)	0	0	0	486	6	487	39	303	0	0	489	77
Future Volume (veh/h)	0	0	0	486	6	487	39	303	0	0	489	77
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				540	7	315	43	337	0	0	543	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				674	9	1068	127	1396	0	0	1194	
Arrive On Green				0.38	0.38	0.38	0.07	0.39	0.00	0.00	0.23	0.00
Sat Flow, veh/h				1760	23	2790	1781	3647	0	0	5274	1585
Grp Volume(v), veh/h				547	0	315	43	337	0	0	543	0
Grp Sat Flow(s),veh/h/ln				1782	0	1395	1781	1777	0	0	1702	1585
Q Serve(g_s), s				14.0	0.0	4.0	1.2	3.3	0.0	0.0	4.7	0.0
Cycle Q Clear(g_c), s				14.0	0.0	4.0	1.2	3.3	0.0	0.0	4.7	0.0
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				683	0	1068	127	1396	0	0	1194	
V/C Ratio(X)				0.80	0.00	0.29	0.34	0.24	0.00	0.00	0.45	
Avail Cap(c_a), veh/h				1216	0	1902	1215	2423	0	0	3482	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				14.1	0.0	11.0	22.7	10.4	0.0	0.0	16.9	0.0
Incr Delay (d2), s/veh				1.4	0.0	0.1	0.6	0.0	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.9	0.0	1.1	0.4	1.0	0.0	0.0	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				15.5	0.0	11.1	23.3	10.5	0.0	0.0	17.0	0.0
LnGrp LOS				B	A	B	C	B	A	A	B	
Approach Vol, veh/h					862			380			543	A
Approach Delay, s/veh					13.9			11.9			17.0	
Approach LOS					B			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		25.9			8.2	17.7		25.5				
Change Period (Y+Rc), s		5.7			4.5	5.7		5.8				
Max Green Setting (Gmax), s		35.0			35.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s		5.3			3.2	6.7		16.0				
Green Ext Time (p_c), s		1.3			0.0	2.2		3.6				

Intersection Summary		
HCM 6th Ctrl Delay	14.4	
HCM 6th LOS	B	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	2	51	0	0	0	0	277	819	0	629	339
Future Volume (veh/h)	89	2	51	0	0	0	0	277	819	0	629	339
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	101	0	9				0	311	513	0	707	311
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	586	0	261				0	1593	710	0	1076	473
Arrive On Green	0.16	0.00	0.16				0.00	0.45	0.45	0.00	0.45	0.45
Sat Flow, veh/h	3563	0	1585				0	3647	1585	0	2495	1056
Grp Volume(v), veh/h	101	0	9				0	311	513	0	523	495
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	0	1777	1680
Q Serve(g_s), s	0.7	0.0	0.1				0.0	1.5	7.4	0.0	6.4	6.4
Cycle Q Clear(g_c), s	0.7	0.0	0.1				0.0	1.5	7.4	0.0	6.4	6.4
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.63
Lane Grp Cap(c), veh/h	586	0	261				0	1593	710	0	796	753
V/C Ratio(X)	0.17	0.00	0.03				0.00	0.20	0.72	0.00	0.66	0.66
Avail Cap(c_a), veh/h	4343	0	1932				0	4460	1989	0	2230	2109
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	10.0	0.0	9.8				0.0	4.7	6.3	0.0	6.0	6.0
Incr Delay (d2), s/veh	0.1	0.0	0.0				0.0	0.0	0.5	0.0	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0				0.0	0.1	0.6	0.0	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.1	0.0	9.8				0.0	4.7	6.8	0.0	6.4	6.4
LnGrp LOS	B	A	A				A	A	A	A	A	A
Approach Vol, veh/h		110						824			1018	
Approach Delay, s/veh		10.0						6.0			6.4	
Approach LOS		B						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	18.2	9.7	18.2
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	9.4	2.7	8.4
Green Ext Time (p_c), s	2.1	0.0	4.1

Intersection Summary	
HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	2	11	19	1	240	9	817	25	228	460	9
Future Volume (veh/h)	23	2	11	19	1	240	9	817	25	228	460	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	2	2	22	1	29	10	939	14	262	529	7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	139	117	45	132	196	23	1843	821	379	1151	976
Arrive On Green	0.03	0.07	0.07	0.03	0.07	0.07	0.01	0.52	0.52	0.11	0.62	0.62
Sat Flow, veh/h	1781	1870	1585	1781	1870	2782	1781	3554	1584	3456	1870	1585
Grp Volume(v), veh/h	26	2	2	22	1	29	10	939	14	262	529	7
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1391	1781	1777	1584	1728	1870	1585
Q Serve(g_s), s	1.0	0.1	0.1	0.8	0.0	0.7	0.4	11.7	0.3	4.9	10.2	0.1
Cycle Q Clear(g_c), s	1.0	0.1	0.1	0.8	0.0	0.7	0.4	11.7	0.3	4.9	10.2	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	139	117	45	132	196	23	1843	821	379	1151	976
V/C Ratio(X)	0.51	0.01	0.02	0.49	0.01	0.15	0.44	0.51	0.02	0.69	0.46	0.01
Avail Cap(c_a), veh/h	396	970	822	396	970	1442	396	1843	821	768	1151	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	29.0	29.0	32.5	29.2	29.5	33.1	10.6	7.9	28.9	7.0	5.0
Incr Delay (d2), s/veh	7.7	0.0	0.1	8.2	0.0	0.3	13.0	1.0	0.0	2.3	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.4	0.0	0.2	0.2	3.7	0.1	2.0	3.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	29.0	29.0	40.7	29.2	29.8	46.1	11.6	7.9	31.2	8.3	5.0
LnGrp LOS	D	C	C	D	C	C	D	B	A	C	A	A
Approach Vol, veh/h		30			52			963			798	
Approach Delay, s/veh		38.6			34.4			11.9			15.8	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	47.3	5.7	9.6	11.4	40.8	5.9	9.4
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	15.0	35.0	15.0	35.0	15.0	35.0	15.0	35.0
Max Q Clear Time (g_c+I1), s	2.4	12.2	2.8	2.1	6.9	13.7	3.0	2.7
Green Ext Time (p_c), s	0.0	3.1	0.0	0.0	0.5	6.2	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	44	62	774	43	231	54	472	807	223	185	35
Future Volume (veh/h)	54	44	62	774	43	231	54	472	807	223	185	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	47	0	832	46	117	58	508	314	240	199	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	296		1045	580	633	135	888	395	315	943	418
Arrive On Green	0.08	0.08	0.00	0.30	0.31	0.31	0.08	0.25	0.25	0.09	0.27	0.27
Sat Flow, veh/h	1781	3647	0	3456	1870	1577	1781	3554	1579	3456	3554	1573
Grp Volume(v), veh/h	58	47	0	832	46	117	58	508	314	240	199	11
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1577	1781	1777	1579	1728	1777	1573
Q Serve(g_s), s	3.4	1.3	0.0	24.3	1.9	5.3	3.4	13.7	20.4	7.4	4.8	0.6
Cycle Q Clear(g_c), s	3.4	1.3	0.0	24.3	1.9	5.3	3.4	13.7	20.4	7.4	4.8	0.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	135	296		1045	580	633	135	888	395	315	943	418
V/C Ratio(X)	0.43	0.16		0.80	0.08	0.18	0.43	0.57	0.80	0.76	0.21	0.03
Avail Cap(c_a), veh/h	162	389		1464	827	842	258	1930	858	375	1801	797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.5	46.7	0.0	35.2	26.8	21.3	48.5	36.0	38.5	48.7	31.4	29.8
Incr Delay (d2), s/veh	3.1	0.4	0.0	3.5	0.1	0.2	3.1	0.6	3.7	8.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.6	0.0	10.3	0.8	1.9	1.6	5.8	8.1	3.5	2.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	47.1	0.0	38.7	26.9	21.5	51.5	36.6	42.2	57.2	31.5	29.8
LnGrp LOS	D	D		D	C	C	D	D	D	E	C	C
Approach Vol, veh/h		105	A		995			880			450	
Approach Delay, s/veh		49.5			36.1			39.6			45.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	34.9	40.7	16.6	15.8	36.6	15.8	41.5
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	11.3	59.6	46.5	12.0	15.9	55.6	10.0	48.5
Max Q Clear Time (g_c+I1), s	9.4	22.4	26.3	3.3	5.4	6.8	5.4	7.3
Green Ext Time (p_c), s	0.3	4.5	6.9	0.1	0.1	1.8	0.1	1.0

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	0	471	12	877	0	0	677	360
Future Volume (veh/h)	0	0	0	10	0	471	12	877	0	0	677	360
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				11	0	0	13	943	0	0	728	263
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				34	0		15	1061	0	0	574	484
Arrive On Green				0.02	0.00	0.00	0.39	0.39	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1781	0	1585	25	1844	0	0	1870	1575
Grp Volume(v), veh/h				11	0	0	956	0	0	0	728	263
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1869	0	0	0	1870	1575
Q Serve(g_s), s				1.0	0.0	0.0	81.3	0.0	0.0	0.0	52.2	23.6
Cycle Q Clear(g_c), s				1.0	0.0	0.0	81.3	0.0	0.0	0.0	52.2	23.6
Prop In Lane				1.00		1.00	0.01		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				34	0		1076	0	0	0	574	484
V/C Ratio(X)				0.32	0.00		0.89	0.00	0.00	0.00	1.27	0.54
Avail Cap(c_a), veh/h				138	0		1076	0	0	0	574	484
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.76	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				82.3	0.0	0.0	47.1	0.0	0.0	0.0	58.9	49.0
Incr Delay (d2), s/veh				2.0	0.0	0.0	8.6	0.0	0.0	0.0	133.8	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.5	0.0	0.0	41.3	0.0	0.0	0.0	45.5	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				84.3	0.0	0.0	55.8	0.0	0.0	0.0	192.7	49.7
LnGrp LOS				F	A		E	A	A	A	F	D
Approach Vol, veh/h					11	A		956			991	
Approach Delay, s/veh					84.3			55.8			154.7	
Approach LOS					F			E			F	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	103.7		58.0		8.3			
Change Period (Y+Rc), s	5.8		5.8		5.1			
Max Green Setting (Gmax), s	87.9		52.2		13.2			
Max Q Clear Time (g_c+I1), s	83.3		54.2		3.0			
Green Ext Time (p_c), s	1.2		0.0		0.0			

Intersection Summary		
HCM 6th Ctrl Delay	106.0	
HCM 6th LOS	F	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	3	78	0	0	0	0	543	510	620	97	0
Future Volume (veh/h)	290	3	78	0	0	0	0	543	510	620	97	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	296	3	0				0	590	456	633	99	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.92	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	136	1					0	968	820	476	74	0
Arrive On Green	0.08	0.08	0.00				0.00	0.52	0.52	0.31	0.31	0.00
Sat Flow, veh/h	1764	18	1585				0	1870	1585	1550	242	0
Grp Volume(v), veh/h	299	0	0				0	590	456	732	0	0
Grp Sat Flow(s),veh/h/ln	1782	0	1585				0	1870	1585	1793	0	0
Q Serve(g_s), s	13.1	0.0	0.0				0.0	37.8	33.1	52.2	0.0	0.0
Cycle Q Clear(g_c), s	13.1	0.0	0.0				0.0	37.8	33.1	52.2	0.0	0.0
Prop In Lane	0.99		1.00				0.00		1.00	0.86		0.00
Lane Grp Cap(c), veh/h	137	0					0	968	820	551	0	0
V/C Ratio(X)	2.18	0.00					0.00	0.61	0.56	1.33	0.00	0.00
Avail Cap(c_a), veh/h	137	0					0	968	820	551	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.09	0.00	0.00
Uniform Delay (d), s/veh	78.5	0.0	0.0				0.0	28.9	27.8	58.9	0.0	0.0
Incr Delay (d2), s/veh	553.0	0.0	0.0				0.0	2.9	2.7	149.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.1	0.0	0.0				0.0	16.9	12.6	46.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	631.4	0.0	0.0				0.0	31.7	30.5	208.4	0.0	0.0
LnGrp LOS	F	A					A	C	C	F	A	A
Approach Vol, veh/h		299	A					1046			732	
Approach Delay, s/veh		631.4						31.2			208.4	
Approach LOS		F						C			F	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	93.8	18.2	58.0
Change Period (Y+Rc), s	5.8	5.1	5.8
Max Green Setting (Gmax), s	88.0	13.1	52.2
Max Q Clear Time (g_c+I1), s	39.8	15.1	54.2
Green Ext Time (p_c), s	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	180.1
HCM 6th LOS	F

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	105	55	8	121	10	102	121	12	0	27	1
Future Volume (veh/h)	14	105	55	8	121	10	102	121	12	0	27	1
Initial Q (Qb), veh	0	0	0	0	0	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	18	135	22	10	155	4	131	155	5	0	35	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	802	358	24	767	342	190	1115	497	5	296	132
Arrive On Green	0.02	0.23	0.23	0.01	0.22	0.22	0.11	0.31	0.31	0.00	0.08	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	18	135	22	10	155	4	131	155	5	0	35	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.3	1.0	0.4	0.2	1.2	0.1	2.3	1.0	0.1	0.0	0.3	0.0
Cycle Q Clear(g_c), s	0.3	1.0	0.4	0.2	1.2	0.1	2.3	1.0	0.1	0.0	0.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	802	358	24	767	342	190	1115	497	5	296	132
V/C Ratio(X)	0.44	0.17	0.06	0.42	0.20	0.01	0.69	0.14	0.01	0.00	0.12	0.00
Avail Cap(c_a), veh/h	1099	4385	1956	1099	4385	1956	1099	4385	1956	1099	4385	1956
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	0.00
Uniform Delay (d), s/veh	15.6	10.1	9.9	15.9	10.4	10.0	14.0	8.0	7.7	0.0	13.8	0.0
Incr Delay (d2), s/veh	7.2	0.1	0.1	11.5	0.1	0.0	4.4	0.1	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.1	0.1	0.3	0.0	0.9	0.2	0.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	10.2	9.9	27.4	10.5	10.0	18.3	8.0	7.7	0.0	13.9	0.0
LnGrp LOS	C	B	A	C	B	B	B	A	A	A	B	A
Approach Vol, veh/h		175			169			291			35	
Approach Delay, s/veh		11.5			11.5			12.7			13.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	12.0	0.0	16.0	4.7	11.7	7.5	8.5
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.2	3.0	0.0	3.0	2.3	3.2	4.3	2.3
Green Ext Time (p_c), s	0.0	0.8	0.0	0.9	0.0	0.9	0.3	0.1

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)	33	815	43	65	783	74	61	40	91	59	4	44
Future Volume (veh/h)	33	815	43	65	783	74	61	40	91	59	4	44
Initial Q (Qb), veh	0	0	0	0	0	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	40	982	28	78	943	56	73	48	43	71	5	7
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	1026	870	142	1062	900	139	84	75	138	171	145
Arrive On Green	0.06	0.55	0.55	0.08	0.57	0.57	0.08	0.09	0.09	0.08	0.09	0.09
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	909	815	1781	1870	1585
Grp Volume(v), veh/h	40	982	28	78	943	56	73	0	91	71	5	7
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1724	1781	1870	1585
Q Serve(g_s), s	2.2	50.0	0.8	4.2	44.0	1.6	3.9	0.0	5.1	3.8	0.2	0.4
Cycle Q Clear(g_c), s	2.2	50.0	0.8	4.2	44.0	1.6	3.9	0.0	5.1	3.8	0.2	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	107	1026	870	142	1062	900	139	0	158	138	171	145
V/C Ratio(X)	0.37	0.96	0.03	0.55	0.89	0.06	0.53	0.00	0.57	0.52	0.03	0.05
Avail Cap(c_a), veh/h	267	1026	870	267	1062	900	267	0	688	267	1026	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	21.5	10.4	44.4	18.9	9.7	44.4	0.0	43.6	44.4	41.5	41.6
Incr Delay (d2), s/veh	2.1	19.4	0.1	3.3	11.0	0.1	3.1	0.0	4.6	3.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	24.6	0.3	1.9	19.0	0.5	1.8	0.0	2.3	1.7	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	40.9	10.5	47.7	29.9	9.8	47.5	0.0	48.3	47.4	41.6	41.8
LnGrp LOS	D	D	B	D	C	A	D	A	D	D	D	D
Approach Vol, veh/h		1050			1077			164			83	
Approach Delay, s/veh		40.4			30.1			47.9			46.6	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	61.5	11.8	15.0	10.0	63.4	11.8	14.9
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	15.0	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	6.2	52.0	5.8	7.1	4.2	46.0	5.9	2.4
Green Ext Time (p_c), s	0.1	2.2	0.1	0.6	0.0	5.4	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.5
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)	364	1099	40	0	811	555	0	0	0	812	8	654
Future Volume (veh/h)	364	1099	40	0	811	555	0	0	0	812	8	654
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	368	1110	26	0	819	0				826	0	338
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	529	1831	810	0	1482					1155	0	507
Arrive On Green	0.15	0.52	0.52	0.00	0.29	0.00				0.32	0.00	0.32
Sat Flow, veh/h	3456	3554	1573	0	5274	1585				3563	0	1563
Grp Volume(v), veh/h	368	1110	26	0	819	0				826	0	338
Grp Sat Flow(s),veh/h/ln	1728	1777	1573	0	1702	1585				1781	0	1563
Q Serve(g_s), s	6.6	14.4	0.5	0.0	8.9	0.0				13.3	0.0	12.2
Cycle Q Clear(g_c), s	6.6	14.4	0.5	0.0	8.9	0.0				13.3	0.0	12.2
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	529	1831	810	0	1482					1155	0	507
V/C Ratio(X)	0.70	0.61	0.03	0.00	0.55					0.72	0.00	0.67
Avail Cap(c_a), veh/h	1586	2174	962	0	3124					1635	0	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	11.2	7.8	0.0	19.6	0.0				19.4	0.0	19.1
Incr Delay (d2), s/veh	1.9	0.4	0.0	0.0	0.4	0.0				1.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	4.5	0.1	0.0	3.2	0.0				5.1	0.0	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.1	11.6	7.8	0.0	20.0	0.0				20.5	0.0	20.9
LnGrp LOS	C	B	A	A	C					C	A	C
Approach Vol, veh/h		1504			819	A					1164	
Approach Delay, s/veh		15.6			20.0						20.6	
Approach LOS		B			C						C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	39.1	26.3	14.7	24.4
Change Period (Y+Rc), s	5.4	5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0	30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	16.4	15.3	8.6	10.9
Green Ext Time (p_c), s	10.4	5.1	1.4	7.6

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	377	398	26	310	409	50
Future Volume (veh/h)	377	398	26	310	409	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	984	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	381	373	26	313	413	47
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	231	226	70	1090	468	53
Arrive On Green	0.51	0.51	0.04	0.58	0.30	0.30
Sat Flow, veh/h	457	447	1781	1870	1576	179
Grp Volume(v), veh/h	0	754	26	313	461	0
Grp Sat Flow(s),veh/h/ln	0	904	1781	1870	1759	0
Q Serve(g_s), s	0.0	40.0	1.1	6.6	19.8	0.0
Cycle Q Clear(g_c), s	0.0	40.0	1.1	6.6	19.8	0.0
Prop In Lane		0.49	1.00		0.90	0.10
Lane Grp Cap(c), veh/h	0	457	70	1090	522	0
V/C Ratio(X)	0.00	1.65	0.37	0.29	0.88	0.00
Avail Cap(c_a), veh/h	0	457	383	1090	889	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	19.6	37.0	8.3	26.5	0.0
Incr Delay (d2), s/veh	0.0	302.2	1.2	0.2	6.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	45.1	0.5	2.1	8.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	321.7	38.2	8.4	33.1	0.0
LnGrp LOS	A	F	D	A	C	A
Approach Vol, veh/h	754			339	461	
Approach Delay, s/veh	321.7			10.7	33.1	
Approach LOS	F			B	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		50.6		28.5	6.1	44.5
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		40.0		40.0	17.0	40.0
Max Q Clear Time (g_c+I1), s		8.6		21.8	3.1	42.0
Green Ext Time (p_c), s		2.1		1.7	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		168.3
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	905	94	204	416	92	76	334	779	69	283	36
Future Volume (veh/h)	80	905	94	204	416	92	76	334	779	69	283	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	91	1028	0	232	473	0	86	380	0	78	322	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	1763		340	1834		238	504		305	573	
Arrive On Green	0.07	0.35	0.00	0.10	0.36	0.00	0.07	0.14	0.00	0.09	0.16	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	91	1028	0	232	473	0	86	380	0	78	322	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	1.8	11.7	0.0	4.6	4.7	0.0	1.7	7.3	0.0	1.5	5.9	0.0
Cycle Q Clear(g_c), s	1.8	11.7	0.0	4.6	4.7	0.0	1.7	7.3	0.0	1.5	5.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	1763		340	1834		238	504		305	573	
V/C Ratio(X)	0.37	0.58		0.68	0.26		0.36	0.75		0.26	0.56	
Avail Cap(c_a), veh/h	583	3589		729	3589		729	600		583	600	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.6	19.1	0.0	31.0	16.1	0.0	31.6	29.3	0.0	30.2	27.5	0.0
Incr Delay (d2), s/veh	0.4	0.4	0.0	2.4	0.1	0.0	0.9	4.5	0.0	0.4	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.9	0.0	1.9	1.6	0.0	0.7	3.1	0.0	0.6	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	19.5	0.0	33.4	16.2	0.0	32.5	33.8	0.0	30.7	28.6	0.0
LnGrp LOS	C	B		C	B		C	C		C	C	
Approach Vol, veh/h		1119	A		705	A		466	A		400	A
Approach Delay, s/veh		20.5			21.9			33.6			29.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	31.7	10.4	17.6	12.5	30.7	11.8	16.2
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	12.0	50.0	15.0	12.0	15.0	50.0	12.0	12.0
Max Q Clear Time (g_c+I1), s	13.8	6.7	3.7	7.9	6.6	13.7	3.5	9.3
Green Ext Time (p_c), s	0.1	4.6	0.1	0.6	0.5	10.8	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	137	267	920	49	104	501
Future Volume (veh/h)	137	267	920	49	104	501
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	183	151	1227	22	139	668
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	641	294	1778	532	451	2099
Arrive On Green	0.19	0.19	0.35	0.35	0.13	0.59
Sat Flow, veh/h	3456	1585	5274	1528	3456	3647
Grp Volume(v), veh/h	183	151	1227	22	139	668
Grp Sat Flow(s),veh/h/ln	1728	1585	1702	1528	1728	1777
Q Serve(g_s), s	2.4	4.6	11.0	0.5	2.0	5.1
Cycle Q Clear(g_c), s	2.4	4.6	11.0	0.5	2.0	5.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	641	294	1778	532	451	2099
V/C Ratio(X)	0.29	0.51	0.69	0.04	0.31	0.32
Avail Cap(c_a), veh/h	2064	947	2383	713	516	2099
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	19.7	15.0	11.5	21.1	5.5
Incr Delay (d2), s/veh	0.3	2.0	0.2	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.2	3.2	0.5	0.7	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.1	21.6	15.2	11.6	21.2	5.6
LnGrp LOS	B	C	B	B	C	A
Approach Vol, veh/h	334		1249			807
Approach Delay, s/veh	20.3		15.2			8.3
Approach LOS	C		B			A

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	37.6		15.9	13.0	24.7
Change Period (Y+Rc), s	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s	10.0		32.0	8.0	25.0
Max Q Clear Time (g_c+I1), s	7.1		6.6	4.0	13.0
Green Ext Time (p_c), s	0.5		1.9	0.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	469	463	162	183	254	217
Future Volume (veh/h)	469	463	162	183	254	217
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	527	375	182	206	285	220
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	599	533	224	992	340	263
Arrive On Green	0.34	0.34	0.13	0.53	0.35	0.35
Sat Flow, veh/h	1781	1585	1781	1870	979	756
Grp Volume(v), veh/h	527	375	182	206	0	505
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1734
Q Serve(g_s), s	22.8	16.8	8.2	4.8	0.0	22.0
Cycle Q Clear(g_c), s	22.8	16.8	8.2	4.8	0.0	22.0
Prop In Lane	1.00	1.00	1.00			0.44
Lane Grp Cap(c), veh/h	599	533	224	992	0	603
V/C Ratio(X)	0.88	0.70	0.81	0.21	0.00	0.84
Avail Cap(c_a), veh/h	870	774	652	1142	0	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.6	23.6	34.9	10.1	0.0	24.6
Incr Delay (d2), s/veh	7.4	1.7	5.3	0.1	0.0	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.3	3.6	1.6	0.0	8.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.0	25.3	40.2	10.3	0.0	29.1
LnGrp LOS	C	C	D	B	A	C
Approach Vol, veh/h	902			388	505	
Approach Delay, s/veh	29.8			24.3	29.1	
Approach LOS	C			C	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		49.7		32.3	15.0	34.7
Change Period (Y+Rc), s		6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s		50.0		* 40	* 30	50.0
Max Q Clear Time (g_c+I1), s		6.8		24.8	10.2	24.0
Green Ext Time (p_c), s		1.6		2.7	0.3	4.5

Intersection Summary		
HCM 6th Ctrl Delay		28.4
HCM 6th LOS		C

Notes

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

Intersection	
Int Delay, s/veh	9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	289	68	7	460	74
Future Vol, veh/h	11	289	68	7	460	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	344	81	8	548	88

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1269	85	0	0	89	0
Stage 1	85	-	-	-	-	-
Stage 2	1184	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	186	974	-	-	1506	-
Stage 1	938	-	-	-	-	-
Stage 2	290	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	115	974	-	-	1506	-
Mov Cap-2 Maneuver	115	-	-	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	179	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	0	7.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	765	1506	-
HCM Lane V/C Ratio	-	-	0.467	0.364	-
HCM Control Delay (s)	-	-	13.8	8.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	2.5	1.7	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	882	501	274	530	336	243	754	112	364	791	135
Future Volume (veh/h)	430	882	501	274	530	336	243	754	112	364	791	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	443	909	0	282	546	112	251	777	51	375	815	79
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	544	1339		376	1090	332	342	1276	389	513	1064	467
Arrive On Green	0.16	0.26	0.00	0.11	0.21	0.21	0.10	0.25	0.25	0.15	0.30	0.30
Sat Flow, veh/h	3456	5106	1585	3456	5106	1554	3456	5106	1556	3456	3554	1560
Grp Volume(v), veh/h	443	909	0	282	546	112	251	777	51	375	815	79
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1554	1728	1702	1556	1728	1777	1560
Q Serve(g_s), s	11.8	15.2	0.0	7.6	9.0	5.8	6.7	12.8	2.4	9.9	19.9	3.6
Cycle Q Clear(g_c), s	11.8	15.2	0.0	7.6	9.0	5.8	6.7	12.8	2.4	9.9	19.9	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	544	1339		376	1090	332	342	1276	389	513	1064	467
V/C Ratio(X)	0.81	0.68		0.75	0.50	0.34	0.73	0.61	0.13	0.73	0.77	0.17
Avail Cap(c_a), veh/h	906	2408		906	2408	733	906	2408	734	906	1676	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	31.6	0.0	41.3	33.0	31.8	41.8	31.7	27.7	38.8	30.4	24.7
Incr Delay (d2), s/veh	3.0	0.6	0.0	3.0	0.4	0.6	3.1	0.5	0.2	4.3	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	6.0	0.0	3.3	3.7	2.2	2.9	5.0	0.9	4.3	8.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	32.2	0.0	44.3	33.4	32.4	44.8	32.1	27.9	43.1	31.6	24.8
LnGrp LOS	D	C		D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1352	A		940			1079			1269	
Approach Delay, s/veh		35.4			36.5			34.9			34.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	31.0	19.2	29.8	20.0	26.4	14.4	34.6
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	9.6	17.2	11.9	14.8	13.8	11.0	8.7	21.9
Green Ext Time (p_c), s	0.8	6.4	2.3	5.6	1.2	4.4	0.7	5.9

Intersection Summary	
HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	447	464	202	460	510	231
Future Volume (veh/h)	447	464	202	460	510	231
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.48	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	466	140	210	87	531	241
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	521	463	292	118	570	1022
Arrive On Green	0.29	0.29	0.16	0.16	0.32	0.55
Sat Flow, veh/h	1781	1585	1870	758	1781	1870
Grp Volume(v), veh/h	466	140	210	87	531	241
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	758	1781	1870
Q Serve(g_s), s	16.8	4.6	7.1	7.3	19.3	4.5
Cycle Q Clear(g_c), s	16.8	4.6	7.1	7.3	19.3	4.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	521	463	292	118	570	1022
V/C Ratio(X)	0.89	0.30	0.72	0.74	0.93	0.24
Avail Cap(c_a), veh/h	575	512	464	188	700	1330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	18.4	26.8	26.9	22.0	7.9
Incr Delay (d2), s/veh	15.9	0.4	4.0	10.2	15.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	1.6	3.2	1.5	9.3	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.5	18.8	30.9	37.1	37.8	8.0
LnGrp LOS	D	B	C	D	D	A
Approach Vol, veh/h	606		297			772
Approach Delay, s/veh	34.0		32.7			28.5
Approach LOS	C		C			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	26.1	15.8			42.0	25.0
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 26	16.6			47.6	21.6
Max Q Clear Time (g_c+I1), s	21.3	9.3			6.5	18.8
Green Ext Time (p_c), s	0.1	1.1			1.6	0.8

Intersection Summary	
HCM 6th Ctrl Delay	31.2
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)	0	0	0	948	250	268	19	218	0	0	580	220
Future Volume (veh/h)	0	0	0	948	250	268	19	218	0	0	580	220
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				977	258	228	20	225	0	0	598	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				968	256	1898	59	771	0	0	733	
Arrive On Green				0.68	0.68	0.68	0.03	0.22	0.00	0.00	0.14	0.00
Sat Flow, veh/h				1423	376	2790	1781	3647	0	0	5274	1585
Grp Volume(v), veh/h				1235	0	228	20	225	0	0	598	0
Grp Sat Flow(s),veh/h/ln				1799	0	1395	1781	1777	0	0	1702	1585
Q Serve(g_s), s				76.2	0.0	3.2	1.2	5.9	0.0	0.0	12.7	0.0
Cycle Q Clear(g_c), s				76.2	0.0	3.2	1.2	5.9	0.0	0.0	12.7	0.0
Prop In Lane				0.79		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1224	0	1898	59	771	0	0	733	
V/C Ratio(X)				1.01	0.00	0.12	0.34	0.29	0.00	0.00	0.82	
Avail Cap(c_a), veh/h				1224	0	1898	127	1057	0	0	948	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				17.9	0.0	6.2	52.9	36.7	0.0	0.0	46.5	0.0
Incr Delay (d2), s/veh				27.9	0.0	0.0	1.3	0.1	0.0	0.0	3.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				36.5	0.0	0.9	0.6	2.5	0.0	0.0	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				45.8	0.0	6.2	54.2	36.7	0.0	0.0	49.9	0.0
LnGrp LOS				F	A	A	D	D	A	A	D	
Approach Vol, veh/h					1463			245			598	
Approach Delay, s/veh					39.6			38.2			49.9	
Approach LOS					D			D			D	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	30.0		8.2	21.8		82.0						
Change Period (Y+Rc), s	5.7		4.5	5.7		5.8						
Max Green Setting (Gmax), s	33.3		8.0	20.8		76.2						
Max Q Clear Time (g_c+I1), s	7.9		3.2	14.7		78.2						
Green Ext Time (p_c), s	0.8		0.0	1.4		0.0						

Intersection Summary		
HCM 6th Ctrl Delay	42.1	
HCM 6th LOS	D	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	24	93	925	81	183	90	219	1174	290	884	43
Future Volume (veh/h)	35	24	93	925	81	183	90	219	1174	290	884	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	25	0	954	84	75	93	226	697	299	911	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	189		1141	616	673	123	1076	1003	347	1187	521
Arrive On Green	0.05	0.05	0.00	0.33	0.33	0.33	0.07	0.30	0.30	0.10	0.33	0.33
Sat Flow, veh/h	1781	3647	0	3456	1870	1558	1781	3554	1583	3456	3554	1559
Grp Volume(v), veh/h	36	25	0	954	84	75	93	226	697	299	911	16
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1558	1781	1777	1583	1728	1777	1559
Q Serve(g_s), s	2.7	0.9	0.0	35.9	4.4	4.1	7.2	6.7	40.6	12.0	32.3	1.0
Cycle Q Clear(g_c), s	2.7	0.9	0.0	35.9	4.4	4.1	7.2	6.7	40.6	12.0	32.3	1.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	189		1141	616	673	123	1076	1003	347	1187	521
V/C Ratio(X)	0.38	0.13		0.84	0.14	0.11	0.75	0.21	0.70	0.86	0.77	0.03
Avail Cap(c_a), veh/h	127	303		1487	831	852	127	1077	1003	366	1200	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.3	63.5	0.0	43.6	33.1	24.0	64.3	36.5	16.9	62.3	41.9	31.5
Incr Delay (d2), s/veh	3.5	0.4	0.0	4.7	0.1	0.1	23.4	0.1	2.1	18.5	3.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.4	0.0	15.8	2.0	1.5	4.0	2.9	14.3	6.1	14.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.7	63.9	0.0	48.2	33.2	24.1	87.6	36.6	19.0	80.8	45.1	31.5
LnGrp LOS	E	E		D	C	C	F	D	B	F	D	C
Approach Vol, veh/h		61			1113			1016			1226	
Approach Delay, s/veh		66.2			45.5			29.2			53.7	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	50.1	53.9	15.0	17.2	54.5	15.0	53.8
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	14.1	42.6	60.5	12.0	10.0	47.5	10.0	62.5
Max Q Clear Time (g_c+I1), s	11.0	42.6	37.9	2.9	9.2	34.3	4.7	6.4
Green Ext Time (p_c), s	0.1	0.0	8.5	0.0	0.0	6.3	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	43.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	461	1	831	8	539	0	0	812	936
Future Volume (veh/h)	0	0	0	461	1	831	8	539	0	0	812	936
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				491	0	0	9	573	0	0	864	615
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				550	0		414	826	0	0	887	1293
Arrive On Green				0.15	0.00	0.00	0.23	0.23	0.00	0.00	0.47	0.47
Sat Flow, veh/h				3563	0	1585	1781	3647	0	0	1870	2726
Grp Volume(v), veh/h				491	0	0	9	573	0	0	864	615
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1781	1777	0	0	1870	1363
Q Serve(g_s), s				16.2	0.0	0.0	0.5	17.7	0.0	0.0	54.2	18.4
Cycle Q Clear(g_c), s				16.2	0.0	0.0	0.5	17.7	0.0	0.0	54.2	18.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				550	0		414	826	0	0	887	1293
V/C Ratio(X)				0.89	0.00		0.02	0.69	0.00	0.00	0.97	0.48
Avail Cap(c_a), veh/h				781	0		414	826	0	0	887	1293
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.38	0.38	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				49.8	0.0	0.0	35.5	42.2	0.0	0.0	30.8	21.4
Incr Delay (d2), s/veh				7.5	0.0	0.0	0.0	0.8	0.0	0.0	24.6	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.8	0.0	0.0	0.2	7.6	0.0	0.0	28.5	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				57.3	0.0	0.0	35.5	43.0	0.0	0.0	55.4	22.7
LnGrp LOS				E	A		D	D	A	A	E	C
Approach Vol, veh/h					491			582			1479	
Approach Delay, s/veh					57.3			42.9			41.8	
Approach LOS					E			D			D	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	33.7		62.7		23.6			
Change Period (Y+Rc), s	5.8		5.8		5.1			
Max Green Setting (Gmax), s	20.1		56.9		26.3			
Max Q Clear Time (g_c+I1), s	19.7		56.2		18.2			
Green Ext Time (p_c), s	0.1		0.3		0.3			

Intersection Summary		
HCM 6th Ctrl Delay	45.0	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	438	0	28	0	0	0	0	105	25	284	935	0
Future Volume (veh/h)	438	0	28	0	0	0	0	105	25	284	935	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	476	0	0				0	114	1	309	1016	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	532	0					0	264	223	1016	1067	0
Arrive On Green	0.15	0.00	0.00				0.00	0.14	0.14	0.57	0.57	0.00
Sat Flow, veh/h	3563	0	1585				0	1870	1579	1781	1870	0
Grp Volume(v), veh/h	476	0	0				0	114	1	309	1016	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1870	1579	1781	1870	0
Q Serve(g_s), s	15.7	0.0	0.0				0.0	6.7	0.1	10.8	61.3	0.0
Cycle Q Clear(g_c), s	15.7	0.0	0.0				0.0	6.7	0.1	10.8	61.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	532	0					0	264	223	1016	1067	0
V/C Ratio(X)	0.90	0.00					0.00	0.43	0.00	0.30	0.95	0.00
Avail Cap(c_a), veh/h	620	0					0	264	223	1072	1125	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.32	0.32	0.00
Uniform Delay (d), s/veh	50.1	0.0	0.0				0.0	47.2	44.3	13.4	24.2	0.0
Incr Delay (d2), s/veh	12.9	0.0	0.0				0.0	0.4	0.0	0.2	7.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	0.0				0.0	3.0	0.0	4.1	26.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.1	0.0	0.0				0.0	47.6	44.3	13.6	32.1	0.0
LnGrp LOS	E	A					A	D	D	B	C	A
Approach Vol, veh/h		476						115			1325	
Approach Delay, s/veh		63.1						47.5			27.8	
Approach LOS		E						D			C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	22.7	23.0	74.3
Change Period (Y+Rc), s	5.8	5.1	5.8
Max Green Setting (Gmax), s	10.2	20.9	72.2
Max Q Clear Time (g_c+I1), s	8.7	17.7	63.3
Green Ext Time (p_c), s	0.0	0.2	5.2

Intersection Summary	
HCM 6th Ctrl Delay	37.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	207	422	36	298	257	28
Future Volume (veh/h)	207	422	36	298	257	28
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	238	434	41	343	295	29
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	704	597	130	977	394	39
Arrive On Green	0.38	0.38	0.07	0.52	0.25	0.25
Sat Flow, veh/h	1870	1585	1781	1870	1599	157
Grp Volume(v), veh/h	238	434	41	343	325	0
Grp Sat Flow(s),veh/h/ln	1870	1585	1781	1870	1761	0
Q Serve(g_s), s	3.7	9.7	0.9	4.4	7.0	0.0
Cycle Q Clear(g_c), s	3.7	9.7	0.9	4.4	7.0	0.0
Prop In Lane		1.00	1.00		0.91	0.09
Lane Grp Cap(c), veh/h	704	597	130	977	434	0
V/C Ratio(X)	0.34	0.73	0.32	0.35	0.75	0.00
Avail Cap(c_a), veh/h	2275	1928	347	2775	1671	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.2	11.0	18.1	5.7	14.3	0.0
Incr Delay (d2), s/veh	0.3	2.1	0.5	0.3	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.5	0.3	0.9	2.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.5	13.1	18.6	6.0	17.4	0.0
LnGrp LOS	A	B	B	A	B	A
Approach Vol, veh/h	672			384	325	
Approach Delay, s/veh	11.8			7.3	17.4	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		26.0		15.1	6.0	20.0
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		61.0		39.0	8.0	50.0
Max Q Clear Time (g_c+I1), s		6.4		9.0	2.9	11.7
Green Ext Time (p_c), s		2.5		1.3	0.0	3.8

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

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	114	93	620	141	139	774
Future Volume (veh/h)	114	93	620	141	139	774
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	14	689	157	154	447
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	163	145	731	1476	612	519
Arrive On Green	0.09	0.09	0.41	0.79	0.33	0.33
Sat Flow, veh/h	1781	1585	1781	1870	1870	1585
Grp Volume(v), veh/h	127	14	689	157	154	447
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	1870	1585
Q Serve(g_s), s	6.4	0.7	33.9	1.8	5.5	24.1
Cycle Q Clear(g_c), s	6.4	0.7	33.9	1.8	5.5	24.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	163	145	731	1476	612	519
V/C Ratio(X)	0.78	0.10	0.94	0.11	0.25	0.86
Avail Cap(c_a), veh/h	371	330	982	2167	1040	881
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	38.0	25.9	2.2	22.5	28.7
Incr Delay (d2), s/veh	7.8	0.3	13.4	0.0	0.3	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	15.3	0.3	2.3	9.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.3	38.3	39.2	2.3	22.8	35.0
LnGrp LOS	D	D	D	A	C	C
Approach Vol, veh/h	141			846	601	
Approach Delay, s/veh	47.3			32.4	31.9	
Approach LOS	D			C	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		78.2		13.1	42.1	36.1
Change Period (Y+Rc), s		6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s		105.7		* 19	* 50	50.7
Max Q Clear Time (g_c+I1), s		3.8		8.4	35.9	26.1
Green Ext Time (p_c), s		1.2		0.2	1.5	3.7

Intersection Summary		
HCM 6th Ctrl Delay		33.5
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)	0	0	0	486	6	487	39	303	0	0	489	77
Future Volume (veh/h)	0	0	0	486	6	487	39	303	0	0	489	77
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				540	7	315	43	337	0	0	543	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				674	9	1068	127	1396	0	0	1194	
Arrive On Green				0.38	0.38	0.38	0.07	0.39	0.00	0.00	0.23	0.00
Sat Flow, veh/h				1760	23	2790	1781	3647	0	0	5274	1585
Grp Volume(v), veh/h				547	0	315	43	337	0	0	543	0
Grp Sat Flow(s),veh/h/ln				1782	0	1395	1781	1777	0	0	1702	1585
Q Serve(g_s), s				14.0	0.0	4.0	1.2	3.3	0.0	0.0	4.7	0.0
Cycle Q Clear(g_c), s				14.0	0.0	4.0	1.2	3.3	0.0	0.0	4.7	0.0
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				683	0	1068	127	1396	0	0	1194	
V/C Ratio(X)				0.80	0.00	0.29	0.34	0.24	0.00	0.00	0.45	
Avail Cap(c_a), veh/h				1216	0	1902	1215	2423	0	0	3482	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				14.1	0.0	11.0	22.7	10.4	0.0	0.0	16.9	0.0
Incr Delay (d2), s/veh				1.4	0.0	0.1	0.6	0.0	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.9	0.0	1.1	0.4	1.0	0.0	0.0	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				15.5	0.0	11.1	23.3	10.5	0.0	0.0	17.0	0.0
LnGrp LOS				B	A	B	C	B	A	A	B	
Approach Vol, veh/h					862			380			543	
Approach Delay, s/veh					13.9			11.9			17.0	
Approach LOS					B			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		25.9			8.2	17.7		25.5				
Change Period (Y+Rc), s		5.7			4.5	5.7		5.8				
Max Green Setting (Gmax), s		35.0			35.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s		5.3			3.2	6.7		16.0				
Green Ext Time (p_c), s		1.3			0.0	2.2		3.6				

Intersection Summary		
HCM 6th Ctrl Delay	14.4	
HCM 6th LOS	B	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	44	62	774	43	231	54	472	807	223	185	35
Future Volume (veh/h)	54	44	62	774	43	231	54	472	807	223	185	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	47	0	832	46	117	58	508	314	240	199	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	308		1096	607	668	141	719	823	340	787	349
Arrive On Green	0.08	0.09	0.00	0.32	0.32	0.32	0.08	0.20	0.20	0.10	0.22	0.22
Sat Flow, veh/h	1781	3647	0	3456	1870	1578	1781	3554	1580	3456	3554	1576
Grp Volume(v), veh/h	58	47	0	832	46	117	58	508	314	240	199	11
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1578	1781	1777	1580	1728	1777	1576
Q Serve(g_s), s	3.1	1.2	0.0	22.0	1.7	4.7	3.1	13.5	12.1	6.8	4.7	0.6
Cycle Q Clear(g_c), s	3.1	1.2	0.0	22.0	1.7	4.7	3.1	13.5	12.1	6.8	4.7	0.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	308		1096	607	668	141	719	823	340	787	349
V/C Ratio(X)	0.41	0.15		0.76	0.08	0.18	0.41	0.71	0.38	0.71	0.25	0.03
Avail Cap(c_a), veh/h	207	420		1956	1062	1052	184	1574	1203	527	1749	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	42.9	0.0	31.2	23.7	18.3	44.5	37.7	14.6	44.4	32.6	31.0
Incr Delay (d2), s/veh	2.7	0.3	0.0	2.3	0.1	0.2	2.7	1.3	0.3	3.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.6	0.0	9.1	0.8	1.7	1.4	5.7	4.1	3.0	2.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.2	43.3	0.0	33.5	23.8	18.4	47.2	39.0	14.9	48.2	32.9	31.1
LnGrp LOS	D	D		C	C	B	D	D	B	D	C	C
Approach Vol, veh/h		105			995			880			450	
Approach Delay, s/veh		45.5			31.3			30.9			41.0	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	28.1	39.7	16.3	15.6	30.0	15.6	40.5
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	15.5	45.0	57.5	12.0	10.5	50.0	11.8	57.7
Max Q Clear Time (g_c+I1), s	8.8	15.5	24.0	3.2	5.1	6.7	5.1	6.7
Green Ext Time (p_c), s	0.6	4.4	8.2	0.1	0.1	1.8	0.1	1.0

Intersection Summary	
HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	0	471	12	877	0	0	677	360
Future Volume (veh/h)	0	0	0	10	0	471	12	877	0	0	677	360
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				11	0	0	13	943	0	0	728	263
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				76	0		696	1389	0	0	752	1116
Arrive On Green				0.02	0.00	0.00	0.39	0.39	0.00	0.00	0.40	0.40
Sat Flow, veh/h				3563	0	1585	1781	3647	0	0	1870	2776
Grp Volume(v), veh/h				11	0	0	13	943	0	0	728	263
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1781	1777	0	0	1870	1388
Q Serve(g_s), s				0.3	0.0	0.0	0.4	19.8	0.0	0.0	34.3	5.6
Cycle Q Clear(g_c), s				0.3	0.0	0.0	0.4	19.8	0.0	0.0	34.3	5.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				76	0		696	1389	0	0	752	1116
V/C Ratio(X)				0.14	0.00		0.02	0.68	0.00	0.00	0.97	0.24
Avail Cap(c_a), veh/h				420	0		696	1389	0	0	752	1116
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.53	0.53	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				43.2	0.0	0.0	16.8	22.7	0.0	0.0	26.3	17.8
Incr Delay (d2), s/veh				0.3	0.0	0.0	0.0	1.4	0.0	0.0	24.9	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.1	0.0	0.0	0.2	7.8	0.0	0.0	18.8	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				43.5	0.0	0.0	16.8	24.2	0.0	0.0	51.2	17.8
LnGrp LOS				D	A		B	C	A	A	D	B
Approach Vol, veh/h					11			956			991	
Approach Delay, s/veh					43.5			24.1			42.3	
Approach LOS					D			C			D	

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	41.0		42.0		7.0	
Change Period (Y+Rc), s	5.8		5.8		5.1	
Max Green Setting (Gmax), s	26.5		36.2		10.6	
Max Q Clear Time (g_c+I1), s	21.8		36.3		2.3	
Green Ext Time (p_c), s	1.2		0.0		0.0	

Intersection Summary		
HCM 6th Ctrl Delay		33.4
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	3	78	0	0	0	0	543	510	620	97	0
Future Volume (veh/h)	290	3	78	0	0	0	0	543	510	620	97	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	298	0	0				0	590	456	633	99	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.92	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	338	0					0	817	692	660	692	0
Arrive On Green	0.09	0.00	0.00				0.00	0.44	0.44	0.37	0.37	0.00
Sat Flow, veh/h	3563	0	1585				0	1870	1585	1781	1870	0
Grp Volume(v), veh/h	298	0	0				0	590	456	633	99	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1870	1585	1781	1870	0
Q Serve(g_s), s	14.0	0.0	0.0				0.0	44.1	38.7	59.0	6.0	0.0
Cycle Q Clear(g_c), s	14.0	0.0	0.0				0.0	44.1	38.7	59.0	6.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	338	0					0	817	692	660	692	0
V/C Ratio(X)	0.88	0.00					0.00	0.72	0.66	0.96	0.14	0.00
Avail Cap(c_a), veh/h	417	0					0	817	692	736	772	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.15	0.15	0.00
Uniform Delay (d), s/veh	76.0	0.0	0.0				0.0	39.4	37.9	52.3	35.6	0.0
Incr Delay (d2), s/veh	14.7	0.0	0.0				0.0	5.5	4.9	5.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	0.0				0.0	20.7	15.4	26.8	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.6	0.0	0.0				0.0	44.9	42.8	58.1	35.6	0.0
LnGrp LOS	F	A					A	D	D	E	D	A
Approach Vol, veh/h		298						1046			732	
Approach Delay, s/veh		90.6						44.0			55.0	
Approach LOS		F						D			E	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	80.0	21.2	68.7
Change Period (Y+Rc), s	5.8	5.1	5.8
Max Green Setting (Gmax), s	63.2	19.9	70.2
Max Q Clear Time (g_c+I1), s	46.1	16.0	61.0
Green Ext Time (p_c), s	1.0	0.1	1.9

Intersection Summary	
HCM 6th Ctrl Delay	54.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	377	398	26	310	409	50
Future Volume (veh/h)	377	398	26	310	409	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	984	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	381	205	26	313	413	47
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	436	703	86	1010	483	55
Arrive On Green	0.44	0.44	0.05	0.54	0.31	0.31
Sat Flow, veh/h	984	1585	1781	1870	1576	179
Grp Volume(v), veh/h	381	205	26	313	461	0
Grp Sat Flow(s),veh/h/ln	984	1585	1781	1870	1759	0
Q Serve(g_s), s	21.8	5.1	0.9	5.7	15.3	0.0
Cycle Q Clear(g_c), s	21.8	5.1	0.9	5.7	15.3	0.0
Prop In Lane		1.00	1.00		0.90	0.10
Lane Grp Cap(c), veh/h	436	703	86	1010	539	0
V/C Ratio(X)	0.87	0.29	0.30	0.31	0.86	0.00
Avail Cap(c_a), veh/h	938	1510	86	1963	994	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.7	11.0	28.5	7.9	20.2	0.0
Incr Delay (d2), s/veh	6.6	0.3	0.7	0.2	4.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	1.5	0.4	1.7	5.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.3	11.3	29.2	8.1	25.0	0.0
LnGrp LOS	C	B	C	A	C	A
Approach Vol, veh/h	586			339	461	
Approach Delay, s/veh	18.4			9.7	25.0	
Approach LOS	B			A	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		38.0		24.0	6.0	32.0
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		65.0		35.0	3.0	59.0
Max Q Clear Time (g_c+I1), s		7.7		17.3	2.9	23.8
Green Ext Time (p_c), s		2.2		1.7	0.0	3.7

Intersection Summary		
HCM 6th Ctrl Delay		18.5
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	469	463	162	183	254	217
Future Volume (veh/h)	469	463	162	183	254	217
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	527	375	182	206	285	220
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	640	569	234	838	436	370
Arrive On Green	0.36	0.36	0.13	0.45	0.23	0.23
Sat Flow, veh/h	1781	1585	1781	1870	1870	1585
Grp Volume(v), veh/h	527	375	182	206	285	220
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	1870	1585
Q Serve(g_s), s	15.2	11.2	5.6	3.9	7.8	7.0
Cycle Q Clear(g_c), s	15.2	11.2	5.6	3.9	7.8	7.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	640	569	234	838	436	370
V/C Ratio(X)	0.82	0.66	0.78	0.25	0.65	0.59
Avail Cap(c_a), veh/h	1869	1663	766	2165	1205	1021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	15.2	23.7	9.7	19.6	19.3
Incr Delay (d2), s/veh	2.7	1.3	4.1	0.2	2.4	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.2	2.3	1.2	3.1	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.2	16.5	27.9	9.9	21.9	21.5
LnGrp LOS	B	B	C	A	C	C
Approach Vol, veh/h	902			388	505	
Approach Delay, s/veh	18.1			18.3	21.7	
Approach LOS	B			B	C	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	31.5		25.0	12.1	19.4
Change Period (Y+Rc), s	6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	65.4		* 59	* 24	36.4
Max Q Clear Time (g_c+I1), s	5.9		17.2	7.6	9.8
Green Ext Time (p_c), s	1.7		3.1	0.3	3.4

Intersection Summary		
HCM 6th Ctrl Delay		19.2
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)	0	0	0	1044	319	572	0	829	0	0	1015	360
Future Volume (veh/h)	0	0	0	1044	319	572	0	829	0	0	1015	360
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	0	0	1870	1870
Adj Flow Rate, veh/h				1006	427	445	0	855	0	0	1046	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	0	2	0	0	2	2
Cap, veh/h				1503	789	1338	0	1189	0	0	1709	
Arrive On Green				0.42	0.42	0.42	0.00	0.33	0.00	0.00	0.33	0.00
Sat Flow, veh/h				3563	1870	3170	0	3741	0	0	5274	1585
Grp Volume(v), veh/h				1006	427	445	0	855	0	0	1046	0
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	0	1777	0	0	1702	1585
Q Serve(g_s), s				10.7	8.1	4.5	0.0	10.0	0.0	0.0	8.1	0.0
Cycle Q Clear(g_c), s				10.7	8.1	4.5	0.0	10.0	0.0	0.0	8.1	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1503	789	1338	0	1189	0	0	1709	
V/C Ratio(X)				0.67	0.54	0.33	0.00	0.72	0.00	0.00	0.61	
Avail Cap(c_a), veh/h				3183	1671	2832	0	5063	0	0	7274	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				11.0	10.2	9.2	0.0	13.8	0.0	0.0	13.2	0.0
Incr Delay (d2), s/veh				0.3	0.4	0.1	0.0	0.3	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.4	2.7	1.2	0.0	3.0	0.0	0.0	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				11.3	10.6	9.3	0.0	14.1	0.0	0.0	13.3	0.0
LnGrp LOS				B	B	A	A	B	A	A	B	
Approach Vol, veh/h					1878			855			1046	
Approach Delay, s/veh					10.7			14.1			13.3	
Approach LOS					B			B			B	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	21.5		21.5		25.7			
Change Period (Y+Rc), s	5.7		5.7		5.8			
Max Green Setting (Gmax), s	67.3		67.3		42.2			
Max Q Clear Time (g_c+I1), s	12.0		10.1		12.7			
Green Ext Time (p_c), s	3.8		5.0		7.2			

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	0	260	0	0	0	0	670	660	0	1390	0
Future Volume (veh/h)	50	0	260	0	0	0	0	670	660	0	1390	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	35	0	229				0	691	343	0	1433	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	381	0	678				0	1678	1317	0	2411	0
Arrive On Green	0.21	0.00	0.21				0.00	0.47	0.47	0.00	0.47	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	35	0	229				0	691	343	0	1433	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	0.5	0.0	2.1				0.0	4.4	2.5	0.0	7.1	0.0
Cycle Q Clear(g_c), s	0.5	0.0	2.1				0.0	4.4	2.5	0.0	7.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	381	0	678				0	1678	1317	0	2411	0
V/C Ratio(X)	0.09	0.00	0.34				0.00	0.41	0.26	0.00	0.59	0.00
Avail Cap(c_a), veh/h	1760	0	3133				0	3615	2838	0	5194	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	10.8	0.0	11.5				0.0	5.9	5.5	0.0	6.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1				0.0	0.1	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.6				0.0	0.6	0.3	0.0	1.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.9	0.0	11.6				0.0	6.0	5.5	0.0	6.7	0.0
LnGrp LOS	B	A	B				A	A	A	A	A	A
Approach Vol, veh/h		264						1034			1433	
Approach Delay, s/veh		11.5						5.8			6.7	
Approach LOS		B						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	21.9	12.5	21.9
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	6.4	4.1	9.1
Green Ext Time (p_c), s	3.7	0.1	7.2

Intersection Summary	
HCM 6th Ctrl Delay	6.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	20	100	30	490	20	510	70	410	970	20
Future Volume (veh/h)	10	10	20	100	30	490	20	510	70	410	970	20
Initial Q (Qb), veh	0	0	0	0	0	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	11	11	2	108	32	94	22	548	32	441	1043	13
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	165	140	139	286	425	43	1516	675	326	2080	928
Arrive On Green	0.01	0.09	0.09	0.08	0.15	0.15	0.02	0.43	0.43	0.18	0.59	0.59
Sat Flow, veh/h	1781	1870	1585	1781	1870	2779	1781	3554	1583	1781	3554	1585
Grp Volume(v), veh/h	11	11	2	108	32	94	22	548	32	441	1043	13
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1389	1781	1777	1583	1781	1777	1585
Q Serve(g_s), s	0.5	0.4	0.1	4.9	1.2	2.4	1.0	8.6	1.0	15.0	14.1	0.3
Cycle Q Clear(g_c), s	0.5	0.4	0.1	4.9	1.2	2.4	1.0	8.6	1.0	15.0	14.1	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	24	165	140	139	286	425	43	1516	675	326	2080	928
V/C Ratio(X)	0.46	0.07	0.01	0.78	0.11	0.22	0.51	0.36	0.05	1.35	0.50	0.01
Avail Cap(c_a), veh/h	326	798	676	326	798	1185	326	1516	675	326	2080	928
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	34.3	34.2	37.1	30.0	30.5	39.6	15.9	13.8	33.5	10.0	7.1
Incr Delay (d2), s/veh	12.9	0.2	0.0	8.9	0.2	0.3	9.2	0.7	0.1	178.3	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.0	2.3	0.5	0.8	0.5	3.2	0.3	22.1	4.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	34.5	34.2	46.0	30.1	30.7	48.8	16.6	13.9	211.8	10.9	7.1
LnGrp LOS	D	C	C	D	C	C	D	B	B	F	B	A
Approach Vol, veh/h		24			234			602			1497	
Approach Delay, s/veh		43.0			37.7			17.7			70.0	
Approach LOS		D			D			B			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	53.8	10.4	11.8	19.0	40.8	5.1	17.1
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	15.0	35.0	15.0	35.0	15.0	35.0	15.0	35.0
Max Q Clear Time (g_c+I1), s	3.0	16.1	6.9	2.4	17.0	10.6	2.5	4.4
Green Ext Time (p_c), s	0.0	6.7	0.1	0.0	0.0	3.5	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	53.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	60	80	610	70	130	60	480	320	200	850	40
Future Volume (veh/h)	40	60	80	610	70	130	60	480	320	200	850	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	62	0	629	72	53	62	495	95	206	876	14
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	327		818	494	553	136	1111	495	310	1157	502
Arrive On Green	0.06	0.09	0.00	0.24	0.26	0.26	0.08	0.31	0.31	0.09	0.33	0.33
Sat Flow, veh/h	1781	3647	0	3456	1870	1556	1781	3554	1583	3456	3554	1542
Grp Volume(v), veh/h	41	62	0	629	72	53	62	495	95	206	876	14
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1556	1781	1777	1583	1728	1777	1542
Q Serve(g_s), s	2.5	1.8	0.0	18.9	3.3	2.5	3.7	12.4	4.9	6.4	24.6	0.7
Cycle Q Clear(g_c), s	2.5	1.8	0.0	18.9	3.3	2.5	3.7	12.4	4.9	6.4	24.6	0.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	327		818	494	553	136	1111	495	310	1157	502
V/C Ratio(X)	0.36	0.19		0.77	0.15	0.10	0.45	0.45	0.19	0.67	0.76	0.03
Avail Cap(c_a), veh/h	160	383		1442	814	819	254	1901	846	369	1773	769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.9	46.8	0.0	39.7	31.4	24.1	49.2	30.6	28.0	49.1	33.6	25.6
Incr Delay (d2), s/veh	2.7	0.4	0.0	3.3	0.2	0.1	3.3	0.3	0.2	4.4	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.8	0.0	8.2	1.5	0.9	1.7	5.1	1.8	2.9	10.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.6	47.2	0.0	43.0	31.6	24.2	52.6	30.9	28.2	53.5	35.1	25.6
LnGrp LOS	D	D		D	C	C	D	C	C	D	D	C
Approach Vol, veh/h		103			754			652			1096	
Approach Delay, s/veh		49.3			40.6			32.5			38.4	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	42.3	33.9	17.7	16.0	43.8	14.7	36.9
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	11.3	59.6	46.5	12.0	15.9	55.6	10.0	48.5
Max Q Clear Time (g_c+I1), s	10.4	14.4	20.9	3.8	5.7	26.6	4.5	5.3
Green Ext Time (p_c), s	0.3	3.6	5.4	0.2	0.1	9.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	38.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	90	70	20	120	10	170	40	20	10	30	160
Future Volume (veh/h)	20	90	70	20	120	10	170	40	20	10	30	160
Initial Q (Qb), veh	0	0	0	0	0	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	22	99	12	22	132	2	187	44	10	11	33	44
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	675	301	49	675	300	252	985	438	26	534	238
Arrive On Green	0.03	0.19	0.19	0.03	0.19	0.19	0.14	0.28	0.28	0.01	0.15	0.15
Sat Flow, veh/h	1781	3554	1583	1781	3554	1581	1781	3554	1582	1781	3554	1582
Grp Volume(v), veh/h	22	99	12	22	132	2	187	44	10	11	33	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1777	1581	1781	1777	1582	1781	1777	1582
Q Serve(g_s), s	0.5	0.9	0.2	0.5	1.2	0.0	3.8	0.3	0.2	0.2	0.3	0.9
Cycle Q Clear(g_c), s	0.5	0.9	0.2	0.5	1.2	0.0	3.8	0.3	0.2	0.2	0.3	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	675	301	49	675	300	252	985	438	26	534	238
V/C Ratio(X)	0.45	0.15	0.04	0.45	0.20	0.01	0.74	0.04	0.02	0.43	0.06	0.19
Avail Cap(c_a), veh/h	946	3773	1680	946	3773	1679	946	3773	1680	946	3773	1680
HCM Platoon Ratio	1.00	1.00	1.00	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	18.0	12.7	12.5	18.0	12.8	12.4	15.5	10.0	9.9	18.4	13.7	14.0
Incr Delay (d2), s/veh	6.4	0.1	0.1	6.4	0.1	0.0	4.3	0.0	0.0	10.9	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.1	0.2	0.3	0.0	1.5	0.1	0.0	0.2	0.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	12.8	12.5	24.5	13.0	12.4	19.8	10.0	9.9	29.3	13.8	14.4
LnGrp LOS	C	B	B	C	B	B	B	A	A	C	B	B
Approach Vol, veh/h		133			156			241			88	
Approach Delay, s/veh		14.7			14.6			17.6			16.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	11.9	4.5	16.2	5.0	11.9	9.3	11.5
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.5	2.9	2.2	2.3	2.5	3.2	5.8	2.9
Green Ext Time (p_c), s	0.0	0.6	0.0	0.2	0.0	0.7	0.4	0.3

Intersection Summary	
HCM 6th Ctrl Delay	16.0
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)	210	150	30	20	550	350	30	30	10	10	40	240
Future Volume (veh/h)	210	150	30	20	550	350	30	30	10	10	40	240
Initial Q (Qb), veh	0	0	0	0	0	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	226	161	20	22	591	200	32	32	2	11	43	28
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	1177	998	72	985	834	93	195	12	42	156	132
Arrive On Green	0.14	0.63	0.63	0.04	0.53	0.53	0.05	0.11	0.11	0.02	0.08	0.08
Sat Flow, veh/h	1781	1870	1585	1781	1870	1584	1781	1742	109	1781	1870	1585
Grp Volume(v), veh/h	226	161	20	22	591	200	32	0	34	11	43	28
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1584	1781	0	1850	1781	1870	1585
Q Serve(g_s), s	13.0	3.6	0.5	1.3	22.8	7.1	1.8	0.0	1.7	0.6	2.3	1.7
Cycle Q Clear(g_c), s	13.0	3.6	0.5	1.3	22.8	7.1	1.8	0.0	1.7	0.6	2.3	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	255	1177	998	72	985	834	93	0	207	42	156	132
V/C Ratio(X)	0.88	0.14	0.02	0.30	0.60	0.24	0.34	0.00	0.16	0.26	0.28	0.21
Avail Cap(c_a), veh/h	256	1177	998	256	985	834	256	0	709	256	985	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	7.9	7.3	48.7	17.1	13.4	47.8	0.0	41.9	50.1	44.9	44.7
Incr Delay (d2), s/veh	28.5	0.2	0.0	2.3	2.7	0.7	2.2	0.0	0.5	3.3	1.3	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	1.4	0.2	0.6	9.3	2.5	0.8	0.0	0.8	0.3	1.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.4	8.1	7.3	51.0	19.8	14.1	50.0	0.0	42.5	53.4	46.2	45.8
LnGrp LOS	E	A	A	D	B	B	D	A	D	D	D	D
Approach Vol, veh/h		407			813			66			82	
Approach Delay, s/veh		43.8			19.2			46.1			47.0	
Approach LOS		D			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	72.2	6.5	17.5	19.0	61.5	9.4	14.5
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	15.0	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	3.3	5.6	2.6	3.7	15.0	24.8	3.8	4.3
Green Ext Time (p_c), s	0.0	1.4	0.0	0.2	0.0	6.7	0.0	0.4

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)	180	680	90	0	750	340	0	0	0	410	20	440
Future Volume (veh/h)	180	680	90	0	750	340	0	0	0	410	20	440
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	202	764	56	0	843	0				477	0	141
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	366	1962	856	0	1763					795	0	349
Arrive On Green	0.11	0.55	0.55	0.00	0.35	0.00				0.22	0.00	0.22
Sat Flow, veh/h	3456	3554	1551	0	5274	1585				3563	0	1564
Grp Volume(v), veh/h	202	764	56	0	843	0				477	0	141
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	0	1702	1585				1781	0	1564
Q Serve(g_s), s	2.6	5.7	0.8	0.0	6.0	0.0				5.6	0.0	3.6
Cycle Q Clear(g_c), s	2.6	5.7	0.8	0.0	6.0	0.0				5.6	0.0	3.6
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	366	1962	856	0	1763					795	0	349
V/C Ratio(X)	0.55	0.39	0.07	0.00	0.48					0.60	0.00	0.40
Avail Cap(c_a), veh/h	2219	3043	1328	0	4372					2288	0	1005
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	19.8	6.0	4.9	0.0	12.0	0.0				16.3	0.0	15.5
Incr Delay (d2), s/veh	1.5	0.2	0.0	0.0	0.3	0.0				0.9	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	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.2	0.2	0.0	1.8	0.0				2.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.3	6.1	4.9	0.0	12.3	0.0				17.2	0.0	16.4
LnGrp LOS	C	A	A	A	B					B	A	B
Approach Vol, veh/h		1022			843						618	
Approach Delay, s/veh		9.1			12.3						17.0	
Approach LOS		A			B						B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	31.2		15.5	9.7	21.5
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	7.7		7.6	4.6	8.0
Green Ext Time (p_c), s	7.6		2.8	0.7	8.1

Intersection Summary		
HCM 6th Ctrl Delay	12.1	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	220	370	40	300	270	50
Future Volume (veh/h)	220	370	40	300	270	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	253	381	46	345	310	50
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	306	461	109	1067	385	62
Arrive On Green	0.45	0.45	0.06	0.57	0.26	0.26
Sat Flow, veh/h	674	1014	1781	1870	1503	242
Grp Volume(v), veh/h	0	634	46	345	361	0
Grp Sat Flow(s),veh/h/ln	0	1688	1781	1870	1750	0
Q Serve(g_s), s	0.0	18.0	1.4	5.3	10.6	0.0
Cycle Q Clear(g_c), s	0.0	18.0	1.4	5.3	10.6	0.0
Prop In Lane		0.60	1.00		0.86	0.14
Lane Grp Cap(c), veh/h	0	767	109	1067	449	0
V/C Ratio(X)	0.00	0.83	0.42	0.32	0.80	0.00
Avail Cap(c_a), veh/h	0	1231	552	1364	1276	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	13.1	24.8	6.2	19.1	0.0
Incr Delay (d2), s/veh	0.0	3.1	1.0	0.2	4.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.5	0.5	1.3	3.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	16.1	25.8	6.4	23.2	0.0
LnGrp LOS	A	B	C	A	C	A
Approach Vol, veh/h	634			391	361	
Approach Delay, s/veh	16.1			8.7	23.2	
Approach LOS	B			A	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.8		19.1	6.4	29.4
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		40.0		40.0	17.0	40.0
Max Q Clear Time (g_c+I1), s		7.3		12.6	3.4	20.0
Green Ext Time (p_c), s		2.4		1.4	0.0	4.9

Intersection Summary		
HCM 6th Ctrl Delay		15.9
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	270	130	660	680	80	180	300	520	30	530	50
Future Volume (veh/h)	30	270	130	660	680	80	180	300	520	30	530	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	38	338	0	825	850	0	225	375	0	38	662	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	889		752	1697		335	751		207	619	
Arrive On Green	0.05	0.17	0.00	0.22	0.33	0.00	0.10	0.21	0.00	0.06	0.17	0.00
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	38	338	0	825	850	0	225	375	0	38	662	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	1.4	4.0	0.0	15.0	9.2	0.0	4.3	6.4	0.0	0.7	12.0	0.0
Cycle Q Clear(g_c), s	1.4	4.0	0.0	15.0	9.2	0.0	4.3	6.4	0.0	0.7	12.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	80	889		752	1697		335	751		207	619	
V/C Ratio(X)	0.47	0.38		1.10	0.50		0.67	0.50		0.18	1.07	
Avail Cap(c_a), veh/h	310	3706		752	3706		752	751		602	619	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.1	25.2	0.0	26.9	18.4	0.0	30.0	24.0	0.0	30.8	28.4	0.0
Incr Delay (d2), s/veh	1.6	0.4	0.0	62.3	0.3	0.0	2.3	0.5	0.0	0.4	56.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.5	0.0	12.0	3.2	0.0	1.7	2.4	0.0	0.3	9.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	25.5	0.0	89.2	18.7	0.0	32.4	24.5	0.0	31.2	84.6	0.0
LnGrp LOS	C	C		F	B		C	C		C	F	
Approach Vol, veh/h		376			1675			600			700	
Approach Delay, s/veh		26.4			53.5			27.4			81.7	
Approach LOS		C			D			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	29.0	12.2	18.1	20.5	18.1	9.6	20.7
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	12.0	50.0	15.0	12.0	15.0	50.0	12.0	12.0
Max Q Clear Time (g_c+I1), s	3.4	11.2	6.3	14.0	17.0	6.0	2.7	8.4
Green Ext Time (p_c), s	0.0	9.2	0.4	0.0	0.0	3.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	51.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	20	120	110	20	270	220	540	190	450	570	300
Future Volume (veh/h)	190	20	120	110	20	270	220	540	190	450	570	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.94	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	207	22	46	147	22	93	239	720	58	600	760	140
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	516	416	352	243	37	155	394	1097	321	623	1211	965
Arrive On Green	0.15	0.22	0.22	0.07	0.12	0.12	0.08	0.21	0.21	0.18	0.34	0.34
Sat Flow, veh/h	3510	1900	1610	3456	306	1294	5103	5106	1493	3456	3554	2834
Grp Volume(v), veh/h	207	22	46	147	0	115	239	720	58	600	760	140
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1600	1701	1702	1493	1728	1777	1417
Q Serve(g_s), s	3.6	0.6	1.5	2.7	0.0	4.5	3.0	8.6	2.1	11.5	11.9	2.3
Cycle Q Clear(g_c), s	3.6	0.6	1.5	2.7	0.0	4.5	3.0	8.6	2.1	11.5	11.9	2.3
Prop In Lane	1.00		1.00	1.00		0.81	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	416	352	243	0	191	394	1097	321	623	1211	965
V/C Ratio(X)	0.40	0.05	0.13	0.61	0.00	0.60	0.61	0.66	0.18	0.96	0.63	0.15
Avail Cap(c_a), veh/h	1689	1211	1026	473	0	433	560	1957	572	623	1693	1350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	20.5	20.9	30.0	0.0	27.8	29.7	23.9	21.3	27.0	18.4	15.2
Incr Delay (d2), s/veh	0.7	0.1	0.2	2.4	0.0	3.0	1.5	0.3	0.1	26.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.3	0.6	1.2	0.0	1.8	1.2	3.0	0.7	6.4	4.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	20.6	21.1	32.5	0.0	30.8	31.2	24.1	21.4	53.7	18.6	15.2
LnGrp LOS	C	C	C	C	A	C	C	C	C	D	B	B
Approach Vol, veh/h		275			262			1017			1500	
Approach Delay, s/veh		25.1			31.7			25.6			32.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	28.7	9.2	19.1	18.0	20.3	15.8	12.4
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	7.3	31.7	9.1	42.4	12.0	25.5	32.0	18.0
Max Q Clear Time (g_c+I1), s	5.0	13.9	4.7	3.5	13.5	10.6	5.6	6.5
Green Ext Time (p_c), s	0.2	1.6	0.2	0.2	0.0	2.7	1.1	0.4

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

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	70	400	920	350	400
Future Volume (veh/h)	70	70	400	920	350	400
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	76	9	435	1000	380	410
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	139	124	473	1530	412	444
Arrive On Green	0.08	0.08	0.26	0.81	0.49	0.49
Sat Flow, veh/h	1810	1610	1810	1900	836	902
Grp Volume(v), veh/h	76	9	435	1000	0	790
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1738
Q Serve(g_s), s	3.7	0.5	21.6	20.0	0.0	39.1
Cycle Q Clear(g_c), s	3.7	0.5	21.6	20.0	0.0	39.1
Prop In Lane	1.00	1.00	1.00			0.52
Lane Grp Cap(c), veh/h	139	124	473	1530	0	856
V/C Ratio(X)	0.55	0.07	0.92	0.65	0.00	0.92
Avail Cap(c_a), veh/h	783	697	588	1530	0	940
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.1	39.6	33.2	3.7	0.0	21.8
Incr Delay (d2), s/veh	3.3	0.2	16.7	1.1	0.0	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.5	10.9	3.0	0.0	16.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.4	39.8	49.9	4.8	0.0	35.7
LnGrp LOS	D	D	D	A	A	D
Approach Vol, veh/h	85			1435	790	
Approach Delay, s/veh	43.9			18.5	35.7	
Approach LOS	D			B	D	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	80.6		11.8	28.9	51.7
Change Period (Y+Rc), s	6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	50.0		* 40	* 30	50.0
Max Q Clear Time (g_c+I1), s	22.0		5.7	23.6	41.1
Green Ext Time (p_c), s	11.9		0.2	0.6	4.5

Intersection Summary	
HCM 6th Ctrl Delay	25.3
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)	0	0	0	40	0	470	0	580	50	210	300	0
Future Volume (veh/h)	0	0	0	40	0	470	0	580	50	210	300	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	50	0	363	0	725	60	262	375	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	3	0	205	0	455	668	791	65	310	462	0
Arrive On Green	0.00	0.00	0.00	0.11	0.00	0.11	0.00	0.46	0.46	0.17	0.25	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1704	141	1781	1870	0
Grp Volume(v), veh/h	0	0	0	50	0	363	0	0	785	262	375	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1845	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	1.7	0.0	7.8	0.0	0.0	27.3	9.8	13.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.7	0.0	7.8	0.0	0.0	27.3	9.8	13.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.08	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	205	0	455	668	0	856	310	462	0
V/C Ratio(X)	0.00	0.00	0.00	0.24	0.00	0.80	0.00	0.00	0.92	0.85	0.81	0.00
Avail Cap(c_a), veh/h	0	215	0	205	0	455	668	0	960	396	1191	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	27.8	0.0	22.7	0.0	0.0	17.2	27.5	24.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	9.6	0.0	0.0	12.4	12.6	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.7	0.0	6.2	0.0	0.0	11.8	4.8	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	28.4	0.0	32.3	0.0	0.0	29.6	40.2	27.9	0.0
LnGrp LOS	A	A	A	C	A	C	A	A	C	D	C	A
Approach Vol, veh/h		0			413			785			637	
Approach Delay, s/veh		0.0			31.8			29.6			32.9	
Approach LOS					C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.7	38.1		0.0	31.6	23.2		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 15	35.8		7.8	7.3	* 44		7.8				
Max Q Clear Time (g_c+I1), s	11.8	29.3		0.0	0.0	15.0		9.8				
Green Ext Time (p_c), s	0.2	2.6		0.0	0.0	2.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		31.2
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)	230	540	200	180	680	190	310	800	140	250	420	330
Future Volume (veh/h)	230	540	200	180	680	190	310	800	140	250	420	330
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	253	593	0	198	747	64	341	879	94	275	462	147
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	377	1211		374	1206	368	454	1357	414	421	910	400
Arrive On Green	0.11	0.24	0.00	0.11	0.24	0.24	0.13	0.27	0.27	0.12	0.26	0.26
Sat Flow, veh/h	3456	5106	1585	3456	5106	1556	3456	5106	1557	3456	3554	1563
Grp Volume(v), veh/h	253	593	0	198	747	64	341	879	94	275	462	147
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1556	1728	1702	1557	1728	1777	1563
Q Serve(g_s), s	5.8	8.3	0.0	4.5	10.8	2.7	7.8	12.6	3.9	6.3	9.2	6.4
Cycle Q Clear(g_c), s	5.8	8.3	0.0	4.5	10.8	2.7	7.8	12.6	3.9	6.3	9.2	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	377	1211		374	1206	368	454	1357	414	421	910	400
V/C Ratio(X)	0.67	0.49		0.53	0.62	0.17	0.75	0.65	0.23	0.65	0.51	0.37
Avail Cap(c_a), veh/h	1049	2790		1049	2790	850	1049	2790	851	1049	1942	854
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	27.1	0.0	34.7	28.1	25.0	34.5	26.8	23.6	34.5	26.2	25.1
Incr Delay (d2), s/veh	2.1	0.3	0.0	1.2	0.5	0.2	2.5	0.5	0.3	3.6	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.1	0.0	1.9	4.2	1.0	3.2	4.7	1.4	2.7	3.7	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	27.4	0.0	35.9	28.7	25.3	37.0	27.3	23.9	38.1	26.6	25.7
LnGrp LOS	D	C		D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		846			1009			1314			884	
Approach Delay, s/veh		30.4			29.9			29.6			30.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	25.5	15.0	27.9	14.0	25.5	15.8	27.1
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	6.5	10.3	8.3	14.6	7.8	12.8	9.8	11.2
Green Ext Time (p_c), s	0.6	4.0	1.8	6.6	0.7	5.9	1.0	3.6

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

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	275	714	326	184	347	326
Future Volume (veh/h)	275	714	326	184	347	326
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.64	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	296	317	351	47	373	351
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	447	398	426	229	425	1032
Arrive On Green	0.25	0.25	0.23	0.23	0.24	0.55
Sat Flow, veh/h	1781	1585	1870	1007	1781	1870
Grp Volume(v), veh/h	296	317	351	47	373	351
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1007	1781	1870
Q Serve(g_s), s	8.2	10.2	9.8	2.1	11.0	5.7
Cycle Q Clear(g_c), s	8.2	10.2	9.8	2.1	11.0	5.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	447	398	426	229	425	1032
V/C Ratio(X)	0.66	0.80	0.82	0.21	0.88	0.34
Avail Cap(c_a), veh/h	606	539	499	269	531	1217
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	19.2	20.1	17.1	20.1	6.8
Incr Delay (d2), s/veh	2.0	6.5	9.9	0.5	11.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.9	4.7	0.4	5.1	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.4	25.7	30.0	17.7	31.6	7.0
LnGrp LOS	C	C	C	B	C	A
Approach Vol, veh/h	613		398			724
Approach Delay, s/veh	23.2		28.6			19.7
Approach LOS	C		C			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.7	17.8			35.6	19.1
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 16	14.6			35.6	18.6
Max Q Clear Time (g_c+I1), s	13.0	11.8			7.7	12.2
Green Ext Time (p_c), s	0.0	0.7			2.4	1.5

Intersection Summary	
HCM 6th Ctrl Delay	22.9
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)	180	30	0	0	720	150	0	0	0	50	0	150
Future Volume (veh/h)	180	30	0	0	720	150	0	0	0	50	0	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	196	33	0	0	783	158	0	0	0	39	21	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	241	2722	0	2	873	176	2	25	0	67	88	101
Arrive On Green	0.13	0.75	0.00	0.00	0.57	0.57	0.00	0.00	0.00	0.04	0.11	0.11
Sat Flow, veh/h	1810	3705	0	1810	1535	310	1810	1900	0	1810	809	925
Grp Volume(v), veh/h	196	33	0	0	0	941	0	0	0	39	0	45
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1810	0	1844	1810	1900	0	1810	0	1734
Q Serve(g_s), s	8.1	0.2	0.0	0.0	0.0	34.4	0.0	0.0	0.0	1.6	0.0	1.8
Cycle Q Clear(g_c), s	8.1	0.2	0.0	0.0	0.0	34.4	0.0	0.0	0.0	1.6	0.0	1.8
Prop In Lane	1.00		0.00	1.00		0.17	1.00		0.00	1.00		0.53
Lane Grp Cap(c), veh/h	241	2722	0	2	0	1049	2	25	0	67	0	189
V/C Ratio(X)	0.81	0.01	0.00	0.00	0.00	0.90	0.00	0.00	0.00	0.59	0.00	0.24
Avail Cap(c_a), veh/h	402	2892	0	213	0	1285	364	526	0	225	0	347
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.2	2.3	0.0	0.0	0.0	14.5	0.0	0.0	0.0	36.3	0.0	31.2
Incr Delay (d2), s/veh	6.5	0.0	0.0	0.0	0.0	7.5	0.0	0.0	0.0	7.9	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.8	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	2.3	0.0	0.0	0.0	22.0	0.0	0.0	0.0	44.2	0.0	31.8
LnGrp LOS	D	A	A	A	A	C	A	A	A	D	A	C
Approach Vol, veh/h		229			941			0			84	
Approach Delay, s/veh		33.5			22.0			0.0			37.6	
Approach LOS		C			C						D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	62.4	7.3	6.8	14.2	48.2	0.0	14.1
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	9.0	* 61	9.5	21.2	17.0	* 53	15.4	15.3
Max Q Clear Time (g_c+I1), s	10.1	2.2	3.6	0.0	10.1	36.4	0.0	3.8
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.3	7.1	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	80	60	330	680	550	300
Future Volume (veh/h)	80	60	330	680	550	300
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	8	359	739	598	310
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	253	225	0	1082	671	348
Arrive On Green	0.14	0.14	0.00	0.58	0.58	0.58
Sat Flow, veh/h	1781	1585	0	1870	1160	602
Grp Volume(v), veh/h	87	8	0	739	0	908
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1870	0	1762
Q Serve(g_s), s	1.4	0.1	0.0	8.9	0.0	14.4
Cycle Q Clear(g_c), s	1.4	0.1	0.0	8.9	0.0	14.4
Prop In Lane	1.00	1.00	0.00			0.34
Lane Grp Cap(c), veh/h	253	225	0	1082	0	1019
V/C Ratio(X)	0.34	0.04	0.00	0.68	0.00	0.89
Avail Cap(c_a), veh/h	995	886	0	1916	0	1121
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.5	11.9	0.0	4.7	0.0	5.9
Incr Delay (d2), s/veh	0.8	0.1	0.0	0.8	0.0	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.2	0.0	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.3	12.0	0.0	5.5	0.0	14.5
LnGrp LOS	B	B	A	A	A	B
Approach Vol, veh/h	95			739	908	
Approach Delay, s/veh	13.2			5.5	14.5	
Approach LOS	B			A	B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.0	23.1		9.1		23.1
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	8.0	20.5		18.0		33.0
Max Q Clear Time (g_c+I1), s	10.0	16.4		3.4		10.9
Green Ext Time (p_c), s	0.0	2.2		0.2		4.6

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

Intersection	
Intersection Delay, s/veh	115.1
Intersection LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	410	100	40	650	330	50
Future Vol, veh/h	410	100	40	650	330	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	446	109	43	707	359	54
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	62.3	198	35.6
HCM LOS	F	F	E

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	87%	0%	6%
Vol Thru, %	0%	80%	94%
Vol Right, %	13%	20%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	380	510	690
LT Vol	330	0	40
Through Vol	0	410	650
RT Vol	50	100	0
Lane Flow Rate	413	554	750
Geometry Grp	1	1	1
Degree of Util (X)	0.807	0.985	1.37
Departure Headway (Hd)	7.675	6.983	6.574
Convergence, Y/N	Yes	Yes	Yes
Cap	475	521	555
Service Time	5.675	4.983	4.663
HCM Lane V/C Ratio	0.869	1.063	1.351
HCM Control Delay	35.6	62.3	198
HCM Lane LOS	E	F	F
HCM 95th-tile Q	7.5	13.3	33.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	695	11	608	0	1111	0	0	1116	181
Future Volume (veh/h)	0	0	0	695	11	608	0	1111	0	0	1116	181
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	0	0	1870	1870
Adj Flow Rate, veh/h				781	0	610	0	1234	0	0	1240	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	0	2	0	0	2	2
Cap, veh/h				1635	0	970	0	1633	0	0	2346	
Arrive On Green				0.31	0.00	0.31	0.00	0.46	0.00	0.00	0.46	0.00
Sat Flow, veh/h				5344	0	3170	0	3741	0	0	5274	1585
Grp Volume(v), veh/h				781	0	610	0	1234	0	0	1240	0
Grp Sat Flow(s),veh/h/ln				1781	0	1585	0	1777	0	0	1702	1585
Q Serve(g_s), s				5.8	0.0	8.1	0.0	14.1	0.0	0.0	8.5	0.0
Cycle Q Clear(g_c), s				5.8	0.0	8.1	0.0	14.1	0.0	0.0	8.5	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1635	0	970	0	1633	0	0	2346	
V/C Ratio(X)				0.48	0.00	0.63	0.00	0.76	0.00	0.00	0.53	
Avail Cap(c_a), veh/h				4600	0	2729	0	4878	0	0	7009	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				13.8	0.0	14.6	0.0	11.0	0.0	0.0	9.5	0.0
Incr Delay (d2), s/veh				0.1	0.0	0.4	0.0	0.3	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.0	0.0	2.5	0.0	3.6	0.0	0.0	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				14.0	0.0	15.0	0.0	11.2	0.0	0.0	9.5	0.0
LnGrp LOS				B	A	B	A	B	A	A	A	
Approach Vol, veh/h					1391			1234			1240	
Approach Delay, s/veh					14.4			11.2			9.5	
Approach LOS					B			B			A	

Timer - Assigned Phs	2		6		8							
Phs Duration (G+Y+Rc), s	28.2		28.2		20.8							
Change Period (Y+Rc), s	5.7		5.7		5.8							
Max Green Setting (Gmax), s	67.3		67.3		42.2							
Max Q Clear Time (g_c+I1), s	16.1		10.5		10.1							
Green Ext Time (p_c), s	6.4		6.4		4.3							

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	11	204	0	0	0	0	1006	995	0	1416	0
Future Volume (veh/h)	226	11	204	0	0	0	0	1006	995	0	1416	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	319	0	133				0	1130	620	0	1591	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	756	0	336				0	1772	1391	0	2546	0
Arrive On Green	0.21	0.00	0.21				0.00	0.50	0.50	0.00	0.50	0.00
Sat Flow, veh/h	3563	0	1585				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	319	0	133				0	1130	620	0	1591	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	2.9	0.0	2.7				0.0	8.7	5.4	0.0	8.5	0.0
Cycle Q Clear(g_c), s	2.9	0.0	2.7				0.0	8.7	5.4	0.0	8.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	756	0	336				0	1772	1391	0	2546	0
V/C Ratio(X)	0.42	0.00	0.40				0.00	0.64	0.45	0.00	0.62	0.00
Avail Cap(c_a), veh/h	3244	0	1443				0	3331	2615	0	4785	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	12.7	0.0	12.6				0.0	6.9	6.0	0.0	6.8	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.3				0.0	0.1	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.8				0.0	1.4	0.7	0.0	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.9	0.0	12.9				0.0	7.0	6.1	0.0	6.9	0.0
LnGrp LOS	B	A	B				A	A	A	A	A	A
Approach Vol, veh/h		452						1750			1591	
Approach Delay, s/veh		12.9						6.7			6.9	
Approach LOS		B						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	24.3	13.0	24.3
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	10.7	4.9	10.5
Green Ext Time (p_c), s	7.1	0.1	8.1

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	197	93	319	51	217	144	872	121	251	609	12
Future Volume (veh/h)	31	197	93	319	51	217	144	872	121	251	609	12
Initial Q (Qb), veh	0	0	0	0	0	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	36	226	20	367	59	72	166	1002	49	289	700	5
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	53	272	230	388	624	930	197	1072	478	311	1300	580
Arrive On Green	0.03	0.15	0.15	0.22	0.33	0.33	0.11	0.30	0.30	0.17	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	1870	2787	1781	3554	1583	1781	3554	1585
Grp Volume(v), veh/h	36	226	20	367	59	72	166	1002	49	289	700	5
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1394	1781	1777	1583	1781	1777	1585
Q Serve(g_s), s	2.3	13.5	1.3	23.3	2.5	2.0	10.5	31.4	2.6	18.3	17.8	0.2
Cycle Q Clear(g_c), s	2.3	13.5	1.3	23.3	2.5	2.0	10.5	31.4	2.6	18.3	17.8	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	272	230	388	624	930	197	1072	478	311	1300	580
V/C Ratio(X)	0.68	0.83	0.09	0.94	0.09	0.08	0.84	0.93	0.10	0.93	0.54	0.01
Avail Cap(c_a), veh/h	93	440	373	388	750	1118	311	1072	478	311	1300	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	47.6	42.4	44.1	26.3	26.1	50.0	38.9	28.8	46.6	28.7	23.1
Incr Delay (d2), s/veh	14.2	7.1	0.2	31.8	0.1	0.0	11.5	15.6	0.4	33.3	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.8	0.5	13.3	1.1	0.7	5.2	15.4	1.0	10.7	7.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.2	54.7	42.6	76.0	26.4	26.2	61.6	54.5	29.3	80.0	30.3	23.2
LnGrp LOS	E	D	D	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h		282			498			1217			994	
Approach Delay, s/veh		55.7			62.9			54.5			44.7	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	47.7	29.0	21.3	24.0	40.4	7.4	42.8
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	20.0	34.6	25.0	27.0	20.0	34.6	6.0	46.0
Max Q Clear Time (g_c+I1), s	12.5	19.8	25.3	15.5	20.3	33.4	4.3	4.5
Green Ext Time (p_c), s	0.2	3.8	0.0	1.0	0.0	0.7	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	52.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	54	65	278	66	145	76	772	413	138	764	38
Future Volume (veh/h)	54	54	65	278	66	145	76	772	413	138	764	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		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	58	58	0	299	71	51	82	830	216	148	822	14
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	354		552	330	443	167	1125	500	360	1161	515
Arrive On Green	0.08	0.10	0.00	0.16	0.18	0.18	0.09	0.32	0.32	0.10	0.33	0.33
Sat Flow, veh/h	1781	3647	0	3456	1870	1572	1781	3554	1580	3456	3554	1575
Grp Volume(v), veh/h	58	58	0	299	71	51	82	830	216	148	822	14
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1572	1781	1777	1580	1728	1777	1575
Q Serve(g_s), s	2.9	1.4	0.0	7.5	3.0	2.3	4.1	19.5	10.2	3.8	19.0	0.6
Cycle Q Clear(g_c), s	2.9	1.4	0.0	7.5	3.0	2.3	4.1	19.5	10.2	3.8	19.0	0.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	354		552	330	443	167	1125	500	360	1161	515
V/C Ratio(X)	0.39	0.16		0.54	0.22	0.12	0.49	0.74	0.43	0.41	0.71	0.03
Avail Cap(c_a), veh/h	190	454		1712	967	978	302	2257	1004	438	2106	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	38.7	0.0	36.3	33.1	25.1	40.4	28.6	25.4	39.3	27.7	21.5
Incr Delay (d2), s/veh	2.4	0.3	0.0	1.8	0.5	0.2	3.1	1.0	0.6	1.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.6	0.0	3.2	1.4	0.8	1.9	7.9	3.7	1.6	7.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	39.0	0.0	38.0	33.5	25.2	43.5	29.6	26.0	40.4	28.8	21.5
LnGrp LOS	D	D		D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		116			421			1128			984	
Approach Delay, s/veh		41.1			35.7			29.9			30.4	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	37.2	22.5	16.9	16.3	38.2	15.3	24.1
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	11.3	59.6	46.5	12.0	15.9	55.6	10.0	48.5
Max Q Clear Time (g_c+I1), s	5.8	21.5	9.5	3.4	6.1	21.0	4.9	5.0
Green Ext Time (p_c), s	0.3	7.0	2.5	0.2	0.2	8.8	0.1	0.8

Intersection Summary	
HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	425	226	53	48	108	180	84	220	21	360	160	110
Future Volume (veh/h)	425	226	53	48	108	180	84	220	21	360	160	110
Initial Q (Qb), veh	0	0	0	0	0	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	545	290	19	62	138	27	108	282	5	462	205	41
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	583	1274	568	80	270	121	138	410	183	499	1129	504
Arrive On Green	0.33	0.36	0.36	0.05	0.08	0.08	0.08	0.12	0.12	0.28	0.32	0.32
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	545	290	19	62	138	27	108	282	5	462	205	41
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	27.3	5.2	0.7	3.2	3.4	1.5	5.5	7.0	0.3	23.2	3.8	1.7
Cycle Q Clear(g_c), s	27.3	5.2	0.7	3.2	3.4	1.5	5.5	7.0	0.3	23.2	3.8	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	583	1274	568	80	270	121	138	410	183	499	1129	504
V/C Ratio(X)	0.93	0.23	0.03	0.77	0.51	0.22	0.78	0.69	0.03	0.93	0.18	0.08
Avail Cap(c_a), veh/h	658	2375	1059	213	1487	663	329	1159	517	561	1622	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	20.6	19.2	43.5	40.9	40.0	41.7	39.1	36.1	32.2	22.7	22.0
Incr Delay (d2), s/veh	19.4	0.1	0.0	14.5	1.5	0.9	9.2	2.1	0.1	20.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	2.0	0.3	1.7	1.5	0.6	2.7	3.1	0.1	12.1	1.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	20.7	19.2	57.9	42.4	40.9	50.8	41.2	36.2	52.4	22.8	22.1
LnGrp LOS	D	C	B	E	D	D	D	D	D	D	C	C
Approach Vol, veh/h		854			227			395			708	
Approach Delay, s/veh		39.0			46.4			43.8			42.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	37.7	29.8	16.4	34.1	11.7	11.1	35.0
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	11.0	* 62	29.0	30.0	34.0	* 39	17.0	42.0
Max Q Clear Time (g_c+I1), s	5.2	7.2	25.2	9.0	29.3	5.4	7.5	5.8
Green Ext Time (p_c), s	0.0	1.9	0.6	1.6	0.8	0.9	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	41.6
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)	245	457	78	21	139	85	55	76	76	356	31	324
Future Volume (veh/h)	245	457	78	21	139	85	55	76	76	356	31	324
Initial Q (Qb), veh	0	0	0	0	0	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	295	551	52	25	167	47	66	92	63	429	37	76
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	278	822	696	78	612	519	127	115	78	392	485	411
Arrive On Green	0.16	0.44	0.44	0.04	0.33	0.33	0.07	0.11	0.11	0.22	0.26	0.26
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1034	708	1781	1870	1585
Grp Volume(v), veh/h	295	551	52	25	167	47	66	0	155	429	37	76
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1743	1781	1870	1585
Q Serve(g_s), s	17.0	25.5	2.1	1.5	7.2	2.2	3.9	0.0	9.5	24.0	1.6	4.1
Cycle Q Clear(g_c), s	17.0	25.5	2.1	1.5	7.2	2.2	3.9	0.0	9.5	24.0	1.6	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	278	822	696	78	612	519	127	0	193	392	485	411
V/C Ratio(X)	1.06	0.67	0.07	0.32	0.27	0.09	0.52	0.00	0.80	1.09	0.08	0.18
Avail Cap(c_a), veh/h	278	822	696	147	612	519	163	0	367	392	634	538
HCM Platoon Ratio	1.00	1.00	1.00	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	46.0	24.3	17.7	50.6	27.1	25.4	48.8	0.0	47.3	42.5	30.5	31.4
Incr Delay (d2), s/veh	71.5	4.3	0.2	2.3	1.1	0.3	3.3	0.0	10.5	73.4	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	11.7	0.8	0.7	3.2	0.9	1.8	0.0	4.5	18.1	0.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.6	28.6	17.9	52.9	28.2	25.8	52.1	0.0	57.8	115.9	30.6	31.7
LnGrp LOS	F	C	B	D	C	C	D	A	E	F	C	C
Approach Vol, veh/h		898			239			221			542	
Approach Delay, s/veh		57.2			30.3			56.1			98.3	
Approach LOS		E			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	54.4	28.0	17.9	21.0	42.2	11.8	34.1
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	9.0	* 44	24.0	23.0	17.0	35.7	10.0	37.0
Max Q Clear Time (g_c+I1), s	3.5	27.5	26.0	11.5	19.0	9.2	5.9	6.1
Green Ext Time (p_c), s	0.0	4.6	0.0	0.7	0.0	1.4	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	65.4
HCM 6th LOS	E

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)	370	1389	288	0	1148	680	0	0	0	828	92	787
Future Volume (veh/h)	370	1389	288	0	1148	680	0	0	0	828	92	787
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	374	1403	217	0	1160	0				902	0	470
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	498	1915	848	0	1733					1201	0	530
Arrive On Green	0.14	0.54	0.54	0.00	0.34	0.00				0.34	0.00	0.34
Sat Flow, veh/h	3456	3554	1573	0	5274	1585				3563	0	1572
Grp Volume(v), veh/h	374	1403	217	0	1160	0				902	0	470
Grp Sat Flow(s),veh/h/ln	1728	1777	1573	0	1702	1585				1781	0	1572
Q Serve(g_s), s	8.8	25.5	6.3	0.0	16.5	0.0				19.1	0.0	24.0
Cycle Q Clear(g_c), s	8.8	25.5	6.3	0.0	16.5	0.0				19.1	0.0	24.0
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	498	1915	848	0	1733					1201	0	530
V/C Ratio(X)	0.75	0.73	0.26	0.00	0.67					0.75	0.00	0.89
Avail Cap(c_a), veh/h	1223	1915	848	0	2409					1260	0	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	34.8	14.9	10.5	0.0	23.9	0.0				24.9	0.0	26.6
Incr Delay (d2), s/veh	2.6	1.6	0.2	0.0	0.6	0.0				2.6	0.0	15.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	9.1	1.9	0.0	6.2	0.0				8.0	0.0	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	16.5	10.7	0.0	24.5	0.0				27.5	0.0	42.2
LnGrp LOS	D	B	B	A	C					C	A	D
Approach Vol, veh/h		1994			1160						1372	
Approach Delay, s/veh		19.8			24.5						32.5	
Approach LOS		B			C						C	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	51.1		33.7	16.9	34.2
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	27.5		26.0	10.8	18.5
Green Ext Time (p_c), s	9.1		2.5	1.4	10.0

Intersection Summary	
HCM 6th Ctrl Delay	24.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	486	465	30	421	557	51
Future Volume (veh/h)	486	465	30	421	557	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	491	441	30	425	563	49
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	492	442	41	1101	548	48
Arrive On Green	0.54	0.54	0.02	0.59	0.34	0.34
Sat Flow, veh/h	908	816	1781	1870	1620	141
Grp Volume(v), veh/h	0	932	30	425	613	0
Grp Sat Flow(s),veh/h/ln	0	1724	1781	1870	1764	0
Q Serve(g_s), s	0.0	70.1	2.2	15.7	44.0	0.0
Cycle Q Clear(g_c), s	0.0	70.1	2.2	15.7	44.0	0.0
Prop In Lane		0.47	1.00		0.92	0.08
Lane Grp Cap(c), veh/h	0	935	41	1101	597	0
V/C Ratio(X)	0.00	1.00	0.73	0.39	1.03	0.00
Avail Cap(c_a), veh/h	0	935	41	1101	597	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	29.6	63.1	14.2	43.0	0.0
Incr Delay (d2), s/veh	0.0	28.7	43.7	0.3	43.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	33.7	1.5	6.3	25.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	58.3	106.8	14.5	86.8	0.0
LnGrp LOS	A	E	F	B	F	A
Approach Vol, veh/h	932			455	613	
Approach Delay, s/veh	58.3			20.6	86.8	
Approach LOS	E			C	F	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	81.0		49.0	6.0	75.0
Change Period (Y+Rc), s	4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s	76.5		44.0	3.0	70.5
Max Q Clear Time (g_c+I1), s	17.7		46.0	4.2	72.1
Green Ext Time (p_c), s	3.2		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.5
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	990	230	360	660	100	320	530	690	70	380	40
Future Volume (veh/h)	90	990	230	360	660	100	320	530	690	70	380	40
Initial Q (Qb), veh	0	0	0	0	0	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	110	1207	0	439	805	0	390	646	0	85	463	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1785		509	2087		466	659		259	446	
Arrive On Green	0.08	0.35	0.00	0.15	0.41	0.00	0.13	0.19	0.00	0.07	0.13	0.00
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	110	1207	0	439	805	0	390	646	0	85	463	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	5.8	19.2	0.0	11.9	10.6	0.0	10.5	17.3	0.0	2.2	12.0	0.0
Cycle Q Clear(g_c), s	5.8	19.2	0.0	11.9	10.6	0.0	10.5	17.3	0.0	2.2	12.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	1785		509	2087		466	659		259	446	
V/C Ratio(X)	0.80	0.68		0.86	0.39		0.84	0.98		0.33	1.04	
Avail Cap(c_a), veh/h	224	2672		542	2672		542	659		434	446	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.3	26.5	0.0	39.8	19.8	0.0	40.3	38.8	0.0	41.9	41.8	0.0
Incr Delay (d2), s/veh	3.9	0.6	0.0	12.9	0.2	0.0	9.8	30.1	0.0	0.7	52.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	7.1	0.0	5.7	3.9	0.0	4.8	9.8	0.0	0.9	8.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.2	27.1	0.0	52.7	20.0	0.0	50.1	68.9	0.0	42.7	94.5	0.0
LnGrp LOS	D	C		D	B		D	E		D	F	
Approach Vol, veh/h		1317			1244			1036			548	
Approach Delay, s/veh		28.8			31.5			61.8			86.4	
Approach LOS		C			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	45.2	18.4	18.1	19.6	39.5	12.7	23.8
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	12.0	50.0	15.0	12.0	15.0	50.0	12.0	12.0
Max Q Clear Time (g_c+I1), s	7.8	12.6	12.5	14.0	13.9	21.2	4.2	19.3
Green Ext Time (p_c), s	0.0	8.5	0.4	0.0	0.2	12.2	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	20	337	140	40	270	220	790	50	110	470	390
Future Volume (veh/h)	490	20	337	140	40	270	220	790	50	110	470	390
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	533	22	267	187	43	243	239	1053	16	147	627	182
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	697	689	584	196	47	268	289	1298	383	305	1076	858
Arrive On Green	0.20	0.36	0.36	0.06	0.20	0.20	0.06	0.25	0.25	0.09	0.30	0.30
Sat Flow, veh/h	3510	1900	1610	3456	232	1313	5103	5106	1507	3456	3554	2834
Grp Volume(v), veh/h	533	22	267	187	0	286	239	1053	16	147	627	182
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1545	1701	1702	1507	1728	1777	1417
Q Serve(g_s), s	12.7	0.7	11.2	4.8	0.0	15.9	4.1	17.1	0.7	3.6	13.2	4.2
Cycle Q Clear(g_c), s	12.7	0.7	11.2	4.8	0.0	15.9	4.1	17.1	0.7	3.6	13.2	4.2
Prop In Lane	1.00		1.00	1.00		0.85	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	697	689	584	196	0	315	289	1298	383	305	1076	858
V/C Ratio(X)	0.76	0.03	0.46	0.95	0.00	0.91	0.83	0.81	0.04	0.48	0.58	0.21
Avail Cap(c_a), veh/h	1274	689	584	196	0	315	289	1448	427	314	1076	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	18.1	21.5	41.5	0.0	34.3	41.2	30.9	24.8	38.3	26.0	22.9
Incr Delay (d2), s/veh	2.5	0.0	0.6	51.1	0.0	28.6	17.5	2.9	0.0	0.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.3	4.2	3.4	0.0	8.4	2.1	6.7	0.3	1.4	5.1	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	18.1	22.0	92.6	0.0	62.9	58.7	33.8	24.8	38.7	26.6	22.9
LnGrp LOS	D	B	C	F	A	E	E	C	C	D	C	C
Approach Vol, veh/h		822			473			1308			956	
Approach Delay, s/veh		30.9			74.6			38.2			27.7	
Approach LOS		C			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	32.7	9.5	36.5	13.8	28.4	23.5	22.5
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	5.0	10.0	5.0	18.0	8.0	25.0	32.0	18.0
Max Q Clear Time (g_c+I1), s	6.1	15.2	6.8	13.2	5.6	19.1	14.7	17.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	2.4	2.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	38.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	464	353	51	768	868	176
Future Volume (veh/h)	464	353	51	768	868	176
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	504	255	55	835	943	187
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	489	435	76	1248	898	178
Arrive On Green	0.27	0.27	0.04	0.66	0.58	0.58
Sat Flow, veh/h	1810	1610	1810	1900	1540	305
Grp Volume(v), veh/h	504	255	55	835	0	1130
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1845
Q Serve(g_s), s	40.3	20.5	4.5	40.1	0.0	87.0
Cycle Q Clear(g_c), s	40.3	20.5	4.5	40.1	0.0	87.0
Prop In Lane	1.00	1.00	1.00			0.17
Lane Grp Cap(c), veh/h	489	435	76	1248	0	1076
V/C Ratio(X)	1.03	0.59	0.72	0.67	0.00	1.05
Avail Cap(c_a), veh/h	489	435	86	1258	0	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.4	47.2	70.6	15.7	0.0	31.1
Incr Delay (d2), s/veh	48.9	2.0	20.7	1.5	0.0	41.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.0	18.5	2.5	16.1	0.0	47.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	103.3	49.2	91.2	17.2	0.0	72.7
LnGrp LOS	F	D	F	B	A	F
Approach Vol, veh/h	759			890	1130	
Approach Delay, s/veh	85.2			21.8	72.7	
Approach LOS	F			C	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		104.2		45.0	11.0	93.2
Change Period (Y+Rc), s		6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s		98.8		* 40	* 7.1	87.0
Max Q Clear Time (g_c+I1), s		42.1		42.3	6.5	89.0
Green Ext Time (p_c), s		10.5		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		59.8
HCM 6th LOS		E

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)	0	0	0	40	0	292	0	730	42	342	684	0
Future Volume (veh/h)	0	0	0	40	0	292	0	730	42	342	684	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	48	0	202	0	869	49	407	814	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	127	0	503	518	928	52	440	891	0
Arrive On Green	0.00	0.00	0.00	0.07	0.00	0.07	0.00	0.53	0.53	0.25	0.48	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1754	99	1781	1870	0
Grp Volume(v), veh/h	0	0	0	48	0	202	0	0	918	407	814	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1853	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	7.8	0.0	0.0	51.5	24.8	44.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.8	0.0	7.8	0.0	0.0	51.5	24.8	44.9	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.05	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	127	0	503	518	0	980	440	891	0
V/C Ratio(X)	0.00	0.00	0.00	0.38	0.00	0.40	0.00	0.00	0.94	0.92	0.91	0.00
Avail Cap(c_a), veh/h	0	133	0	127	0	503	518	0	1129	533	1560	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	49.4	0.0	29.7	0.0	0.0	24.5	40.9	27.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.9	0.0	0.5	0.0	0.0	13.2	19.8	4.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.3	0.0	4.2	0.0	0.0	23.2	12.7	19.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	51.3	0.0	30.2	0.0	0.0	37.6	60.7	31.7	0.0
LnGrp LOS	A	A	A	D	A	C	A	A	D	E	C	A
Approach Vol, veh/h		0			250			918			1221	
Approach Delay, s/veh		0.0			34.3			37.6			41.4	
Approach LOS					C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.2	65.0		0.0	38.0	59.2		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 33	67.8		7.8	8.3	* 93		7.8				
Max Q Clear Time (g_c+I1), s	26.8	53.5		0.0	0.0	46.9		9.8				
Green Ext Time (p_c), s	0.7	5.4		0.0	0.0	6.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		39.2
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)	378	919	521	313	636	383	243	799	142	415	961	142
Future Volume (veh/h)	378	919	521	313	636	383	243	799	142	415	961	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	390	947	0	323	656	166	251	824	83	428	991	88
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	474	1312		405	1211	369	329	1373	419	544	1177	517
Arrive On Green	0.14	0.26	0.00	0.12	0.24	0.24	0.10	0.27	0.27	0.16	0.33	0.33
Sat Flow, veh/h	3456	5106	1585	3456	5106	1555	3456	5106	1557	3456	3554	1561
Grp Volume(v), veh/h	390	947	0	323	656	166	251	824	83	428	991	88
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1555	1728	1702	1557	1728	1777	1561
Q Serve(g_s), s	12.1	18.7	0.0	10.0	12.4	10.1	7.8	15.5	4.5	13.2	28.6	4.4
Cycle Q Clear(g_c), s	12.1	18.7	0.0	10.0	12.4	10.1	7.8	15.5	4.5	13.2	28.6	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	474	1312		405	1211	369	329	1373	419	544	1177	517
V/C Ratio(X)	0.82	0.72		0.80	0.54	0.45	0.76	0.60	0.20	0.79	0.84	0.17
Avail Cap(c_a), veh/h	782	2081		782	2081	634	782	2081	634	782	1448	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	37.4	0.0	47.5	36.9	36.0	48.7	35.2	31.2	44.7	34.2	26.2
Incr Delay (d2), s/veh	3.7	0.8	0.0	3.6	0.4	0.9	3.7	0.4	0.2	5.9	3.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	7.5	0.0	4.5	5.1	3.8	3.4	6.2	1.7	5.9	12.4	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	38.2	0.0	51.1	37.2	36.8	52.4	35.6	31.4	50.6	38.1	26.3
LnGrp LOS	D	D		D	D	D	D	D	C	D	D	C
Approach Vol, veh/h		1337			1145			1158			1507	
Approach Delay, s/veh		41.6			41.1			38.9			41.0	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	34.4	22.4	35.7	20.1	32.2	15.5	42.6
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	12.0	20.7	15.2	17.5	14.1	14.4	9.8	30.6
Green Ext Time (p_c), s	0.9	6.5	2.2	6.0	1.0	5.5	0.7	6.0

Intersection Summary	
HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	398	734	357	581	765	469
Future Volume (veh/h)	398	734	357	581	765	469
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.61	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	415	249	372	197	797	489
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	460	410	394	203	595	1131
Arrive On Green	0.26	0.26	0.21	0.21	0.33	0.60
Sat Flow, veh/h	1781	1585	1870	964	1781	1870
Grp Volume(v), veh/h	415	249	372	197	797	489
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	964	1781	1870
Q Serve(g_s), s	17.7	10.9	15.4	16.0	26.3	11.0
Cycle Q Clear(g_c), s	17.7	10.9	15.4	16.0	26.3	11.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	460	410	394	203	595	1131
V/C Ratio(X)	0.90	0.61	0.94	0.97	1.34	0.43
Avail Cap(c_a), veh/h	489	435	394	203	595	1131
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	25.7	30.6	30.8	26.2	8.3
Incr Delay (d2), s/veh	19.4	2.5	31.3	54.3	164.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	4.1	9.8	6.4	36.9	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.6	28.2	61.9	85.1	190.2	8.7
LnGrp LOS	D	C	E	F	F	A
Approach Vol, veh/h	664		569			1286
Approach Delay, s/veh	40.3		69.9			121.2
Approach LOS	D		E			F

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	31.0	22.0			53.0	25.7
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 26	16.6			47.6	21.6
Max Q Clear Time (g_c+I1), s	28.3	18.0			13.0	19.7
Green Ext Time (p_c), s	0.0	0.0			3.7	0.6

Intersection Summary	
HCM 6th Ctrl Delay	88.3
HCM 6th LOS	F

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)	30	676	0	0	153	61	0	0	0	313	0	38
Future Volume (veh/h)	30	676	0	0	153	61	0	0	0	313	0	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	33	735	0	0	166	52	0	0	0	340	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	74	1685	0	7	376	118	7	7	0	640	240	0
Arrive On Green	0.04	0.47	0.00	0.00	0.27	0.27	0.00	0.00	0.00	0.18	0.00	0.00
Sat Flow, veh/h	1810	3705	0	1810	1387	435	1810	1900	0	3619	1900	0
Grp Volume(v), veh/h	33	735	0	0	0	218	0	0	0	340	0	0
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1810	0	1822	1810	1900	0	1810	1900	0
Q Serve(g_s), s	0.5	3.5	0.0	0.0	0.0	2.6	0.0	0.0	0.0	2.2	0.0	0.0
Cycle Q Clear(g_c), s	0.5	3.5	0.0	0.0	0.0	2.6	0.0	0.0	0.0	2.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.24	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	74	1685	0	7	0	494	7	7	0	640	240	0
V/C Ratio(X)	0.45	0.44	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.53	0.00	0.00
Avail Cap(c_a), veh/h	1192	8572	0	631	0	3761	1079	1560	0	1332	1126	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)	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.1	4.6	0.0	0.0	0.0	7.8	0.0	0.0	0.0	9.7	0.0	0.0
Incr Delay (d2), s/veh	4.2	0.2	0.0	0.0	0.0	0.6	0.0	0.0	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.3	4.8	0.0	0.0	0.0	8.4	0.0	0.0	0.0	10.3	0.0	0.0
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	A	A
Approach Vol, veh/h		768			218			0			340	
Approach Delay, s/veh		5.3			8.4			0.0			10.3	
Approach LOS		A			A						B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	16.8	9.1	0.0	5.1	11.7	0.0	9.1
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	9.0	* 61	9.5	21.2	17.0	* 53	15.4	15.3
Max Q Clear Time (g_c+I1), s	10.0	5.5	4.2	0.0	2.5	4.6	0.0	0.0
Green Ext Time (p_c), s	0.0	6.2	0.6	0.0	0.0	1.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	350	180	320	630	790	90
Future Volume (veh/h)	350	180	320	630	790	90
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	380	54	348	685	859	94
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	479	426	0	951	842	92
Arrive On Green	0.27	0.27	0.00	0.51	0.51	0.51
Sat Flow, veh/h	1781	1585	0	1870	1656	181
Grp Volume(v), veh/h	380	54	0	685	0	953
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1870	0	1838
Q Serve(g_s), s	8.0	1.0	0.0	11.5	0.0	20.5
Cycle Q Clear(g_c), s	8.0	1.0	0.0	11.5	0.0	20.5
Prop In Lane	1.00	1.00	0.00			0.10
Lane Grp Cap(c), veh/h	479	426	0	951	0	934
V/C Ratio(X)	0.79	0.13	0.00	0.72	0.00	1.02
Avail Cap(c_a), veh/h	795	707	0	1530	0	934
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	11.2	0.0	7.7	0.0	9.9
Incr Delay (d2), s/veh	3.0	0.1	0.0	1.0	0.0	34.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.3	0.0	2.1	0.0	12.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.7	11.3	0.0	8.7	0.0	44.6
LnGrp LOS	B	B	A	A	A	F
Approach Vol, veh/h	434			685	953	
Approach Delay, s/veh	16.1			8.7	44.6	
Approach LOS	B			A	D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.0	25.0		15.3		25.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	5.5	20.5		18.0		33.0
Max Q Clear Time (g_c+I1), s	10.0	22.5		10.0		13.5
Green Ext Time (p_c), s	0.0	0.0		0.9		4.0

Intersection Summary	
HCM 6th Ctrl Delay	26.8
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	528.7
Intersection LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1036	372	192	636	261	125
Future Vol, veh/h	1036	372	192	636	261	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1126	404	209	691	284	136
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	785.3	319.3	41.6
HCM LOS	F	F	E

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	68%	0%	23%
Vol Thru, %	0%	74%	77%
Vol Right, %	32%	26%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	386	1408	828
LT Vol	261	0	192
Through Vol	0	1036	636
RT Vol	125	372	0
Lane Flow Rate	420	1530	900
Geometry Grp	1	1	1
Degree of Util (X)	0.809	2.697	1.637
Departure Headway (Hd)	9.283	7.259	8.721
Convergence, Y/N	Yes	Yes	Yes
Cap	394	520	423
Service Time	7.283	5.259	6.721
HCM Lane V/C Ratio	1.066	2.942	2.128
HCM Control Delay	41.6	785.3	319.3
HCM Lane LOS	E	F	F
HCM 95th-tile Q	7.2	109.8	39.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1272	319	572	0	838	0	0	1051	360
Future Volume (veh/h)	0	0	0	1272	319	572	0	838	0	0	1051	360
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	0	0	1870	1870
Adj Flow Rate, veh/h				1202	481	463	0	864	0	0	1084	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	0	2	0	0	2	2
Cap, veh/h				1655	869	1472	0	1155	0	0	1659	
Arrive On Green				0.46	0.46	0.46	0.00	0.32	0.00	0.00	0.32	0.00
Sat Flow, veh/h				3563	1870	3170	0	3741	0	0	5274	1585
Grp Volume(v), veh/h				1202	481	463	0	864	0	0	1084	0
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	0	1777	0	0	1702	1585
Q Serve(g_s), s				14.9	10.1	5.0	0.0	11.8	0.0	0.0	9.9	0.0
Cycle Q Clear(g_c), s				14.9	10.1	5.0	0.0	11.8	0.0	0.0	9.9	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1655	869	1472	0	1155	0	0	1659	
V/C Ratio(X)				0.73	0.55	0.31	0.00	0.75	0.00	0.00	0.65	
Avail Cap(c_a), veh/h				2754	1446	2450	0	4380	0	0	6294	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				11.8	10.5	9.2	0.0	16.4	0.0	0.0	15.8	0.0
Incr Delay (d2), s/veh				0.4	0.3	0.1	0.0	0.4	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.8	3.5	1.4	0.0	3.9	0.0	0.0	3.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				12.2	10.9	9.2	0.0	16.8	0.0	0.0	16.0	0.0
LnGrp LOS				B	B	A	A	B	A	A	B	
Approach Vol, veh/h					2146			864			1084	A
Approach Delay, s/veh					11.3			16.8			16.0	
Approach LOS					B			B			B	

Timer - Assigned Phs	2			6		8						
Phs Duration (G+Y+Rc), s	23.4			23.4		31.2						
Change Period (Y+Rc), s	5.7			5.7		5.8						
Max Green Setting (Gmax), s	67.3			67.3		42.2						
Max Q Clear Time (g_c+I1), s	13.8			11.9		16.9						
Green Ext Time (p_c), s	3.9			5.3		8.5						

Intersection Summary		
HCM 6th Ctrl Delay	13.7	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	0	379	0	0	0	0	1004	1025	0	1833	0
Future Volume (veh/h)	68	0	379	0	0	0	0	1004	1025	0	1833	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	47	0	358				0	1035	581	0	1890	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	339	0	604				0	1955	1534	0	2809	0
Arrive On Green	0.19	0.00	0.19				0.00	0.55	0.55	0.00	0.55	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	47	0	358				0	1035	581	0	1890	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	0.9	0.0	4.3				0.0	7.7	4.9	0.0	11.0	0.0
Cycle Q Clear(g_c), s	0.9	0.0	4.3				0.0	7.7	4.9	0.0	11.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	339	0	604				0	1955	1534	0	2809	0
V/C Ratio(X)	0.14	0.00	0.59				0.00	0.53	0.38	0.00	0.67	0.00
Avail Cap(c_a), veh/h	1455	0	2590				0	2989	2346	0	4294	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	14.0	0.0	15.4				0.0	5.9	5.3	0.0	6.7	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.3				0.0	0.1	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.3				0.0	1.2	0.6	0.0	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	0.0	15.7				0.0	6.0	5.4	0.0	6.8	0.0
LnGrp LOS	B	A	B				A	A	A	A	A	A
Approach Vol, veh/h		405						1616			1890	
Approach Delay, s/veh		15.5						5.8			6.8	
Approach LOS		B						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	28.6	13.0	28.6
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	9.7	6.3	13.0
Green Ext Time (p_c), s	6.4	0.1	9.9

Intersection Summary	
HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	15	29	133	40	714	30	783	106	742	1159	23
Future Volume (veh/h)	15	15	29	133	40	714	30	783	106	742	1159	23
Initial Q (Qb), veh	0	0	0	0	0	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	16	16	2	143	43	139	32	842	48	798	1246	14
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	165	140	179	318	473	56	1475	657	317	1996	890
Arrive On Green	0.02	0.09	0.09	0.10	0.17	0.17	0.03	0.42	0.42	0.18	0.56	0.56
Sat Flow, veh/h	1781	1870	1585	1781	1870	2780	1781	3554	1583	1781	3554	1585
Grp Volume(v), veh/h	16	16	2	143	43	139	32	842	48	798	1246	14
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1390	1781	1777	1583	1781	1777	1585
Q Serve(g_s), s	0.7	0.7	0.1	6.6	1.6	3.7	1.5	15.3	1.5	15.0	19.9	0.3
Cycle Q Clear(g_c), s	0.7	0.7	0.1	6.6	1.6	3.7	1.5	15.3	1.5	15.0	19.9	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	33	165	140	179	318	473	56	1475	657	317	1996	890
V/C Ratio(X)	0.48	0.10	0.01	0.80	0.14	0.29	0.57	0.57	0.07	2.52	0.62	0.02
Avail Cap(c_a), veh/h	317	776	658	317	776	1154	317	1475	657	317	1996	890
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	35.4	35.1	37.1	29.7	30.6	40.3	18.9	14.9	34.7	12.5	8.2
Incr Delay (d2), s/veh	10.6	0.3	0.0	7.9	0.2	0.3	9.0	1.6	0.2	692.3	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.0	3.1	0.7	1.2	0.8	5.9	0.5	67.0	6.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.6	35.6	35.1	45.0	29.9	30.9	49.3	20.5	15.1	727.0	13.9	8.2
LnGrp LOS	D	D	D	D	C	C	D	C	B	F	B	A
Approach Vol, veh/h		34			325			922			2058	
Approach Delay, s/veh		43.1			37.0			21.2			290.4	
Approach LOS		D			D			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	53.2	12.5	12.0	19.0	40.8	5.6	18.9
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	15.0	35.0	15.0	35.0	15.0	35.0	15.0	35.0
Max Q Clear Time (g_c+I1), s	3.5	21.9	8.6	2.7	17.0	17.3	2.7	5.7
Green Ext Time (p_c), s	0.0	6.7	0.2	0.0	0.0	5.2	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	188.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	70	94	854	86	166	92	736	952	268	1019	48
Future Volume (veh/h)	47	70	94	854	86	166	92	736	952	268	1019	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	72	0	880	89	98	95	759	502	276	1051	17
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	274		990	571	603	118	1251	557	279	1302	565
Arrive On Green	0.06	0.08	0.00	0.29	0.31	0.31	0.07	0.35	0.35	0.08	0.37	0.37
Sat Flow, veh/h	1781	3647	0	3456	1870	1557	1781	3554	1583	3456	3554	1543
Grp Volume(v), veh/h	48	72	0	880	89	98	95	759	502	276	1051	17
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1557	1781	1777	1583	1728	1777	1543
Q Serve(g_s), s	3.8	2.8	0.0	35.9	5.1	6.1	7.8	25.9	44.4	11.8	39.2	1.0
Cycle Q Clear(g_c), s	3.8	2.8	0.0	35.9	5.1	6.1	7.8	25.9	44.4	11.8	39.2	1.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	274		990	571	603	118	1251	557	279	1302	565
V/C Ratio(X)	0.46	0.26		0.89	0.16	0.16	0.80	0.61	0.90	0.99	0.81	0.03
Avail Cap(c_a), veh/h	121	289		1090	615	640	192	1436	640	279	1340	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.2	64.1	0.0	50.3	37.3	29.7	67.9	39.3	45.3	67.7	42.0	29.9
Incr Delay (d2), s/veh	4.5	0.7	0.0	9.6	0.2	0.2	16.1	0.6	14.6	50.9	3.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.3	0.0	16.6	2.4	2.3	4.0	11.2	19.3	7.1	17.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.7	64.8	0.0	60.0	37.5	29.8	84.0	39.9	59.9	118.7	45.9	30.0
LnGrp LOS	E	E		E	D	C	F	D	E	F	D	C
Approach Vol, veh/h		120	A		1067			1356			1344	
Approach Delay, s/veh		67.6			55.3			50.4			60.6	
Approach LOS		E			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	59.4	49.8	18.9	17.3	61.5	16.1	52.5
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	1.9	59.6	46.5	12.0	15.9	55.6	10.0	48.5
Max Q Clear Time (g_c+I1), s	3.8	46.4	37.9	4.8	9.8	41.2	5.8	8.1
Green Ext Time (p_c), s	0.0	5.6	4.3	0.2	0.1	7.7	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	55.8
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	261	86	27	167	13	219	57	26	38	36	192
Future Volume (veh/h)	25	261	86	27	167	13	219	57	26	38	36	192
Initial Q (Qb), veh	0	0	0	0	0	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	287	17	30	184	3	241	63	13	42	40	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	624	278	63	635	283	318	1020	454	83	552	246
Arrive On Green	0.03	0.18	0.18	0.04	0.18	0.18	0.18	0.29	0.29	0.05	0.16	0.16
Sat Flow, veh/h	1781	3554	1582	1781	3554	1581	1781	3554	1582	1781	3554	1582
Grp Volume(v), veh/h	27	287	17	30	184	3	241	63	13	42	40	45
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1781	1777	1581	1781	1777	1582	1781	1777	1582
Q Serve(g_s), s	0.6	2.9	0.4	0.7	1.8	0.1	5.2	0.5	0.2	0.9	0.4	1.0
Cycle Q Clear(g_c), s	0.6	2.9	0.4	0.7	1.8	0.1	5.2	0.5	0.2	0.9	0.4	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	58	624	278	63	635	283	318	1020	454	83	552	246
V/C Ratio(X)	0.47	0.46	0.06	0.48	0.29	0.01	0.76	0.06	0.03	0.51	0.07	0.18
Avail Cap(c_a), veh/h	877	3499	1558	877	3499	1557	877	3499	1558	877	3499	1558
HCM Platoon Ratio	1.00	1.00	1.00	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	19.3	15.0	13.9	19.2	14.4	13.7	15.9	10.5	10.4	18.9	14.7	14.9
Incr Delay (d2), s/veh	5.8	0.5	0.1	5.5	0.2	0.0	3.7	0.0	0.0	4.7	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	0.1	0.3	0.6	0.0	2.0	0.2	0.1	0.4	0.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	15.5	14.0	24.7	14.7	13.7	19.6	10.5	10.4	23.7	14.7	15.3
LnGrp LOS	C	B	B	C	B	B	B	B	B	C	B	B
Approach Vol, veh/h		331			217			317			127	
Approach Delay, s/veh		16.2			16.1			17.4			17.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	11.8	5.9	17.5	5.3	12.0	11.2	12.1
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.7	4.9	2.9	2.5	2.6	3.8	7.2	3.0
Green Ext Time (p_c), s	0.0	1.8	0.1	0.4	0.0	1.1	0.5	0.3

Intersection Summary	
HCM 6th Ctrl Delay	16.8
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)	318	716	45	115	679	420	46	46	421	126	48	285
Future Volume (veh/h)	318	716	45	115	679	420	46	46	421	126	48	285
Initial Q (Qb), veh	0	0	0	0	0	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	342	770	21	124	730	240	49	49	253	135	52	82
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	856	726	149	796	674	103	56	288	160	456	387
Arrive On Green	0.12	0.46	0.46	0.08	0.43	0.43	0.06	0.21	0.21	0.09	0.24	0.24
Sat Flow, veh/h	1781	1870	1585	1781	1870	1583	1781	263	1360	1781	1870	1585
Grp Volume(v), veh/h	342	770	21	124	730	240	49	0	302	135	52	82
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1583	1781	0	1623	1781	1870	1585
Q Serve(g_s), s	15.0	49.1	0.9	8.9	47.5	13.3	3.4	0.0	23.3	9.6	2.8	5.3
Cycle Q Clear(g_c), s	15.0	49.1	0.9	8.9	47.5	13.3	3.4	0.0	23.3	9.6	2.8	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.84	1.00		1.00
Lane Grp Cap(c), veh/h	207	856	726	149	796	674	103	0	343	160	456	387
V/C Ratio(X)	1.65	0.90	0.03	0.83	0.92	0.36	0.48	0.00	0.88	0.84	0.11	0.21
Avail Cap(c_a), veh/h	207	856	726	207	796	674	207	0	502	207	796	674
HCM Platoon Ratio	1.00	1.00	1.00	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	57.1	32.3	19.3	58.3	35.0	25.2	59.0	0.0	49.4	57.9	38.0	39.0
Incr Delay (d2), s/veh	315.2	14.3	0.1	17.9	17.2	1.5	3.4	0.0	13.7	21.0	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.7	24.5	0.4	4.6	24.0	5.1	1.6	0.0	10.5	5.2	1.3	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	372.3	46.6	19.3	76.2	52.2	26.6	62.4	0.0	63.1	78.9	38.2	39.4
LnGrp LOS	F	D	B	E	D	C	E	A	E	E	D	D
Approach Vol, veh/h		1133			1094			351			269	
Approach Delay, s/veh		144.4			49.3			63.0			59.0	
Approach LOS		F			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	65.7	15.6	33.1	19.0	61.5	11.5	37.3
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	10.8	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	10.9	51.1	11.6	25.3	17.0	49.5	5.4	7.3
Green Ext Time (p_c), s	0.1	2.3	0.1	2.0	0.0	3.2	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	89.8
HCM 6th LOS	F

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)	193	789	96	0	776	352	0	0	0	452	22	739
Future Volume (veh/h)	193	789	96	0	776	352	0	0	0	452	22	739
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	217	887	55	0	872	0				526	0	526
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	345	1642	717	0	1499					1368	0	601
Arrive On Green	0.10	0.46	0.46	0.00	0.29	0.00				0.38	0.00	0.38
Sat Flow, veh/h	3456	3554	1551	0	5274	1585				3563	0	1565
Grp Volume(v), veh/h	217	887	55	0	872	0				526	0	526
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	0	1702	1585				1781	0	1565
Q Serve(g_s), s	4.1	12.2	1.3	0.0	9.9	0.0				7.3	0.0	21.3
Cycle Q Clear(g_c), s	4.1	12.2	1.3	0.0	9.9	0.0				7.3	0.0	21.3
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	345	1642	717	0	1499					1368	0	601
V/C Ratio(X)	0.63	0.54	0.08	0.00	0.58					0.38	0.00	0.88
Avail Cap(c_a), veh/h	1520	2084	909	0	2994					1567	0	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	13.2	10.2	0.0	20.5	0.0				15.2	0.0	19.5
Incr Delay (d2), s/veh	2.1	0.4	0.1	0.0	0.5	0.0				0.2	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	0.0
%ile BackOfQ(50%),veh/ln	1.7	4.1	0.4	0.0	3.6	0.0				2.7	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	13.5	10.3	0.0	21.0	0.0				15.4	0.0	30.9
LnGrp LOS	C	B	B	A	C					B	A	C
Approach Vol, veh/h		1159			872	A					1052	
Approach Delay, s/veh		16.8			21.0						23.1	
Approach LOS		B			C						C	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	36.9		31.3	11.5	25.4
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	14.2		23.3	6.1	11.9
Green Ext Time (p_c), s	8.5		2.9	0.8	8.1

Intersection Summary	
HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	227	636	40	304	338	52
Future Volume (veh/h)	227	636	40	304	338	52
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	261	655	46	349	389	55
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	238	597	90	1107	442	63
Arrive On Green	0.50	0.50	0.05	0.59	0.29	0.29
Sat Flow, veh/h	472	1185	1781	1870	1533	217
Grp Volume(v), veh/h	0	916	46	349	445	0
Grp Sat Flow(s),veh/h/ln	0	1657	1781	1870	1754	0
Q Serve(g_s), s	0.0	40.0	2.0	7.4	19.2	0.0
Cycle Q Clear(g_c), s	0.0	40.0	2.0	7.4	19.2	0.0
Prop In Lane		0.72	1.00		0.87	0.12
Lane Grp Cap(c), veh/h	0	835	90	1107	506	0
V/C Ratio(X)	0.00	1.10	0.51	0.32	0.88	0.00
Avail Cap(c_a), veh/h	0	835	381	1107	884	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	19.7	36.7	8.1	26.9	0.0
Incr Delay (d2), s/veh	0.0	61.2	1.7	0.2	6.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	26.6	0.9	2.4	8.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	80.9	38.4	8.3	33.2	0.0
LnGrp LOS	A	F	D	A	C	A
Approach Vol, veh/h	916			395	445	
Approach Delay, s/veh	80.9			11.8	33.2	
Approach LOS	F			B	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		51.5		27.9	7.0	44.5
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		40.0		40.0	17.0	40.0
Max Q Clear Time (g_c+I1), s		9.4		21.2	4.0	42.0
Green Ext Time (p_c), s		2.4		1.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.3
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	278	134	707	687	81	180	360	526	30	784	50
Future Volume (veh/h)	31	278	134	707	687	81	180	360	526	30	784	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	39	348	0	884	859	0	225	450	0	38	980	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	889		752	1693		335	751		207	619	
Arrive On Green	0.05	0.17	0.00	0.22	0.33	0.00	0.10	0.21	0.00	0.06	0.17	0.00
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	39	348	0	884	859	0	225	450	0	38	980	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	1.5	4.2	0.0	15.0	9.3	0.0	4.3	7.9	0.0	0.7	12.0	0.0
Cycle Q Clear(g_c), s	1.5	4.2	0.0	15.0	9.3	0.0	4.3	7.9	0.0	0.7	12.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	889		752	1693		335	751		207	619	
V/C Ratio(X)	0.48	0.39		1.17	0.51		0.67	0.60		0.18	1.58	
Avail Cap(c_a), veh/h	310	3706		752	3706		752	751		602	619	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.1	25.2	0.0	26.9	18.5	0.0	30.0	24.5	0.0	30.8	28.4	0.0
Incr Delay (d2), s/veh	1.6	0.4	0.0	92.3	0.3	0.0	2.3	1.3	0.0	0.4	270.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.5	0.0	15.1	3.2	0.0	1.7	3.1	0.0	0.3	27.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	25.6	0.0	119.3	18.8	0.0	32.4	25.9	0.0	31.2	298.5	0.0
LnGrp LOS	C	C		F	B		C	C		C	F	
Approach Vol, veh/h		387	A		1743	A		675	A		1018	A
Approach Delay, s/veh		26.4			69.8			28.0			288.5	
Approach LOS		C			E			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	28.9	12.2	18.1	20.5	18.1	9.6	20.7
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	12.0	50.0	15.0	12.0	15.0	50.0	12.0	12.0
Max Q Clear Time (g_c+I1), s	3.5	11.3	6.3	14.0	17.0	6.2	2.7	9.9
Green Ext Time (p_c), s	0.0	9.3	0.4	0.0	0.0	3.1	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	116.3
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	20	120	110	20	270	220	606	190	450	864	300
Future Volume (veh/h)	190	20	120	110	20	270	220	606	190	450	864	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	207	22	43	147	22	63	239	808	80	600	1152	187
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	509	377	320	240	42	120	392	1242	365	614	1303	1039
Arrive On Green	0.15	0.20	0.20	0.07	0.10	0.10	0.08	0.24	0.24	0.18	0.37	0.37
Sat Flow, veh/h	3510	1900	1610	3456	417	1194	5103	5106	1500	3456	3554	2834
Grp Volume(v), veh/h	207	22	43	147	0	85	239	808	80	600	1152	187
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1611	1701	1702	1500	1728	1777	1417
Q Serve(g_s), s	3.6	0.6	1.5	2.8	0.0	3.4	3.1	9.6	2.9	11.7	20.5	3.0
Cycle Q Clear(g_c), s	3.6	0.6	1.5	2.8	0.0	3.4	3.1	9.6	2.9	11.7	20.5	3.0
Prop In Lane	1.00		1.00	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	509	377	320	240	0	162	392	1242	365	614	1303	1039
V/C Ratio(X)	0.41	0.06	0.13	0.61	0.00	0.52	0.61	0.65	0.22	0.98	0.88	0.18
Avail Cap(c_a), veh/h	1664	1193	1011	466	0	430	552	1929	567	614	1669	1331
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	21.9	22.3	30.5	0.0	28.8	30.2	23.0	20.4	27.6	20.0	14.5
Incr Delay (d2), s/veh	0.7	0.1	0.2	2.5	0.0	2.6	1.5	0.2	0.1	30.3	4.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.3	0.6	1.2	0.0	1.4	1.2	3.3	1.0	6.8	7.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	22.0	22.5	33.1	0.0	31.4	31.7	23.2	20.5	57.9	24.2	14.5
LnGrp LOS	C	C	C	C	A	C	C	C	C	E	C	B
Approach Vol, veh/h		272			232			1127			1939	
Approach Delay, s/veh		25.8			32.5			24.8			33.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	30.7	9.2	17.9	18.0	22.4	15.8	11.3
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	7.3	31.7	9.1	42.4	12.0	25.5	32.0	18.0
Max Q Clear Time (g_c+I1), s	5.1	22.5	4.8	3.5	13.7	11.6	5.6	5.4
Green Ext Time (p_c), s	0.2	2.2	0.2	0.2	0.0	3.0	1.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	30.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	104	482	946	362	423
Future Volume (veh/h)	150	104	482	946	362	423
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	163	17	524	1028	393	434
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	200	178	505	1497	384	424
Arrive On Green	0.11	0.11	0.28	0.79	0.47	0.47
Sat Flow, veh/h	1810	1610	1810	1900	825	911
Grp Volume(v), veh/h	163	17	524	1028	0	827
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1736
Q Serve(g_s), s	9.5	1.0	30.0	26.8	0.0	50.0
Cycle Q Clear(g_c), s	9.5	1.0	30.0	26.8	0.0	50.0
Prop In Lane	1.00	1.00	1.00			0.52
Lane Grp Cap(c), veh/h	200	178	505	1497	0	808
V/C Ratio(X)	0.82	0.10	1.04	0.69	0.00	1.02
Avail Cap(c_a), veh/h	673	599	505	1497	0	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.7	43.0	38.7	5.3	0.0	28.7
Incr Delay (d2), s/veh	7.8	0.2	50.1	1.5	0.0	37.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	1.0	19.4	6.3	0.0	26.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	54.6	43.2	88.8	6.7	0.0	66.6
LnGrp LOS	D	D	F	A	A	F
Approach Vol, veh/h	180			1552	827	
Approach Delay, s/veh	53.5			34.4	66.6	
Approach LOS	D			C	E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	90.9		16.6	34.7	56.2
Change Period (Y+Rc), s	6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	50.0		* 40	* 30	50.0
Max Q Clear Time (g_c+I1), s	28.8		11.5	32.0	52.0
Green Ext Time (p_c), s	10.7		0.5	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		46.2
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)	0	0	0	42	0	509	0	685	55	239	346	0
Future Volume (veh/h)	0	0	0	42	0	509	0	685	55	239	346	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	52	0	457	0	856	67	299	432	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	3	0	188	0	467	674	817	64	340	515	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.48	0.48	0.19	0.28	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1712	134	1781	1870	0
Grp Volume(v), veh/h	0	0	0	52	0	457	0	0	923	299	432	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1846	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	7.8	0.0	0.0	35.8	12.2	16.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.0	0.0	7.8	0.0	0.0	35.8	12.2	16.3	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	188	0	467	674	0	881	340	515	0
V/C Ratio(X)	0.00	0.00	0.00	0.28	0.00	0.98	0.00	0.00	1.05	0.88	0.84	0.00
Avail Cap(c_a), veh/h	0	198	0	188	0	467	674	0	881	363	1092	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	31.0	0.0	26.2	0.0	0.0	19.6	29.5	25.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	35.8	0.0	0.0	43.5	20.3	3.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.9	0.0	12.1	0.0	0.0	22.6	6.6	6.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	31.8	0.0	62.0	0.0	0.0	63.2	49.8	29.3	0.0
LnGrp LOS	A	A	A	C	A	E	A	A	F	D	C	A
Approach Vol, veh/h		0			509			923			731	
Approach Delay, s/veh		0.0			58.9			63.2			37.7	
Approach LOS					E			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.0	42.0		0.0	34.2	26.9		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 15	35.8		7.8	7.3	* 44		7.8				
Max Q Clear Time (g_c+I1), s	14.2	37.8		0.0	0.0	18.3		9.8				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	2.3		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		53.6
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)	238	566	207	185	718	195	316	815	143	261	438	364
Future Volume (veh/h)	238	566	207	185	718	195	316	815	143	261	438	364
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	262	622	0	203	789	76	347	896	97	287	481	186
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	1252		362	1248	381	457	1363	416	430	921	405
Arrive On Green	0.11	0.25	0.00	0.10	0.24	0.24	0.13	0.27	0.27	0.12	0.26	0.26
Sat Flow, veh/h	3456	5106	1585	3456	5106	1556	3456	5106	1557	3456	3554	1563
Grp Volume(v), veh/h	262	622	0	203	789	76	347	896	97	287	481	186
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1556	1728	1702	1557	1728	1777	1563
Q Serve(g_s), s	6.2	8.9	0.0	4.8	11.8	3.3	8.2	13.3	4.1	6.7	9.9	8.5
Cycle Q Clear(g_c), s	6.2	8.9	0.0	4.8	11.8	3.3	8.2	13.3	4.1	6.7	9.9	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	365	1252		362	1248	381	457	1363	416	430	921	405
V/C Ratio(X)	0.72	0.50		0.56	0.63	0.20	0.76	0.66	0.23	0.67	0.52	0.46
Avail Cap(c_a), veh/h	1015	2700		1015	2700	823	1015	2700	823	1015	1879	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	27.6	0.0	36.2	28.7	25.5	35.6	27.7	24.4	35.6	27.0	26.5
Incr Delay (d2), s/veh	2.7	0.3	0.0	1.4	0.5	0.3	2.6	0.5	0.3	3.8	0.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.4	0.0	2.0	4.6	1.2	3.4	5.1	1.5	2.9	4.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	27.9	0.0	37.6	29.3	25.8	38.3	28.3	24.7	39.3	27.5	27.3
LnGrp LOS	D	C		D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		884	A		1068			1340			954	
Approach Delay, s/veh		31.3			30.6			30.6			31.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	26.9	15.6	28.7	14.0	26.8	16.2	28.1
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	6.8	10.9	8.7	15.3	8.2	13.8	10.2	11.9
Green Ext Time (p_c), s	0.6	4.2	1.9	6.8	0.8	6.3	1.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	549	714	326	215	347	326
Future Volume (veh/h)	549	714	326	215	347	326
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	590	317	351	53	373	351
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	532	473	408	338	418	988
Arrive On Green	0.30	0.30	0.22	0.22	0.23	0.53
Sat Flow, veh/h	1781	1585	1870	1551	1781	1870
Grp Volume(v), veh/h	590	317	351	53	373	351
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1551	1781	1870
Q Serve(g_s), s	18.6	10.9	11.3	1.7	12.6	6.8
Cycle Q Clear(g_c), s	18.6	10.9	11.3	1.7	12.6	6.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	532	473	408	338	418	988
V/C Ratio(X)	1.11	0.67	0.86	0.16	0.89	0.36
Avail Cap(c_a), veh/h	532	473	438	363	466	1068
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	19.2	23.5	19.7	23.1	8.5
Incr Delay (d2), s/veh	72.8	3.9	15.4	0.3	16.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.4	4.0	6.1	0.6	6.5	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	94.6	23.0	38.9	20.0	39.8	8.8
LnGrp LOS	F	C	D	B	D	A
Approach Vol, veh/h	907		404			724
Approach Delay, s/veh	69.6		36.4			24.8
Approach LOS	E		D			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	19.3	19.0			38.3	24.0
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 16	14.6			35.6	18.6
Max Q Clear Time (g_c+I1), s	14.6	13.3			8.8	20.6
Green Ext Time (p_c), s	0.0	0.3			2.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	47.1
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)	223	1046	0	0	1002	153	0	0	0	60	0	180
Future Volume (veh/h)	223	1046	0	0	1002	153	0	0	0	60	0	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	242	1137	0	0	1089	162	0	0	0	52	18	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	279	2824	0	2	944	140	2	25	0	73	55	119
Arrive On Green	0.15	0.78	0.00	0.00	0.58	0.58	0.00	0.00	0.00	0.04	0.10	0.10
Sat Flow, veh/h	1810	3705	0	1810	1616	240	1810	1900	0	1810	534	1157
Grp Volume(v), veh/h	242	1137	0	0	0	1251	0	0	0	52	0	57
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1810	0	1857	1810	1900	0	1810	0	1692
Q Serve(g_s), s	11.9	9.1	0.0	0.0	0.0	53.3	0.0	0.0	0.0	2.6	0.0	2.9
Cycle Q Clear(g_c), s	11.9	9.1	0.0	0.0	0.0	53.3	0.0	0.0	0.0	2.6	0.0	2.9
Prop In Lane	1.00		0.00	1.00		0.13	1.00		0.00	1.00		0.68
Lane Grp Cap(c), veh/h	279	2824	0	2	0	1084	2	25	0	73	0	174
V/C Ratio(X)	0.87	0.40	0.00	0.00	0.00	1.15	0.00	0.00	0.00	0.72	0.00	0.33
Avail Cap(c_a), veh/h	337	2824	0	178	0	1084	305	441	0	188	0	284
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.7	3.2	0.0	0.0	0.0	19.0	0.0	0.0	0.0	43.3	0.0	38.0
Incr Delay (d2), s/veh	17.9	0.1	0.0	0.0	0.0	79.9	0.0	0.0	0.0	12.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	2.2	0.0	0.0	0.0	44.0	0.0	0.0	0.0	1.4	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	3.3	0.0	0.0	0.0	98.9	0.0	0.0	0.0	55.6	0.0	39.1
LnGrp LOS	E	A	A	A	A	F	A	A	A	E	A	D
Approach Vol, veh/h		1379			1251			0			109	
Approach Delay, s/veh		12.4			98.9			0.0			47.0	
Approach LOS		B			F						D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	76.1	8.2	7.0	18.1	58.0	0.0	15.2
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	9.0	* 61	9.5	21.2	17.0	* 53	15.4	15.3
Max Q Clear Time (g_c+I1), s	10.0	11.1	4.6	0.0	13.9	55.3	0.0	4.9
Green Ext Time (p_c), s	0.0	11.4	0.0	0.0	0.2	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	53.3
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	83	60	330	743	560	584
Future Volume (veh/h)	83	60	330	743	560	584
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	8	359	808	609	605
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	252	224	0	1116	514	510
Arrive On Green	0.14	0.14	0.00	0.60	0.60	0.60
Sat Flow, veh/h	1781	1585	0	1870	861	855
Grp Volume(v), veh/h	90	8	0	808	0	1214
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1870	0	1716
Q Serve(g_s), s	1.6	0.1	0.0	10.5	0.0	20.5
Cycle Q Clear(g_c), s	1.6	0.1	0.0	10.5	0.0	20.5
Prop In Lane	1.00	1.00	0.00			0.50
Lane Grp Cap(c), veh/h	252	224	0	1116	0	1024
V/C Ratio(X)	0.36	0.04	0.00	0.72	0.00	1.19
Avail Cap(c_a), veh/h	933	830	0	1796	0	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.3	12.7	0.0	4.9	0.0	6.9
Incr Delay (d2), s/veh	0.9	0.1	0.0	0.9	0.0	93.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.4	0.0	26.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.2	12.8	0.0	5.8	0.0	100.4
LnGrp LOS	B	B	A	A	A	F
Approach Vol, veh/h	98			808	1214	
Approach Delay, s/veh	14.1			5.8	100.4	
Approach LOS	B			A	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.0	25.0		9.4		25.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	8.0	20.5		18.0		33.0
Max Q Clear Time (g_c+I1), s	10.0	22.5		3.6		12.5
Green Ext Time (p_c), s	0.0	0.0		0.2		5.2

Intersection Summary		
HCM 6th Ctrl Delay		60.4
HCM 6th LOS		E

Intersection	
Intersection Delay, s/veh	282.8
Intersection LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	504	149	53	867	430	64
Future Vol, veh/h	504	149	53	867	430	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	548	162	58	942	467	70
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	195	448.7	90.1
HCM LOS	F	F	F

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	87%	0%	6%
Vol Thru, %	0%	77%	94%
Vol Right, %	13%	23%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	494	653	920
LT Vol	430	0	53
Through Vol	0	504	867
RT Vol	64	149	0
Lane Flow Rate	537	710	1000
Geometry Grp	1	1	1
Degree of Util (X)	1.058	1.347	1.939
Departure Headway (Hd)	8.633	8.333	7.728
Convergence, Y/N	Yes	Yes	Yes
Cap	424	440	480
Service Time	6.633	6.333	5.728
HCM Lane V/C Ratio	1.267	1.614	2.083
HCM Control Delay	90.1	195	448.7
HCM Lane LOS	F	F	F
HCM 95th-tile Q	14.5	26.9	60.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	811	11	608	0	1137	0	0	1134	181
Future Volume (veh/h)	0	0	0	811	11	608	0	1137	0	0	1134	181
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	0	0	1870	1870
Adj Flow Rate, veh/h				910	0	616	0	1263	0	0	1260	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	0	2	0	0	2	2
Cap, veh/h				1623	0	963	0	1659	0	0	2384	
Arrive On Green				0.30	0.00	0.30	0.00	0.47	0.00	0.00	0.47	0.00
Sat Flow, veh/h				5344	0	3170	0	3741	0	0	5274	1585
Grp Volume(v), veh/h				910	0	616	0	1263	0	0	1260	0
Grp Sat Flow(s),veh/h/ln				1781	0	1585	0	1777	0	0	1702	1585
Q Serve(g_s), s				7.2	0.0	8.4	0.0	14.7	0.0	0.0	8.8	0.0
Cycle Q Clear(g_c), s				7.2	0.0	8.4	0.0	14.7	0.0	0.0	8.8	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1623	0	963	0	1659	0	0	2384	
V/C Ratio(X)				0.56	0.00	0.64	0.00	0.76	0.00	0.00	0.53	
Avail Cap(c_a), veh/h				4499	0	2669	0	4771	0	0	6855	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				14.6	0.0	15.1	0.0	11.1	0.0	0.0	9.5	0.0
Incr Delay (d2), s/veh				0.2	0.0	0.4	0.0	0.3	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	0.0	2.7	0.0	3.9	0.0	0.0	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				14.8	0.0	15.5	0.0	11.3	0.0	0.0	9.5	0.0
LnGrp LOS				B	A	B	A	B	A	A	A	
Approach Vol, veh/h					1526			1263			1260	A
Approach Delay, s/veh					15.1			11.3			9.5	
Approach LOS					B			B			A	

Timer - Assigned Phs	2		6		8							
Phs Duration (G+Y+Rc), s	29.1		29.1		21.0							
Change Period (Y+Rc), s	5.7		5.7		5.8							
Max Green Setting (Gmax), s	67.3		67.3		42.2							
Max Q Clear Time (g_c+I1), s	16.7		10.8		10.4							
Green Ext Time (p_c), s	6.7		6.5		4.8							

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

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	11	218	0	0	0	0	1054	1159	0	1550	0
Future Volume (veh/h)	226	11	218	0	0	0	0	1054	1159	0	1550	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	325	0	146				0	1184	754	0	1742	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	717	0	319				0	1868	1466	0	2683	0
Arrive On Green	0.20	0.00	0.20				0.00	0.53	0.53	0.00	0.53	0.00
Sat Flow, veh/h	3563	0	1585				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	325	0	146				0	1184	754	0	1742	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	3.2	0.0	3.2				0.0	9.4	6.9	0.0	9.7	0.0
Cycle Q Clear(g_c), s	3.2	0.0	3.2				0.0	9.4	6.9	0.0	9.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	717	0	319				0	1868	1466	0	2683	0
V/C Ratio(X)	0.45	0.00	0.46				0.00	0.63	0.51	0.00	0.65	0.00
Avail Cap(c_a), veh/h	3064	0	1363				0	3147	2470	0	4521	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	13.9	0.0	13.9				0.0	6.7	6.1	0.0	6.8	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.4				0.0	0.1	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.0				0.0	1.5	0.9	0.0	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	0.0	14.3				0.0	6.8	6.2	0.0	6.9	0.0
LnGrp LOS	B	A	B				A	A	A	A	A	A
Approach Vol, veh/h		471						1938			1742	
Approach Delay, s/veh		14.1						6.6			6.9	
Approach LOS		B						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	26.5	13.1	26.5
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	11.4	5.2	11.7
Green Ext Time (p_c), s	7.9	0.1	9.1

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	197	93	319	51	409	144	894	121	385	623	12
Future Volume (veh/h)	31	197	93	319	51	409	144	894	121	385	623	12
Initial Q (Qb), veh	0	0	0	0	0	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	36	226	18	367	59	168	166	1028	40	443	716	5
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	53	272	230	388	624	930	197	1072	478	311	1300	580
Arrive On Green	0.03	0.15	0.15	0.22	0.33	0.33	0.11	0.30	0.30	0.17	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	1870	2787	1781	3554	1583	1781	3554	1585
Grp Volume(v), veh/h	36	226	18	367	59	168	166	1028	40	443	716	5
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1394	1781	1777	1583	1781	1777	1585
Q Serve(g_s), s	2.3	13.5	1.1	23.3	2.5	4.9	10.5	32.6	2.1	20.0	18.3	0.2
Cycle Q Clear(g_c), s	2.3	13.5	1.1	23.3	2.5	4.9	10.5	32.6	2.1	20.0	18.3	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	272	230	388	624	930	197	1072	478	311	1300	580
V/C Ratio(X)	0.68	0.83	0.08	0.94	0.09	0.18	0.84	0.96	0.08	1.43	0.55	0.01
Avail Cap(c_a), veh/h	93	440	373	388	750	1118	311	1072	478	311	1300	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	47.6	42.4	44.1	26.3	27.1	50.0	39.3	28.7	47.3	28.9	23.1
Incr Delay (d2), s/veh	14.2	7.1	0.1	31.8	0.1	0.1	11.5	19.1	0.3	209.3	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.8	0.4	13.3	1.1	1.6	5.2	16.3	0.8	26.6	7.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.2	54.7	42.5	75.9	26.4	27.2	61.6	58.5	29.0	256.6	30.5	23.1
LnGrp LOS	E	D	D	E	C	C	E	E	C	F	C	C
Approach Vol, veh/h		280			594			1234			1164	
Approach Delay, s/veh		55.8			57.2			57.9			116.6	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	47.8	29.0	21.2	24.0	40.4	7.4	42.8
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	20.0	34.6	25.0	27.0	20.0	34.6	6.0	46.0
Max Q Clear Time (g_c+I1), s	12.5	20.3	25.3	15.5	22.0	34.6	4.3	6.9
Green Ext Time (p_c), s	0.2	3.8	0.0	1.0	0.0	0.0	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	78.5
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	54	65	630	66	167	76	772	645	152	764	38
Future Volume (veh/h)	54	54	65	630	66	167	76	772	645	152	764	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		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	58	58	0	677	71	121	82	830	240	163	822	13
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	318		871	499	561	147	1074	477	306	1096	486
Arrive On Green	0.07	0.09	0.00	0.25	0.27	0.27	0.08	0.30	0.30	0.09	0.31	0.31
Sat Flow, veh/h	1781	3647	0	3456	1870	1576	1781	3554	1580	3456	3554	1575
Grp Volume(v), veh/h	58	58	0	677	71	121	82	830	240	163	822	13
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1576	1781	1777	1580	1728	1777	1575
Q Serve(g_s), s	3.5	1.7	0.0	20.4	3.2	6.0	5.0	23.8	14.0	5.1	23.3	0.6
Cycle Q Clear(g_c), s	3.5	1.7	0.0	20.4	3.2	6.0	5.0	23.8	14.0	5.1	23.3	0.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	318		871	499	561	147	1074	477	306	1096	486
V/C Ratio(X)	0.44	0.18		0.78	0.14	0.22	0.56	0.77	0.50	0.53	0.75	0.03
Avail Cap(c_a), veh/h	159	381		1434	810	823	253	1890	840	367	1763	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	47.2	0.0	39.0	31.3	25.2	49.5	35.6	32.2	48.8	34.9	27.0
Incr Delay (d2), s/veh	3.2	0.4	0.0	3.2	0.2	0.3	4.7	1.2	0.8	2.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.8	0.0	8.8	1.5	2.2	2.3	10.0	5.3	2.2	9.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	47.6	0.0	42.2	31.5	25.5	54.2	36.8	33.0	50.9	36.3	27.0
LnGrp LOS	D	D		D	C	C	D	D	C	D	D	C
Approach Vol, veh/h		116	A		869			1152			998	
Approach Delay, s/veh		50.2			39.0			37.3			38.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	41.3	35.7	17.5	16.7	42.1	15.9	37.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	11.3	59.6	46.5	12.0	15.9	55.6	10.0	48.5
Max Q Clear Time (g_c+I1), s	7.1	25.8	22.4	3.7	7.0	25.3	5.5	8.0
Green Ext Time (p_c), s	0.3	7.0	5.8	0.2	0.2	8.4	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	38.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	425	302	53	48	130	180	84	241	21	373	160	110
Future Volume (veh/h)	425	302	53	48	130	180	84	241	21	373	160	110
Initial Q (Qb), veh	0	0	0	0	0	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	545	387	24	62	167	25	108	309	4	478	205	44
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	578	1266	565	80	273	122	138	434	194	509	1175	524
Arrive On Green	0.32	0.36	0.36	0.05	0.08	0.08	0.08	0.12	0.12	0.29	0.33	0.33
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	545	387	24	62	167	25	108	309	4	478	205	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	28.9	7.6	1.0	3.3	4.4	1.4	5.8	8.1	0.2	25.4	4.0	1.9
Cycle Q Clear(g_c), s	28.9	7.6	1.0	3.3	4.4	1.4	5.8	8.1	0.2	25.4	4.0	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	578	1266	565	80	273	122	138	434	194	509	1175	524
V/C Ratio(X)	0.94	0.31	0.04	0.77	0.61	0.21	0.78	0.71	0.02	0.94	0.17	0.08
Avail Cap(c_a), veh/h	625	2254	1005	202	1411	629	312	1099	490	533	1539	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	22.5	20.4	45.8	43.4	42.0	43.9	40.9	37.5	33.8	23.1	22.3
Incr Delay (d2), s/veh	22.0	0.1	0.0	14.4	2.2	0.8	9.4	2.2	0.0	24.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	3.0	0.3	1.7	2.0	0.6	2.8	3.6	0.1	13.7	1.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.8	22.7	20.4	60.2	45.6	42.8	53.3	43.1	37.5	58.1	23.1	22.4
LnGrp LOS	D	C	C	E	D	D	D	D	D	E	C	C
Approach Vol, veh/h		956			254			421			727	
Approach Delay, s/veh		40.4			48.9			45.7			46.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	39.3	31.7	17.6	35.5	12.1	11.5	37.9
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	11.0	* 62	29.0	30.0	34.0	* 39	17.0	42.0
Max Q Clear Time (g_c+I1), s	5.3	9.6	27.4	10.1	30.9	6.4	7.8	6.0
Green Ext Time (p_c), s	0.0	2.6	0.3	1.7	0.6	1.0	0.1	1.3

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)	245	703	78	321	513	276	55	76	279	414	31	324
Future Volume (veh/h)	245	703	78	321	513	276	55	76	279	414	31	324
Initial Q (Qb), veh	0	0	0	0	0	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	295	847	35	387	618	98	66	92	228	499	37	156
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	688	583	133	564	478	118	91	225	354	604	512
Arrive On Green	0.14	0.37	0.37	0.07	0.30	0.30	0.07	0.19	0.19	0.20	0.32	0.32
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	477	1181	1781	1870	1585
Grp Volume(v), veh/h	295	847	35	387	618	98	66	0	320	499	37	156
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1658	1781	1870	1585
Q Serve(g_s), s	17.0	44.4	1.7	9.0	36.4	5.6	4.3	0.0	23.0	24.0	1.6	8.9
Cycle Q Clear(g_c), s	17.0	44.4	1.7	9.0	36.4	5.6	4.3	0.0	23.0	24.0	1.6	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h	251	688	583	133	564	478	118	0	316	354	604	512
V/C Ratio(X)	1.18	1.23	0.06	2.91	1.10	0.21	0.56	0.00	1.01	1.41	0.06	0.30
Avail Cap(c_a), veh/h	251	688	583	133	564	478	148	0	316	354	604	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	38.1	24.7	55.8	42.1	31.4	54.6	0.0	48.9	48.3	28.2	30.7
Incr Delay (d2), s/veh	112.8	116.4	0.2	881.3	66.6	1.0	4.1	0.0	54.0	200.1	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.3	41.7	0.7	36.4	26.3	2.2	2.0	0.0	13.9	30.0	0.7	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	164.6	154.6	24.9	937.2	108.8	32.3	58.7	0.0	102.8	248.4	28.3	31.2
LnGrp LOS	F	F	C	F	F	C	E	A	F	F	C	C
Approach Vol, veh/h		1177			1103			386			692	
Approach Delay, s/veh		153.2			392.6			95.3			187.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	50.9	28.0	28.8	21.0	42.9	12.0	44.8
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	9.0	* 44	24.0	23.0	17.0	35.7	10.0	37.0
Max Q Clear Time (g_c+I1), s	11.0	46.4	26.0	25.0	19.0	38.4	6.3	10.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	232.3
HCM 6th LOS	F

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)	370	1608	288	0	1148	680	0	0	0	828	92	917
Future Volume (veh/h)	370	1608	288	0	1148	680	0	0	0	828	92	917
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	374	1624	222	0	1160	0				902	0	601
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	495	1895	839	0	1715					1232	0	544
Arrive On Green	0.14	0.53	0.53	0.00	0.34	0.00				0.35	0.00	0.35
Sat Flow, veh/h	3456	3554	1573	0	5274	1585				3563	0	1573
Grp Volume(v), veh/h	374	1624	222	0	1160	0				902	0	601
Grp Sat Flow(s),veh/h/ln	1728	1777	1573	0	1702	1585				1781	0	1573
Q Serve(g_s), s	9.0	34.1	6.7	0.0	16.9	0.0				19.2	0.0	30.0
Cycle Q Clear(g_c), s	9.0	34.1	6.7	0.0	16.9	0.0				19.2	0.0	30.0
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	495	1895	839	0	1715					1232	0	544
V/C Ratio(X)	0.76	0.86	0.26	0.00	0.68					0.73	0.00	1.11
Avail Cap(c_a), veh/h	1195	1895	839	0	2354					1232	0	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	35.7	17.4	11.0	0.0	24.8	0.0				24.9	0.0	28.4
Incr Delay (d2), s/veh	2.7	4.2	0.2	0.0	0.6	0.0				2.4	0.0	70.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	12.9	2.1	0.0	6.4	0.0				8.0	0.0	32.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	21.6	11.2	0.0	25.4	0.0				27.2	0.0	99.0
LnGrp LOS	D	C	B	A	C					C	A	F
Approach Vol, veh/h		2220			1160	A					1503	
Approach Delay, s/veh		23.4			25.4						55.9	
Approach LOS		C			C						E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	51.7		35.1	17.1	34.5
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	36.1		32.0	11.0	18.9
Green Ext Time (p_c), s	3.5		0.0	1.4	9.9

Intersection Summary		
HCM 6th Ctrl Delay	33.9	
HCM 6th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	486	595	30	421	776	51
Future Volume (veh/h)	486	595	30	421	776	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	491	567	30	425	784	50
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	429	496	41	1101	562	36
Arrive On Green	0.54	0.54	0.02	0.59	0.34	0.34
Sat Flow, veh/h	792	914	1781	1870	1660	106
Grp Volume(v), veh/h	0	1058	30	425	835	0
Grp Sat Flow(s),veh/h/ln	0	1706	1781	1870	1768	0
Q Serve(g_s), s	0.0	70.5	2.2	15.7	44.0	0.0
Cycle Q Clear(g_c), s	0.0	70.5	2.2	15.7	44.0	0.0
Prop In Lane		0.54	1.00		0.94	0.06
Lane Grp Cap(c), veh/h	0	925	41	1101	598	0
V/C Ratio(X)	0.00	1.14	0.73	0.39	1.40	0.00
Avail Cap(c_a), veh/h	0	925	41	1101	598	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	29.8	63.1	14.2	43.0	0.0
Incr Delay (d2), s/veh	0.0	77.6	43.7	0.3	187.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	46.1	1.5	6.3	49.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	107.3	106.8	14.5	230.9	0.0
LnGrp LOS	A	F	F	B	F	A
Approach Vol, veh/h	1058			455	835	
Approach Delay, s/veh	107.3			20.6	230.9	
Approach LOS	F			C	F	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	81.0		49.0	6.0	75.0
Change Period (Y+Rc), s	4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s	76.5		44.0	3.0	70.5
Max Q Clear Time (g_c+I1), s	17.7		46.0	4.2	72.5
Green Ext Time (p_c), s	3.2		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	134.5
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	990	230	380	660	100	320	749	706	70	510	40
Future Volume (veh/h)	90	990	230	380	660	100	320	749	706	70	510	40
Initial Q (Qb), veh	0	0	0	0	0	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	110	1207	0	463	805	0	390	913	0	85	622	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1778		527	2108		465	655		257	442	
Arrive On Green	0.08	0.35	0.00	0.15	0.41	0.00	0.13	0.18	0.00	0.07	0.12	0.00
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	110	1207	0	463	805	0	390	913	0	85	622	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	5.9	19.5	0.0	12.7	10.6	0.0	10.6	17.8	0.0	2.3	12.0	0.0
Cycle Q Clear(g_c), s	5.9	19.5	0.0	12.7	10.6	0.0	10.6	17.8	0.0	2.3	12.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	1778		527	2108		465	655		257	442	
V/C Ratio(X)	0.80	0.68		0.88	0.38		0.84	1.39		0.33	1.41	
Avail Cap(c_a), veh/h	222	2646		537	2646		537	655		430	442	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.8	26.8	0.0	40.0	19.7	0.0	40.7	39.4	0.0	42.4	42.2	0.0
Incr Delay (d2), s/veh	3.9	0.7	0.0	15.1	0.2	0.0	10.1	186.3	0.0	0.7	196.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	7.2	0.0	6.2	3.9	0.0	4.9	24.2	0.0	0.9	17.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.7	27.5	0.0	55.1	19.9	0.0	50.9	225.7	0.0	43.1	238.8	0.0
LnGrp LOS	D	C		E	B		D	F		D	F	
Approach Vol, veh/h		1317	A		1268	A		1303	A		707	A
Approach Delay, s/veh		29.2			32.8			173.4			215.2	
Approach LOS		C			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	45.9	18.5	18.1	20.2	39.7	12.7	23.9
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	12.0	50.0	15.0	12.0	15.0	50.0	12.0	12.0
Max Q Clear Time (g_c+I1), s	7.9	12.6	12.6	14.0	14.7	21.5	4.3	19.8
Green Ext Time (p_c), s	0.0	8.5	0.3	0.0	0.1	12.1	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	99.7
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	20	337	140	40	270	220	1025	50	110	620	390
Future Volume (veh/h)	490	20	337	140	40	270	220	1025	50	110	620	390
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	533	22	279	187	43	241	239	1367	18	147	827	187
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	690	676	573	189	46	258	280	1399	414	296	1141	910
Arrive On Green	0.20	0.36	0.36	0.05	0.20	0.20	0.05	0.27	0.27	0.09	0.32	0.32
Sat Flow, veh/h	3510	1900	1610	3456	233	1308	5103	5106	1513	3456	3554	2834
Grp Volume(v), veh/h	533	22	279	187	0	284	239	1367	18	147	827	187
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1542	1701	1702	1513	1728	1777	1417
Q Serve(g_s), s	13.1	0.7	12.3	4.9	0.0	16.5	4.2	24.2	0.8	3.7	18.8	4.4
Cycle Q Clear(g_c), s	13.1	0.7	12.3	4.9	0.0	16.5	4.2	24.2	0.8	3.7	18.8	4.4
Prop In Lane	1.00		1.00	1.00		0.85	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	690	676	573	189	0	304	280	1399	414	296	1141	910
V/C Ratio(X)	0.77	0.03	0.49	0.99	0.00	0.93	0.85	0.98	0.04	0.50	0.72	0.21
Avail Cap(c_a), veh/h	1231	676	573	189	0	304	280	1399	414	303	1141	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	19.2	22.9	43.1	0.0	36.0	42.8	32.8	24.3	39.8	27.4	22.5
Incr Delay (d2), s/veh	2.6	0.0	0.6	61.6	0.0	34.6	21.9	18.7	0.0	0.5	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.3	4.7	3.7	0.0	9.1	2.3	11.5	0.3	1.5	7.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	19.2	23.6	104.7	0.0	70.6	64.7	51.6	24.4	40.3	29.4	22.6
LnGrp LOS	D	B	C	F	A	E	E	D	C	D	C	C
Approach Vol, veh/h		834			471			1624			1161	
Approach Delay, s/veh		32.3			84.2			53.2			29.7	
Approach LOS		C			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	35.3	9.5	36.9	13.8	31.0	23.9	22.5
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	5.0	10.0	5.0	18.0	8.0	25.0	32.0	18.0
Max Q Clear Time (g_c+I1), s	6.2	20.8	6.9	14.3	5.7	26.2	15.1	18.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	0.0	2.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	691	410	86	768	868	181
Future Volume (veh/h)	691	410	86	768	868	181
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	751	350	93	835	943	193
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	486	433	86	1251	888	182
Arrive On Green	0.27	0.27	0.05	0.66	0.58	0.58
Sat Flow, veh/h	1810	1610	1810	1900	1530	313
Grp Volume(v), veh/h	751	350	93	835	0	1136
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1844
Q Serve(g_s), s	40.3	30.5	7.1	40.1	0.0	87.0
Cycle Q Clear(g_c), s	40.3	30.5	7.1	40.1	0.0	87.0
Prop In Lane	1.00	1.00	1.00			0.17
Lane Grp Cap(c), veh/h	486	433	86	1251	0	1069
V/C Ratio(X)	1.54	0.81	1.09	0.67	0.00	1.06
Avail Cap(c_a), veh/h	486	433	86	1251	0	1069
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.8	51.3	71.4	15.6	0.0	31.5
Incr Delay (d2), s/veh	255.2	11.0	122.5	1.5	0.0	45.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	52.8	26.6	6.1	16.1	0.0	48.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	310.1	62.2	193.9	17.1	0.0	77.2
LnGrp LOS	F	E	F	B	A	F
Approach Vol, veh/h	1101			928	1136	
Approach Delay, s/veh	231.3			34.8	77.2	
Approach LOS	F			C	E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	105.0		45.0	11.8	93.2
Change Period (Y+Rc), s	6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	98.8		* 40	* 7.1	87.0
Max Q Clear Time (g_c+I1), s	42.1		42.3	9.1	89.0
Green Ext Time (p_c), s	10.5		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	118.4
HCM 6th LOS	F

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)	0	0	0	40	0	302	0	755	42	358	725	0
Future Volume (veh/h)	0	0	0	40	0	302	0	755	42	358	725	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	48	0	220	0	899	49	426	863	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	119	0	508	501	941	51	454	937	0
Arrive On Green	0.00	0.00	0.00	0.07	0.00	0.07	0.00	0.54	0.54	0.26	0.50	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1757	96	1781	1870	0
Grp Volume(v), veh/h	0	0	0	48	0	220	0	0	948	426	863	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1853	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	3.0	0.0	7.8	0.0	0.0	57.8	27.8	50.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.0	0.0	7.8	0.0	0.0	57.8	27.8	50.8	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.05	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	119	0	508	501	0	993	454	937	0
V/C Ratio(X)	0.00	0.00	0.00	0.40	0.00	0.43	0.00	0.00	0.96	0.94	0.92	0.00
Avail Cap(c_a), veh/h	0	125	0	119	0	508	501	0	1057	499	1460	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	53.3	0.0	31.9	0.0	0.0	26.3	43.4	27.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.2	0.0	0.6	0.0	0.0	17.4	24.6	6.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.4	0.0	5.0	0.0	0.0	27.2	14.7	22.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	55.5	0.0	32.5	0.0	0.0	43.6	67.9	34.3	0.0
LnGrp LOS	A	A	A	E	A	C	A	A	D	E	C	A
Approach Vol, veh/h		0			268			948			1289	
Approach Delay, s/veh		0.0			36.6			43.6			45.4	
Approach LOS					D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	35.0	69.9		0.0	39.2	65.8		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 33	67.8		7.8	8.3	* 93		7.8				
Max Q Clear Time (g_c+I1), s	29.8	59.8		0.0	0.0	52.8		9.8				
Green Ext Time (p_c), s	0.5	3.9		0.0	0.0	6.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	43.8
HCM 6th LOS	D

Notes

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



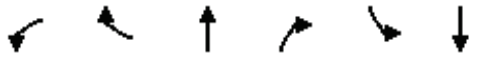
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	378	935	521	313	646	383	243	799	142	415	961	152
Future Volume (veh/h)	378	935	521	313	646	383	243	799	142	415	961	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	390	964	0	323	666	166	251	824	83	428	991	99
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	473	1326		405	1226	373	328	1371	418	543	1174	516
Arrive On Green	0.14	0.26	0.00	0.12	0.24	0.24	0.10	0.27	0.27	0.16	0.33	0.33
Sat Flow, veh/h	3456	5106	1585	3456	5106	1555	3456	5106	1556	3456	3554	1561
Grp Volume(v), veh/h	390	964	0	323	666	166	251	824	83	428	991	99
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1555	1728	1702	1556	1728	1777	1561
Q Serve(g_s), s	12.2	19.2	0.0	10.1	12.7	10.1	7.9	15.7	4.6	13.3	28.8	5.0
Cycle Q Clear(g_c), s	12.2	19.2	0.0	10.1	12.7	10.1	7.9	15.7	4.6	13.3	28.8	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	473	1326		405	1226	373	328	1371	418	543	1174	516
V/C Ratio(X)	0.82	0.73		0.80	0.54	0.44	0.76	0.60	0.20	0.79	0.84	0.19
Avail Cap(c_a), veh/h	776	2064		776	2064	629	776	2064	629	776	1436	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	37.6	0.0	47.9	37.0	36.0	49.2	35.5	31.5	45.1	34.6	26.6
Incr Delay (d2), s/veh	3.8	0.8	0.0	3.6	0.4	0.8	3.7	0.4	0.2	6.0	4.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	7.8	0.0	4.5	5.3	3.8	3.5	6.3	1.7	6.0	12.6	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.5	38.4	0.0	51.5	37.3	36.8	52.9	35.9	31.7	51.2	38.6	26.8
LnGrp LOS	D	D		D	D	D	D	D	C	D	D	C
Approach Vol, veh/h		1354	A		1155			1158			1518	
Approach Delay, s/veh		41.9			41.2			39.3			41.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	34.9	22.5	35.9	20.2	32.7	15.6	42.8
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	12.1	21.2	15.3	17.7	14.2	14.7	9.9	30.8
Green Ext Time (p_c), s	0.9	6.6	2.2	6.0	1.0	5.6	0.7	5.9

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	526	734	357	691	765	469
Future Volume (veh/h)	526	734	357	691	765	469
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	548	249	372	312	797	489
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	481	428	388	327	586	1113
Arrive On Green	0.27	0.27	0.21	0.21	0.33	0.60
Sat Flow, veh/h	1781	1585	1870	1577	1781	1870
Grp Volume(v), veh/h	548	249	372	312	797	489
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1577	1781	1870
Q Serve(g_s), s	21.6	10.9	15.7	15.6	26.3	11.5
Cycle Q Clear(g_c), s	21.6	10.9	15.7	15.6	26.3	11.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	481	428	388	327	586	1113
V/C Ratio(X)	1.14	0.58	0.96	0.95	1.36	0.44
Avail Cap(c_a), veh/h	481	428	388	327	586	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	25.3	31.4	31.3	26.8	8.9
Incr Delay (d2), s/veh	85.2	2.2	35.0	37.5	173.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.9	4.1	10.3	8.9	38.1	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	114.4	27.5	66.4	68.8	200.2	9.2
LnGrp LOS	F	C	E	E	F	A
Approach Vol, veh/h	797		684			1286
Approach Delay, s/veh	87.3		67.5			127.6
Approach LOS	F		E			F

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	31.0	22.0			53.0	27.0
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 26	16.6			47.6	21.6
Max Q Clear Time (g_c+I1), s	28.3	17.7			13.5	23.6
Green Ext Time (p_c), s	0.0	0.0			3.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	101.1
HCM 6th LOS	F

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)	30	1183	0	0	1016	61	0	0	0	313	0	38
Future Volume (veh/h)	30	1183	0	0	1016	61	0	0	0	313	0	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	33	1286	0	0	1104	65	0	0	0	340	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	60	2728	0	2	1187	70	2	3	0	433	194	0
Arrive On Green	0.03	0.76	0.00	0.00	0.67	0.67	0.00	0.00	0.00	0.12	0.00	0.00
Sat Flow, veh/h	1810	3705	0	1810	1777	105	1810	1900	0	3619	1900	0
Grp Volume(v), veh/h	33	1286	0	0	0	1169	0	0	0	340	0	0
Grp Sat Flow(s),veh/h/ln	1810	1805	0	1810	0	1881	1810	1900	0	1810	1900	0
Q Serve(g_s), s	1.3	10.0	0.0	0.0	0.0	40.2	0.0	0.0	0.0	6.7	0.0	0.0
Cycle Q Clear(g_c), s	1.3	10.0	0.0	0.0	0.0	40.2	0.0	0.0	0.0	6.7	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.06	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	60	2728	0	2	0	1257	2	3	0	433	194	0
V/C Ratio(X)	0.55	0.47	0.00	0.00	0.00	0.93	0.00	0.00	0.00	0.78	0.00	0.00
Avail Cap(c_a), veh/h	416	2996	0	220	0	1357	377	545	0	465	394	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)	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.2	3.4	0.0	0.0	0.0	10.7	0.0	0.0	0.0	31.6	0.0	0.0
Incr Delay (d2), s/veh	7.5	0.1	0.0	0.0	0.0	11.0	0.0	0.0	0.0	8.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.2	0.0	0.0	0.0	16.0	0.0	0.0	0.0	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	3.5	0.0	0.0	0.0	21.7	0.0	0.0	0.0	39.7	0.0	0.0
LnGrp LOS	D	A	A	A	A	C	A	A	A	D	A	A
Approach Vol, veh/h		1319			1169			0			340	
Approach Delay, s/veh		4.5			21.7			0.0			39.7	
Approach LOS		A			C						D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	60.5	13.3	0.0	6.5	54.1	0.0	13.3
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	9.0	* 61	9.5	21.2	17.0	* 53	15.4	15.3
Max Q Clear Time (g_c+I1), s	0.0	12.0	8.7	0.0	3.3	42.2	0.0	0.0
Green Ext Time (p_c), s	0.0	13.8	0.1	0.0	0.0	7.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	358	180	320	857	795	235
Future Volume (veh/h)	358	180	320	857	795	235
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	389	54	348	932	864	243
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	465	414	0	1046	786	221
Arrive On Green	0.26	0.26	0.00	0.56	0.56	0.56
Sat Flow, veh/h	1781	1585	0	1870	1404	395
Grp Volume(v), veh/h	389	54	0	932	0	1107
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1870	0	1799
Q Serve(g_s), s	10.3	1.3	0.0	21.9	0.0	28.0
Cycle Q Clear(g_c), s	10.3	1.3	0.0	21.9	0.0	28.0
Prop In Lane	1.00	1.00	0.00			0.22
Lane Grp Cap(c), veh/h	465	414	0	1046	0	1007
V/C Ratio(X)	0.84	0.13	0.00	0.89	0.00	1.10
Avail Cap(c_a), veh/h	640	569	0	1231	0	1007
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.5	14.2	0.0	9.7	0.0	11.0
Incr Delay (d2), s/veh	7.0	0.1	0.0	7.5	0.0	59.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.4	0.0	6.5	0.0	22.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.5	14.3	0.0	17.2	0.0	70.8
LnGrp LOS	C	B	A	B	A	F
Approach Vol, veh/h	443			932	1107	
Approach Delay, s/veh	23.3			17.2	70.8	
Approach LOS	C			B	E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.0	32.5		17.6		32.5
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	8.0	20.5		18.0		33.0
Max Q Clear Time (g_c+I1), s	10.0	30.0		12.3		23.9
Green Ext Time (p_c), s	0.0	0.0		0.8		4.1

Intersection Summary		
HCM 6th Ctrl Delay	42.2	
HCM 6th LOS	D	

Intersection	
Intersection Delay, s/veh	546.9
Intersection LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1036	385	192	636	282	125
Future Vol, veh/h	1036	385	192	636	282	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1126	418	209	691	307	136
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	815.6	331.2	47.9
HCM LOS	F	F	E

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	69%	0%	23%
Vol Thru, %	0%	73%	77%
Vol Right, %	31%	27%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	407	1421	828
LT Vol	282	0	192
Through Vol	0	1036	636
RT Vol	125	385	0
Lane Flow Rate	442	1545	900
Geometry Grp	1	1	1
Degree of Util (X)	0.854	2.764	1.663
Departure Headway (Hd)	9.354	7.406	8.942
Convergence, Y/N	Yes	Yes	Yes
Cap	389	510	414
Service Time	7.354	5.406	6.942
HCM Lane V/C Ratio	1.136	3.029	2.174
HCM Control Delay	47.9	815.6	331.2
HCM Lane LOS	E	F	F
HCM 95th-tile Q	8.1	111.7	39.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	15	29	133	40	714	30	783	106	742	1159	23
Future Volume (veh/h)	15	15	29	133	40	714	30	783	106	742	1159	23
Initial Q (Qb), veh	0	0	0	0	0	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	16	16	2	143	43	139	32	842	48	798	1246	14
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	164	139	147	284	421	56	1282	571	872	2068	922
Arrive On Green	0.02	0.09	0.09	0.08	0.15	0.15	0.03	0.36	0.36	0.25	0.58	0.58
Sat Flow, veh/h	1781	1870	1585	1781	1870	2779	1781	3554	1582	3456	3554	1585
Grp Volume(v), veh/h	16	16	2	143	43	139	32	842	48	798	1246	14
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1389	1781	1777	1582	1728	1777	1585
Q Serve(g_s), s	0.8	0.7	0.1	6.8	1.7	3.8	1.5	16.8	1.7	19.0	19.2	0.3
Cycle Q Clear(g_c), s	0.8	0.7	0.1	6.8	1.7	3.8	1.5	16.8	1.7	19.0	19.2	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	33	164	139	147	284	421	56	1282	571	872	2068	922
V/C Ratio(X)	0.49	0.10	0.01	0.97	0.15	0.33	0.58	0.66	0.08	0.92	0.60	0.02
Avail Cap(c_a), veh/h	105	595	504	147	639	950	105	1282	571	896	2068	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	35.6	35.4	38.8	31.3	32.1	40.5	22.7	17.9	30.8	11.4	7.5
Incr Delay (d2), s/veh	10.6	0.3	0.0	65.9	0.2	0.5	9.1	2.6	0.3	13.6	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.0	5.5	0.7	1.2	0.8	6.8	0.6	8.9	6.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	35.9	35.4	104.7	31.5	32.6	49.6	25.4	18.2	44.4	12.7	7.5
LnGrp LOS	D	D	D	F	C	C	D	C	B	D	B	A
Approach Vol, veh/h		34			325			922			2058	
Approach Delay, s/veh		43.4			64.2			25.8			25.0	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	55.2	11.0	12.0	25.4	36.4	5.6	17.5
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	5.0	47.6	7.0	27.0	22.0	30.6	5.0	29.0
Max Q Clear Time (g_c+I1), s	3.5	21.2	8.8	2.7	21.0	18.8	2.8	5.8
Green Ext Time (p_c), s	0.0	9.7	0.0	0.0	0.4	4.3	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	70	94	854	86	166	92	736	952	268	1019	48
Future Volume (veh/h)	47	70	94	854	86	166	92	736	952	268	1019	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	72	0	880	89	98	95	759	920	276	1051	18
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	257		918	528	580	115	1370	1031	306	1455	632
Arrive On Green	0.06	0.07	0.00	0.27	0.28	0.28	0.06	0.39	0.39	0.09	0.41	0.41
Sat Flow, veh/h	1781	3647	0	3456	1870	1557	1781	3554	1583	3456	3554	1544
Grp Volume(v), veh/h	48	72	0	880	89	98	95	759	920	276	1051	18
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1557	1781	1777	1583	1728	1777	1544
Q Serve(g_s), s	4.2	3.1	0.0	40.0	5.7	6.7	8.4	26.6	61.4	12.6	39.5	1.1
Cycle Q Clear(g_c), s	4.2	3.1	0.0	40.0	5.7	6.7	8.4	26.6	61.4	12.6	39.5	1.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	257		918	528	580	115	1370	1031	306	1455	632
V/C Ratio(X)	0.49	0.28		0.96	0.17	0.17	0.83	0.55	0.89	0.90	0.72	0.03
Avail Cap(c_a), veh/h	112	268		922	528	580	134	1370	1031	306	1455	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.1	70.0	0.0	57.6	43.1	33.6	73.6	38.3	23.2	71.9	39.5	28.1
Incr Delay (d2), s/veh	5.2	0.8	0.0	20.6	0.2	0.2	31.6	0.5	10.0	28.5	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.4	0.0	19.8	2.7	2.6	4.8	11.5	29.5	6.7	17.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.3	70.8	0.0	78.2	43.3	33.8	105.3	38.8	33.1	100.5	41.4	28.1
LnGrp LOS	E	E		E	D	C	F	D	C	F	D	C
Approach Vol, veh/h		120			1067			1774			1345	
Approach Delay, s/veh		73.8			71.2			39.4			53.4	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	68.9	49.8	19.0	17.8	72.7	16.3	52.5
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	14.1	61.4	42.5	12.0	12.0	63.5	10.0	44.5
Max Q Clear Time (g_c+I1), s	14.6	63.4	42.0	5.1	10.4	41.5	6.2	8.7
Green Ext Time (p_c), s	0.0	0.0	0.3	0.2	0.0	9.9	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	52.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	716	45	115	679	420	46	46	421	126	48	285
Future Volume (veh/h)	318	716	45	115	679	420	46	46	421	126	48	285
Initial Q (Qb), veh	0	0	0	0	0	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	342	770	22	124	730	183	49	49	394	135	52	47
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	407	1333	595	295	1218	543	118	477	539	297	515	436
Arrive On Green	0.12	0.38	0.38	0.09	0.34	0.34	0.07	0.26	0.26	0.09	0.28	0.28
Sat Flow, veh/h	3456	3554	1585	3456	3554	1584	1781	1870	1583	3456	1870	1585
Grp Volume(v), veh/h	342	770	22	124	730	183	49	49	394	135	52	47
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1584	1781	1870	1583	1728	1870	1585
Q Serve(g_s), s	9.9	17.7	0.9	3.5	17.4	8.8	2.7	2.1	22.4	3.8	2.1	2.3
Cycle Q Clear(g_c), s	9.9	17.7	0.9	3.5	17.4	8.8	2.7	2.1	22.4	3.8	2.1	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	407	1333	595	295	1218	543	118	477	539	297	515	436
V/C Ratio(X)	0.84	0.58	0.04	0.42	0.60	0.34	0.42	0.10	0.73	0.45	0.10	0.11
Avail Cap(c_a), veh/h	439	1333	595	304	1218	543	157	621	661	304	621	526
HCM Platoon Ratio	1.00	1.00	1.00	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	44.2	25.5	20.3	44.4	27.8	25.0	45.9	29.2	29.6	44.5	27.7	27.7
Incr Delay (d2), s/veh	12.9	1.8	0.1	1.0	2.2	1.7	2.3	0.1	3.9	1.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	7.4	0.3	1.5	7.2	3.4	1.2	0.9	8.5	1.6	0.9	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	27.3	20.4	45.4	30.0	26.7	48.2	29.3	33.5	45.6	27.8	27.9
LnGrp LOS	E	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1134			1037			492			234	
Approach Delay, s/veh		36.2			31.3			34.6			38.1	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	44.9	12.8	31.9	16.1	41.6	10.8	34.0
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	9.0	* 38	9.0	34.0	13.0	33.7	9.0	34.0
Max Q Clear Time (g_c+I1), s	5.5	19.7	5.8	24.4	11.9	19.4	4.7	4.3
Green Ext Time (p_c), s	0.1	6.7	0.1	1.8	0.1	5.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

Notes

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	227	636	40	304	338	52
Future Volume (veh/h)	227	636	40	304	338	52
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	261	228	46	349	389	55
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	475	402	144	776	506	72
Arrive On Green	0.25	0.25	0.08	0.41	0.33	0.33
Sat Flow, veh/h	1870	1585	1781	1870	1533	217
Grp Volume(v), veh/h	261	228	46	349	445	0
Grp Sat Flow(s),veh/h/ln	1870	1585	1781	1870	1754	0
Q Serve(g_s), s	4.5	4.7	0.9	5.0	8.5	0.0
Cycle Q Clear(g_c), s	4.5	4.7	0.9	5.0	8.5	0.0
Prop In Lane		1.00	1.00		0.87	0.12
Lane Grp Cap(c), veh/h	475	402	144	776	579	0
V/C Ratio(X)	0.55	0.57	0.32	0.45	0.77	0.00
Avail Cap(c_a), veh/h	2512	2129	335	3015	1885	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.0	12.1	16.2	7.8	11.2	0.0
Incr Delay (d2), s/veh	1.2	1.5	0.5	0.5	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.3	0.3	1.2	2.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.2	13.6	16.6	8.3	13.8	0.0
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	489			395	445	
Approach Delay, s/veh	13.4			9.3	13.8	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		19.9		17.3	6.0	13.9
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		60.0		40.0	7.0	50.0
Max Q Clear Time (g_c+I1), s		7.0		10.5	2.9	6.7
Green Ext Time (p_c), s		2.5		1.8	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	278	134	707	687	81	180	360	526	30	784	50
Future Volume (veh/h)	31	278	134	707	687	81	180	360	526	30	784	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	39	348	0	884	859	0	225	450	0	38	980	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	552		983	1766		285	1241		172	1125	
Arrive On Green	0.04	0.11	0.00	0.28	0.35	0.00	0.08	0.35	0.00	0.05	0.32	0.00
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	39	348	0	884	859	0	225	450	0	38	980	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.4	7.3	0.0	27.4	14.7	0.0	7.1	10.5	0.0	1.2	29.0	0.0
Cycle Q Clear(g_c), s	2.4	7.3	0.0	27.4	14.7	0.0	7.1	10.5	0.0	1.2	29.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	552		983	1766		285	1241		172	1125	
V/C Ratio(X)	0.58	0.63		0.90	0.49		0.79	0.36		0.22	0.87	
Avail Cap(c_a), veh/h	141	1532		1164	2803		310	1370		248	1306	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.7	47.5	0.0	38.3	28.6	0.0	50.1	27.0	0.0	50.8	35.9	0.0
Incr Delay (d2), s/veh	2.9	1.7	0.0	8.5	0.3	0.0	12.0	0.2	0.0	0.6	6.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.0	0.0	12.2	5.8	0.0	3.4	4.2	0.0	0.5	12.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	49.2	0.0	46.8	28.9	0.0	62.1	27.2	0.0	51.5	41.9	0.0
LnGrp LOS	E	D		D	C		E	C		D	D	
Approach Vol, veh/h		387			1743			675			1018	
Approach Delay, s/veh		49.9			38.0			38.8			42.2	
Approach LOS		D			D			D			D	

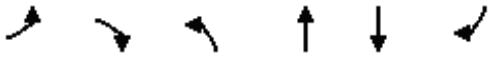
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	44.6	14.7	41.3	37.2	18.1	11.0	45.0
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	8.8	61.1	10.0	40.9	37.5	33.4	8.0	42.9
Max Q Clear Time (g_c+I1), s	4.4	16.7	9.1	31.0	29.4	9.3	3.2	12.5
Green Ext Time (p_c), s	0.0	9.5	0.1	4.3	2.3	2.8	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	40.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



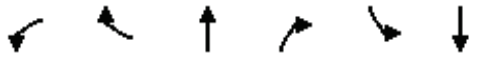
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	104	482	946	362	423
Future Volume (veh/h)	150	104	482	946	362	423
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	163	20	524	1028	393	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	271	242	600	2263	719	321
Arrive On Green	0.15	0.15	0.33	0.63	0.20	0.20
Sat Flow, veh/h	1810	1610	1810	3705	3705	1610
Grp Volume(v), veh/h	163	20	524	1028	393	106
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1805	1805	1610
Q Serve(g_s), s	4.1	0.5	13.3	7.3	4.8	2.8
Cycle Q Clear(g_c), s	4.1	0.5	13.3	7.3	4.8	2.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	271	242	600	2263	719	321
V/C Ratio(X)	0.60	0.08	0.87	0.45	0.55	0.33
Avail Cap(c_a), veh/h	703	626	937	3700	1484	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	17.9	15.4	4.8	17.6	16.8
Incr Delay (d2), s/veh	2.1	0.1	5.0	0.2	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.5	4.7	1.0	1.7	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.5	18.0	20.3	5.0	18.5	17.6
LnGrp LOS	C	B	C	A	B	B
Approach Vol, veh/h	183			1552	499	
Approach Delay, s/veh	21.2			10.1	18.3	
Approach LOS	C			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		36.9		12.0	20.9	15.9
Change Period (Y+Rc), s		6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s		50.1		* 19	* 25	20.1
Max Q Clear Time (g_c+I1), s		9.3		6.1	15.3	6.8
Green Ext Time (p_c), s		11.8		0.4	0.9	3.0

Intersection Summary		
HCM 6th Ctrl Delay		12.9
HCM 6th LOS		B

Notes

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



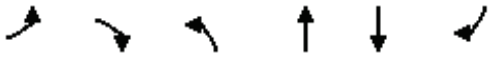
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	549	714	326	215	347	326
Future Volume (veh/h)	549	714	326	215	347	326
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.64	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	590	335	351	57	373	351
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	612	544	428	231	490	855
Arrive On Green	0.34	0.34	0.23	0.23	0.14	0.46
Sat Flow, veh/h	1781	1585	1870	1010	3456	1870
Grp Volume(v), veh/h	590	335	351	57	373	351
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1010	1728	1870
Q Serve(g_s), s	17.6	9.5	9.7	2.5	5.6	6.8
Cycle Q Clear(g_c), s	17.6	9.5	9.7	2.5	5.6	6.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	612	544	428	231	490	855
V/C Ratio(X)	0.96	0.62	0.82	0.25	0.76	0.41
Avail Cap(c_a), veh/h	612	544	504	272	1040	1229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	14.8	19.8	17.1	22.4	9.8
Incr Delay (d2), s/veh	27.7	2.3	9.5	0.7	0.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	3.1	4.6	0.5	2.0	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.2	17.1	29.4	17.7	23.3	10.2
LnGrp LOS	D	B	C	B	C	B
Approach Vol, veh/h	925		408			724
Approach Delay, s/veh	35.0		27.7			16.9
Approach LOS	C		C			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.4	17.8			30.2	24.0
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 16	14.6			35.6	18.6
Max Q Clear Time (g_c+I1), s	7.6	11.7			8.8	19.6
Green Ext Time (p_c), s	0.1	0.7			2.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C

Notes

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



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	83	60	330	743	560	584
Future Volume (veh/h)	83	60	330	743	560	584
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	7	359	808	609	280
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	203	180	425	1345	741	628
Arrive On Green	0.11	0.11	0.24	0.72	0.40	0.40
Sat Flow, veh/h	1781	1585	1781	1870	1870	1585
Grp Volume(v), veh/h	90	7	359	808	609	280
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	1870	1585
Q Serve(g_s), s	2.5	0.2	10.3	11.5	15.7	7.0
Cycle Q Clear(g_c), s	2.5	0.2	10.3	11.5	15.7	7.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	203	180	425	1345	741	628
V/C Ratio(X)	0.44	0.04	0.84	0.60	0.82	0.45
Avail Cap(c_a), veh/h	596	530	612	1842	1043	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	21.2	19.5	3.7	14.5	11.9
Incr Delay (d2), s/veh	1.5	0.1	7.3	0.4	3.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.1	4.3	0.8	5.5	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.8	21.3	26.8	4.2	18.2	12.4
LnGrp LOS	C	C	C	A	B	B
Approach Vol, veh/h	97			1167	889	
Approach Delay, s/veh	23.6			11.1	16.4	
Approach LOS	C			B	B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.4	25.8		10.6		43.2
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	18.5	30.0		18.0		53.0
Max Q Clear Time (g_c+I1), s	12.3	17.7		4.5		13.5
Green Ext Time (p_c), s	0.6	3.7		0.2		6.0

Intersection Summary			
HCM 6th Ctrl Delay		13.9	
HCM 6th LOS		B	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	504	149	53	867	430	64
Future Volume (veh/h)	504	149	53	867	430	64
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	548	162	58	942	467	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	821	696	93	1060	530	472
Arrive On Green	0.43	0.43	0.05	0.56	0.29	0.29
Sat Flow, veh/h	1900	1610	1810	1900	1810	1610
Grp Volume(v), veh/h	548	162	58	942	467	70
Grp Sat Flow(s),veh/h/ln	1900	1610	1810	1900	1810	1610
Q Serve(g_s), s	13.9	3.8	1.9	26.3	14.9	1.9
Cycle Q Clear(g_c), s	13.9	3.8	1.9	26.3	14.9	1.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	821	696	93	1060	530	472
V/C Ratio(X)	0.67	0.23	0.62	0.89	0.88	0.15
Avail Cap(c_a), veh/h	944	800	150	1243	644	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	10.8	28.1	11.7	20.3	15.8
Incr Delay (d2), s/veh	1.5	0.2	6.6	7.3	11.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	1.2	1.0	10.6	7.4	2.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.2	11.0	34.7	19.0	32.0	15.9
LnGrp LOS	B	B	C	B	C	B
Approach Vol, veh/h	710			1000	537	
Approach Delay, s/veh	14.2			19.9	29.9	
Approach LOS	B			B	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		38.2		22.2	7.6	30.6
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		39.5		21.5	5.0	30.0
Max Q Clear Time (g_c+I1), s		28.3		16.9	3.9	15.9
Green Ext Time (p_c), s		5.4		0.8	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	197	93	319	51	409	144	894	121	385	623	12
Future Volume (veh/h)	31	197	93	319	51	409	144	894	121	385	623	12
Initial Q (Qb), veh	0	0	0	0	0	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	36	226	18	367	59	168	166	1028	40	443	716	5
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	53	272	230	388	624	930	195	1196	533	482	1304	582
Arrive On Green	0.03	0.15	0.15	0.22	0.33	0.33	0.11	0.34	0.34	0.14	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	1870	2787	1781	3554	1584	3456	3554	1585
Grp Volume(v), veh/h	36	226	18	367	59	168	166	1028	40	443	716	5
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1394	1781	1777	1584	1728	1777	1585
Q Serve(g_s), s	2.3	13.5	1.1	23.3	2.5	4.9	10.5	31.0	2.0	14.5	18.3	0.2
Cycle Q Clear(g_c), s	2.3	13.5	1.1	23.3	2.5	4.9	10.5	31.0	2.0	14.5	18.3	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	272	230	388	624	930	195	1196	533	482	1304	582
V/C Ratio(X)	0.68	0.83	0.08	0.94	0.09	0.18	0.85	0.86	0.08	0.92	0.55	0.01
Avail Cap(c_a), veh/h	93	440	373	388	750	1118	233	1196	533	482	1304	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	47.6	42.4	44.1	26.3	27.1	50.2	35.5	25.9	48.7	28.8	23.0
Incr Delay (d2), s/veh	14.2	7.1	0.1	31.8	0.1	0.1	22.1	8.1	0.3	22.7	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.8	0.4	13.3	1.1	1.6	5.7	14.0	0.8	7.6	7.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.2	54.7	42.5	75.9	26.4	27.2	72.2	43.6	26.1	71.4	30.4	23.1
LnGrp LOS	E	D	D	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h		280			594			1234			1164	
Approach Delay, s/veh		55.8			57.2			46.9			46.0	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	47.9	29.0	21.2	20.0	44.4	7.4	42.8
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	15.0	39.6	25.0	27.0	16.0	38.6	6.0	46.0
Max Q Clear Time (g_c+I1), s	12.5	20.3	25.3	15.5	16.5	33.0	4.3	6.9
Green Ext Time (p_c), s	0.1	4.3	0.0	1.0	0.0	3.1	0.0	0.9

Intersection Summary			
HCM 6th Ctrl Delay		49.2	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	54	65	630	66	167	76	772	645	152	764	38
Future Volume (veh/h)	54	54	65	630	66	167	76	772	645	152	764	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		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	58	58	0	677	71	123	82	830	605	163	822	12
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	301		853	488	541	137	1210	930	282	1227	544
Arrive On Green	0.07	0.08	0.00	0.25	0.26	0.26	0.08	0.34	0.34	0.08	0.35	0.35
Sat Flow, veh/h	1781	3647	0	3456	1870	1576	1781	3554	1580	3456	3554	1576
Grp Volume(v), veh/h	58	58	0	677	71	123	82	830	605	163	822	12
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1576	1781	1777	1580	1728	1777	1576
Q Serve(g_s), s	3.8	1.9	0.0	22.4	3.6	6.8	5.4	24.5	31.2	5.5	24.0	0.6
Cycle Q Clear(g_c), s	3.8	1.9	0.0	22.4	3.6	6.8	5.4	24.5	31.2	5.5	24.0	0.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	301		853	488	541	137	1210	930	282	1227	544
V/C Ratio(X)	0.46	0.19		0.79	0.15	0.23	0.60	0.69	0.65	0.58	0.67	0.02
Avail Cap(c_a), veh/h	172	364		1347	740	753	227	1647	1124	383	1589	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	51.9	0.0	43.0	34.6	28.6	54.4	34.6	16.8	53.9	34.0	26.3
Incr Delay (d2), s/veh	3.7	0.4	0.0	3.6	0.2	0.3	5.8	0.7	1.0	2.6	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.9	0.0	9.8	1.6	2.6	2.6	10.3	10.7	2.5	10.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.2	52.4	0.0	46.6	34.8	28.9	60.3	35.3	17.8	56.6	35.0	26.3
LnGrp LOS	E	D		D	C	C	E	D	B	E	C	C
Approach Vol, veh/h		116			871			1517			997	
Approach Delay, s/veh		55.3			43.1			29.7			38.4	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	49.0	37.6	17.8	16.9	49.6	16.1	39.3
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	13.5	56.5	47.5	12.5	15.5	54.5	11.8	48.2
Max Q Clear Time (g_c+I1), s	7.5	33.2	24.4	3.9	7.4	26.0	5.8	8.8
Green Ext Time (p_c), s	0.3	8.3	5.7	0.2	0.1	8.3	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	36.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	703	78	321	513	276	55	76	279	414	31	324
Future Volume (veh/h)	245	703	78	321	513	276	55	76	279	414	31	324
Initial Q (Qb), veh	0	0	0	0	0	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	295	847	33	387	618	123	66	92	252	499	37	109
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	1168	521	459	1265	564	136	310	473	577	480	406
Arrive On Green	0.11	0.33	0.33	0.13	0.36	0.36	0.08	0.17	0.17	0.17	0.26	0.26
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	1781	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	295	847	33	387	618	123	66	92	252	499	37	109
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1781	1870	1585	1728	1870	1585
Q Serve(g_s), s	8.2	20.7	1.4	10.8	13.4	5.3	3.5	4.3	13.1	13.9	1.5	5.4
Cycle Q Clear(g_c), s	8.2	20.7	1.4	10.8	13.4	5.3	3.5	4.3	13.1	13.9	1.5	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	365	1168	521	459	1265	564	136	310	473	577	480	406
V/C Ratio(X)	0.81	0.73	0.06	0.84	0.49	0.22	0.49	0.30	0.53	0.86	0.08	0.27
Avail Cap(c_a), veh/h	421	1168	521	526	1265	564	163	455	596	666	645	546
HCM Platoon Ratio	1.00	1.00	1.00	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	43.1	29.2	22.7	41.7	24.8	22.2	43.7	36.1	28.8	40.0	27.8	29.3
Incr Delay (d2), s/veh	9.9	3.9	0.2	10.7	1.4	0.9	2.7	0.8	1.3	10.3	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	9.0	0.5	5.0	5.4	2.0	1.6	1.9	4.9	6.4	0.6	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	33.1	22.9	52.4	26.1	23.1	46.4	36.9	30.2	50.3	27.9	29.8
LnGrp LOS	D	C	C	D	C	C	D	D	C	D	C	C
Approach Vol, veh/h		1175			1128			410			645	
Approach Delay, s/veh		37.8			34.8			34.3			45.6	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	38.9	20.5	22.1	14.4	41.6	11.5	31.1
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	15.0	* 32	19.0	24.0	12.0	34.7	9.0	34.0
Max Q Clear Time (g_c+I1), s	12.8	22.7	15.9	15.1	10.2	15.4	5.5	7.4
Green Ext Time (p_c), s	0.3	4.9	0.6	1.3	0.2	5.6	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	486	595	30	421	776	51
Future Volume (veh/h)	486	595	30	421	776	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	491	425	30	425	784	50
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	608	515	67	737	841	54
Arrive On Green	0.33	0.33	0.04	0.39	0.51	0.51
Sat Flow, veh/h	1870	1585	1781	1870	1660	106
Grp Volume(v), veh/h	491	425	30	425	835	0
Grp Sat Flow(s),veh/h/ln	1870	1585	1781	1870	1768	0
Q Serve(g_s), s	22.9	23.6	1.6	17.0	42.1	0.0
Cycle Q Clear(g_c), s	22.9	23.6	1.6	17.0	42.1	0.0
Prop In Lane		1.00	1.00		0.94	0.06
Lane Grp Cap(c), veh/h	608	515	67	737	895	0
V/C Ratio(X)	0.81	0.82	0.45	0.58	0.93	0.00
Avail Cap(c_a), veh/h	912	773	75	1049	1242	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.4	29.7	44.9	22.6	22.0	0.0
Incr Delay (d2), s/veh	3.8	5.2	1.7	0.9	10.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	9.0	0.7	7.0	17.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.2	34.8	46.7	23.5	32.7	0.0
LnGrp LOS	C	C	D	C	C	A
Approach Vol, veh/h	916			455	835	
Approach Delay, s/veh	34.0			25.0	32.7	
Approach LOS	C			C	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		42.1		53.3	6.6	35.5
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		53.5		67.0	4.0	46.5
Max Q Clear Time (g_c+I1), s		19.0		44.1	3.6	25.6
Green Ext Time (p_c), s		3.1		4.1	0.0	5.4

Intersection Summary		
HCM 6th Ctrl Delay		31.6
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	990	230	380	660	100	320	749	706	70	510	40
Future Volume (veh/h)	90	990	230	380	660	100	320	749	706	70	510	40
Initial Q (Qb), veh	0	0	0	0	0	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	110	1207	0	463	805	0	390	913	0	85	622	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	136	1416		515	1744		456	1106		221	865	
Arrive On Green	0.08	0.28	0.00	0.15	0.34	0.00	0.13	0.31	0.00	0.06	0.24	0.00
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	110	1207	0	463	805	0	390	913	0	85	622	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.1	26.2	0.0	15.4	14.4	0.0	12.9	27.9	0.0	2.8	18.8	0.0
Cycle Q Clear(g_c), s	7.1	26.2	0.0	15.4	14.4	0.0	12.9	27.9	0.0	2.8	18.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	136	1416		515	1744		456	1106		221	865	
V/C Ratio(X)	0.81	0.85		0.90	0.46		0.86	0.83		0.38	0.72	
Avail Cap(c_a), veh/h	242	1501		517	1744		552	1577		236	1252	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	53.2	40.0	0.0	48.9	30.1	0.0	49.7	37.3	0.0	52.5	40.6	0.0
Incr Delay (d2), s/veh	4.3	5.0	0.0	18.6	0.3	0.0	10.8	2.5	0.0	1.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	10.9	0.0	7.8	5.7	0.0	6.1	11.8	0.0	1.2	8.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.5	45.0	0.0	67.5	30.4	0.0	60.5	39.9	0.0	53.6	41.7	0.0
LnGrp LOS	E	D		E	C		E	D		D	D	
Approach Vol, veh/h		1317			1268			1303			707	
Approach Delay, s/veh		46.0			43.9			46.0			43.1	
Approach LOS		D			D			D			D	

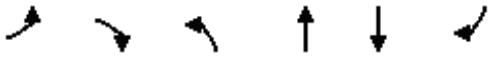
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	46.1	20.9	34.6	22.9	38.5	13.0	42.5
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	15.9	35.0	18.7	41.2	17.5	34.4	8.0	51.9
Max Q Clear Time (g_c+I1), s	9.1	16.4	14.9	20.8	17.4	28.2	4.8	29.9
Green Ext Time (p_c), s	0.1	6.6	0.5	3.6	0.0	4.3	0.0	5.9

Intersection Summary	
HCM 6th Ctrl Delay	45.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



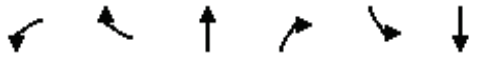
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	691	410	86	768	868	181
Future Volume (veh/h)	691	410	86	768	868	181
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	751	314	93	835	943	167
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	799	711	132	1554	1091	487
Arrive On Green	0.44	0.44	0.07	0.43	0.30	0.30
Sat Flow, veh/h	1810	1610	1810	3705	3705	1610
Grp Volume(v), veh/h	751	314	93	835	943	167
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1805	1805	1610
Q Serve(g_s), s	33.8	11.5	4.3	14.6	21.0	6.9
Cycle Q Clear(g_c), s	33.8	11.5	4.3	14.6	21.0	6.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	799	711	132	1554	1091	487
V/C Ratio(X)	0.94	0.44	0.70	0.54	0.86	0.34
Avail Cap(c_a), veh/h	856	762	149	1644	1148	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	16.5	38.6	18.0	28.1	23.1
Incr Delay (d2), s/veh	17.4	0.4	11.1	0.4	7.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.1	0.1	2.2	5.4	9.2	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.1	16.9	49.7	18.4	35.1	23.7
LnGrp LOS	D	B	D	B	D	C
Approach Vol, veh/h	1065			928	1110	
Approach Delay, s/veh	33.3			21.5	33.4	
Approach LOS	C			C	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		42.9		42.3	10.9	32.0
Change Period (Y+Rc), s		6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s		38.8		* 40	* 7	27.1
Max Q Clear Time (g_c+I1), s		16.6		35.8	6.3	23.0
Green Ext Time (p_c), s		7.4		1.9	0.0	2.7

Intersection Summary		
HCM 6th Ctrl Delay		29.8
HCM 6th LOS		C

Notes

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



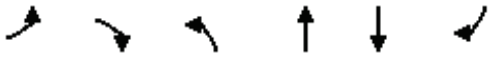
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	526	734	357	691	765	469
Future Volume (veh/h)	526	734	357	691	765	469
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.65	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	548	363	372	224	797	489
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	587	523	448	248	810	998
Arrive On Green	0.33	0.33	0.24	0.24	0.23	0.53
Sat Flow, veh/h	1781	1585	1870	1035	3456	1870
Grp Volume(v), veh/h	548	363	372	224	797	489
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1035	1728	1870
Q Serve(g_s), s	23.5	15.7	14.9	16.6	18.1	13.0
Cycle Q Clear(g_c), s	23.5	15.7	14.9	16.6	18.1	13.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	587	523	448	248	810	998
V/C Ratio(X)	0.93	0.69	0.83	0.90	0.98	0.49
Avail Cap(c_a), veh/h	600	534	460	254	810	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	23.0	28.5	29.1	30.1	11.6
Incr Delay (d2), s/veh	21.7	4.0	12.1	32.1	27.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	5.9	7.6	6.0	9.9	4.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.3	27.0	40.6	61.3	57.7	12.1
LnGrp LOS	D	C	D	E	E	B
Approach Vol, veh/h	911		596			1286
Approach Delay, s/veh	39.2		48.4			40.3
Approach LOS	D		D			D

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	23.2	24.3			47.5	31.4
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 19	19.4			42.6	26.6
Max Q Clear Time (g_c+I1), s	20.1	18.6			15.0	25.5
Green Ext Time (p_c), s	0.0	0.3			3.6	0.5

Intersection Summary	
HCM 6th Ctrl Delay	41.7
HCM 6th LOS	D

Notes

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



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	358	180	320	857	795	235
Future Volume (veh/h)	358	180	320	857	795	235
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	389	43	348	932	864	175
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	393	350	349	1317	881	746
Arrive On Green	0.22	0.22	0.20	0.70	0.47	0.47
Sat Flow, veh/h	1781	1585	1781	1870	1870	1585
Grp Volume(v), veh/h	389	43	348	932	864	175
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	1870	1585
Q Serve(g_s), s	26.1	2.6	23.4	35.3	54.5	7.9
Cycle Q Clear(g_c), s	26.1	2.6	23.4	35.3	54.5	7.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	393	350	349	1317	881	746
V/C Ratio(X)	0.99	0.12	1.00	0.71	0.98	0.23
Avail Cap(c_a), veh/h	393	350	349	1317	881	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	37.4	48.2	10.5	31.2	18.9
Incr Delay (d2), s/veh	42.3	0.2	47.5	1.8	25.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	1.0	14.5	11.9	28.5	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	88.9	37.6	95.7	12.2	56.9	19.0
LnGrp LOS	F	D	F	B	E	B
Approach Vol, veh/h	432			1280	1039	
Approach Delay, s/veh	83.8			34.9	50.5	
Approach LOS	F			C	D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	28.0	61.0		31.0		89.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	23.5	56.5		26.5		84.5
Max Q Clear Time (g_c+I1), s	25.4	56.5		28.1		37.3
Green Ext Time (p_c), s	0.0	0.0		0.0		7.9

Intersection Summary			
HCM 6th Ctrl Delay		48.5	
HCM 6th LOS		D	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1036	385	192	636	282	125
Future Volume (veh/h)	1036	385	192	636	282	125
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1126	418	209	691	307	136
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1132	959	219	1433	309	275
Arrive On Green	0.60	0.60	0.12	0.75	0.17	0.17
Sat Flow, veh/h	1900	1610	1810	1900	1810	1610
Grp Volume(v), veh/h	1126	418	209	691	307	136
Grp Sat Flow(s),veh/h/ln	1900	1610	1810	1900	1810	1610
Q Serve(g_s), s	70.6	17.0	13.8	16.9	20.3	9.2
Cycle Q Clear(g_c), s	70.6	17.0	13.8	16.9	20.3	9.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1132	959	219	1433	309	275
V/C Ratio(X)	0.99	0.44	0.96	0.48	0.99	0.49
Avail Cap(c_a), veh/h	1132	959	219	1433	309	275
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	13.2	52.4	5.7	49.7	45.1
Incr Delay (d2), s/veh	25.4	0.3	48.3	0.3	49.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	37.2	6.1	9.2	5.9	13.4	8.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.4	13.6	100.8	6.0	98.9	46.4
LnGrp LOS	D	B	F	A	F	D
Approach Vol, veh/h	1544			900	443	
Approach Delay, s/veh	39.7			28.0	82.8	
Approach LOS	D			C	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		95.0		25.0	19.0	76.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		90.5		20.5	14.5	71.5
Max Q Clear Time (g_c+I1), s		18.9		22.3	15.8	72.6
Green Ext Time (p_c), s		5.9		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	858	319	836	0	1658	0	0	1135	524
Future Volume (veh/h)	0	0	0	858	319	836	0	1658	0	0	1135	524
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	0	0	1870	1870
Adj Flow Rate, veh/h				847	382	843	0	1709	0	0	1170	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	0	2	0	0	2	2
Cap, veh/h				1193	626	1061	0	1934	0	0	2779	
Arrive On Green				0.33	0.33	0.33	0.00	0.54	0.00	0.00	0.54	0.00
Sat Flow, veh/h				3563	1870	3170	0	3741	0	0	5274	1585
Grp Volume(v), veh/h				847	382	843	0	1709	0	0	1170	0
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	0	1777	0	0	1702	1585
Q Serve(g_s), s				19.7	16.2	22.9	0.0	40.1	0.0	0.0	12.9	0.0
Cycle Q Clear(g_c), s				19.7	16.2	22.9	0.0	40.1	0.0	0.0	12.9	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1193	626	1061	0	1934	0	0	2779	
V/C Ratio(X)				0.71	0.61	0.79	0.00	0.88	0.00	0.00	0.42	
Avail Cap(c_a), veh/h				1582	830	1408	0	2516	0	0	3616	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				27.6	26.4	28.6	0.0	19.0	0.0	0.0	12.8	0.0
Incr Delay (d2), s/veh				0.7	0.6	1.9	0.0	2.8	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	0.0
%ile BackOfQ(50%),veh/ln				8.3	7.1	8.7	0.0	14.7	0.0	0.0	4.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.3	27.0	30.6	0.0	21.8	0.0	0.0	12.8	0.0
LnGrp LOS				C	C	C	A	C	A	A	B	
Approach Vol, veh/h					2072			1709			1170	
Approach Delay, s/veh					29.0			21.8			12.8	
Approach LOS					C			C			B	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	57.4		57.4		37.6			
Change Period (Y+Rc), s	5.7		5.7		5.8			
Max Green Setting (Gmax), s	67.3		67.3		42.2			
Max Q Clear Time (g_c+I1), s	42.1		14.9		24.9			
Green Ext Time (p_c), s	9.6		5.8		6.9			

Intersection Summary		
HCM 6th Ctrl Delay	22.7	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	0	392	0	0	0	0	1887	885	0	1502	0
Future Volume (veh/h)	95	0	392	0	0	0	0	1887	885	0	1502	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	65	0	379				0	1945	654	0	1548	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	278	0	495				0	2247	1764	0	3229	0
Arrive On Green	0.16	0.00	0.16				0.00	0.63	0.63	0.00	0.63	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	65	0	379				0	1945	654	0	1548	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	1.6	0.0	5.9				0.0	22.7	5.8	0.0	8.2	0.0
Cycle Q Clear(g_c), s	1.6	0.0	5.9				0.0	22.7	5.8	0.0	8.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	278	0	495				0	2247	1764	0	3229	0
V/C Ratio(X)	0.23	0.00	0.76				0.00	0.87	0.37	0.00	0.48	0.00
Avail Cap(c_a), veh/h	1185	0	2109				0	2434	1911	0	3498	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	18.9	0.0	20.7				0.0	7.6	4.5	0.0	5.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.9				0.0	3.1	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	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.0				0.0	4.5	0.7	0.0	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	0.0	21.6				0.0	10.7	4.6	0.0	5.0	0.0
LnGrp LOS	B	A	C				A	B	A	A	A	A
Approach Vol, veh/h		444						2599			1548	
Approach Delay, s/veh		21.2						9.2			5.0	
Approach LOS		C						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	38.0	13.1	38.0
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	24.7	7.9	10.2
Green Ext Time (p_c), s	7.6	0.1	7.9

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	15	29	147	53	693	46	943	91	373	1108	58
Future Volume (veh/h)	15	15	29	147	53	693	46	943	91	373	1108	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	16	4	158	57	415	49	1014	31	401	1191	31
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	371	315	172	519	439	63	1091	486	422	1806	806
Arrive On Green	0.02	0.20	0.20	0.10	0.28	0.28	0.04	0.31	0.31	0.24	0.51	0.51
Sat Flow, veh/h	1781	1870	1585	1781	1870	1582	1781	3554	1582	1781	3554	1585
Grp Volume(v), veh/h	16	16	4	158	57	415	49	1014	31	401	1191	31
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1582	1781	1777	1582	1781	1777	1585
Q Serve(g_s), s	1.0	0.8	0.2	10.0	2.6	29.3	3.1	31.6	1.6	25.3	28.3	1.1
Cycle Q Clear(g_c), s	1.0	0.8	0.2	10.0	2.6	29.3	3.1	31.6	1.6	25.3	28.3	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	371	315	172	519	439	63	1091	486	422	1806	806
V/C Ratio(X)	0.52	0.04	0.01	0.92	0.11	0.95	0.78	0.93	0.06	0.95	0.66	0.04
Avail Cap(c_a), veh/h	78	443	375	172	541	458	125	1091	486	422	1806	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	36.9	36.7	51.1	30.7	40.3	54.6	38.3	27.9	42.9	20.7	14.1
Incr Delay (d2), s/veh	12.6	0.0	0.0	46.1	0.1	28.2	18.1	14.9	0.3	31.5	1.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	0.1	6.5	1.1	14.3	1.7	15.3	0.6	14.3	11.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.1	37.0	36.7	97.1	30.8	68.6	72.7	53.2	28.2	74.3	22.6	14.2
LnGrp LOS	E	D	D	F	C	E	E	D	C	E	C	B
Approach Vol, veh/h		36			630			1094			1623	
Approach Delay, s/veh		50.8			72.3			53.3			35.3	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	63.8	15.0	27.2	31.0	40.8	6.0	36.3
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	4.0	54.0	11.0	27.0	27.0	35.0	5.0	33.0
Max Q Clear Time (g_c+I1), s	5.1	30.3	12.0	2.8	27.3	33.6	3.0	31.3
Green Ext Time (p_c), s	0.0	8.8	0.0	0.0	0.0	0.9	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	48.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	176	94	784	98	245	92	798	552	168	1066	48
Future Volume (veh/h)	47	176	94	784	98	245	92	798	552	168	1066	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	181	0	808	101	192	95	823	213	173	1099	17
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	303		930	550	570	123	1285	572	245	1291	561
Arrive On Green	0.06	0.09	0.00	0.27	0.29	0.29	0.07	0.36	0.36	0.07	0.36	0.36
Sat Flow, veh/h	1781	3647	0	3456	1870	1557	1781	3554	1583	3456	3554	1543
Grp Volume(v), veh/h	48	181	0	808	101	192	95	823	213	173	1099	17
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1557	1781	1777	1583	1728	1777	1543
Q Serve(g_s), s	3.7	6.9	0.0	31.4	5.7	12.6	7.4	27.1	14.0	6.9	40.1	1.0
Cycle Q Clear(g_c), s	3.7	6.9	0.0	31.4	5.7	12.6	7.4	27.1	14.0	6.9	40.1	1.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	303		930	550	570	123	1285	572	245	1291	561
V/C Ratio(X)	0.45	0.60		0.87	0.18	0.34	0.77	0.64	0.37	0.71	0.85	0.03
Avail Cap(c_a), veh/h	127	371		1068	640	646	158	1447	644	356	1497	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.9	62.1	0.0	49.1	37.1	32.4	64.4	37.3	33.1	63.9	41.3	28.8
Incr Delay (d2), s/veh	4.1	2.7	0.0	8.3	0.2	0.5	18.5	0.8	0.4	5.2	4.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.3	0.0	14.4	2.6	4.8	3.9	11.6	5.4	3.2	17.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.0	64.7	0.0	57.4	37.3	32.9	82.9	38.1	33.5	69.2	46.0	28.9
LnGrp LOS	E	E		E	D	C	F	D	C	E	D	C
Approach Vol, veh/h		229			1101			1131			1289	
Approach Delay, s/veh		65.4			51.3			41.0			48.9	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	58.4	45.4	19.5	17.3	58.6	16.0	48.9
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	14.5	57.3	43.5	14.7	12.5	59.3	10.0	48.2
Max Q Clear Time (g_c+I1), s	9.9	29.1	33.4	8.9	9.4	42.1	5.7	14.6
Green Ext Time (p_c), s	0.3	6.6	4.5	0.6	0.1	9.0	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	48.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	123	86	53	333	13	219	386	51	12	636	180
Future Volume (veh/h)	37	123	86	53	333	13	219	386	51	12	636	180
Initial Q (Qb), veh	0	0	0	0	0	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	135	16	58	366	3	241	424	30	13	699	63
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	577	257	94	615	273	302	1590	708	29	1046	466
Arrive On Green	0.04	0.16	0.16	0.05	0.17	0.17	0.17	0.45	0.45	0.02	0.29	0.29
Sat Flow, veh/h	1781	3554	1582	1781	3554	1580	1781	3554	1583	1781	3554	1582
Grp Volume(v), veh/h	41	135	16	58	366	3	241	424	30	13	699	63
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1781	1777	1580	1781	1777	1583	1781	1777	1582
Q Serve(g_s), s	1.3	1.9	0.5	1.8	5.5	0.1	7.5	4.3	0.6	0.4	9.9	1.7
Cycle Q Clear(g_c), s	1.3	1.9	0.5	1.8	5.5	0.1	7.5	4.3	0.6	0.4	9.9	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	74	577	257	94	615	273	302	1590	708	29	1046	466
V/C Ratio(X)	0.55	0.23	0.06	0.62	0.60	0.01	0.80	0.27	0.04	0.45	0.67	0.14
Avail Cap(c_a), veh/h	619	2470	1100	619	2470	1099	619	2470	1101	619	2470	1100
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	21.0	20.4	26.7	21.9	19.7	23.0	10.0	9.0	28.0	17.8	14.9
Incr Delay (d2), s/veh	6.2	0.2	0.1	6.5	0.9	0.0	4.9	0.1	0.0	10.4	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	0.2	0.9	2.0	0.0	3.2	1.3	0.2	0.2	3.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.3	21.2	20.5	33.2	22.9	19.7	27.8	10.1	9.0	38.5	18.6	15.1
LnGrp LOS	C	C	C	C	C	B	C	B	A	D	B	B
Approach Vol, veh/h		192			427			695			775	
Approach Delay, s/veh		23.7			24.2			16.2			18.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	14.0	4.9	31.5	6.4	14.7	13.7	22.7
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	3.3	3.9	2.4	6.3	3.3	7.5	9.5	11.9
Green Ext Time (p_c), s	0.1	0.8	0.0	2.9	0.1	2.3	0.5	4.9

Intersection Summary	
HCM 6th Ctrl Delay	19.4
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)	318	288	121	62	555	298	261	460	61	12	523	309
Future Volume (veh/h)	318	288	121	62	555	298	261	460	61	12	523	309
Initial Q (Qb), veh	0	0	0	0	0	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	342	310	50	67	597	126	281	495	63	13	562	155
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	739	626	97	661	559	172	643	82	44	605	513
Arrive On Green	0.10	0.39	0.39	0.05	0.35	0.35	0.10	0.40	0.40	0.02	0.32	0.32
Sat Flow, veh/h	1781	1870	1585	1781	1870	1583	1781	1626	207	1781	1870	1585
Grp Volume(v), veh/h	342	310	50	67	597	126	281	0	558	13	562	155
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1583	1781	0	1833	1781	1870	1585
Q Serve(g_s), s	15.0	18.7	3.1	5.8	47.2	8.7	15.0	0.0	41.2	1.1	45.2	11.4
Cycle Q Clear(g_c), s	15.0	18.7	3.1	5.8	47.2	8.7	15.0	0.0	41.2	1.1	45.2	11.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	172	739	626	97	661	559	172	0	724	44	605	513
V/C Ratio(X)	1.99	0.42	0.08	0.69	0.90	0.23	1.64	0.00	0.77	0.29	0.93	0.30
Avail Cap(c_a), veh/h	172	739	626	172	661	559	172	0	724	172	661	560
HCM Platoon Ratio	1.00	1.00	1.00	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	70.3	34.2	29.4	72.3	47.8	35.4	70.3	0.0	40.9	74.6	50.9	39.5
Incr Delay (d2), s/veh	466.9	1.7	0.2	8.3	18.0	0.9	311.6	0.0	5.4	3.6	19.2	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(50%),veh/ln	29.0	8.8	1.2	2.8	24.5	3.5	21.6	0.0	19.2	0.6	23.9	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	537.3	35.9	29.7	80.6	65.9	36.3	382.0	0.0	46.3	78.2	70.1	39.9
LnGrp LOS	F	D	C	F	E	D	F	A	D	E	E	D
Approach Vol, veh/h		702			790			839			730	
Approach Delay, s/veh		279.7			62.4			158.8			63.8	
Approach LOS		F			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	68.0	7.9	67.3	19.0	61.5	19.0	56.2
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	15.0	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	17.0	20.7	3.1	43.2	17.0	49.2	17.0	47.2
Green Ext Time (p_c), s	0.1	2.9	0.0	0.0	0.0	2.6	0.0	3.2

Intersection Summary	
HCM 6th Ctrl Delay	139.0
HCM 6th LOS	F

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)	193	1082	161	0	827	310	0	0	0	639	33	187
Future Volume (veh/h)	193	1082	161	0	827	310	0	0	0	639	33	187
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	217	1216	121	0	929	0				744	0	70
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	365	1873	818	0	1730					1026	0	451
Arrive On Green	0.11	0.53	0.53	0.00	0.34	0.00				0.29	0.00	0.29
Sat Flow, veh/h	3456	3554	1551	0	5274	1585				3563	0	1565
Grp Volume(v), veh/h	217	1216	121	0	929	0				744	0	70
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	0	1702	1585				1781	0	1565
Q Serve(g_s), s	3.4	14.0	2.3	0.0	8.4	0.0				10.7	0.0	1.9
Cycle Q Clear(g_c), s	3.4	14.0	2.3	0.0	8.4	0.0				10.7	0.0	1.9
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	365	1873	818	0	1730					1026	0	451
V/C Ratio(X)	0.59	0.65	0.15	0.00	0.54					0.72	0.00	0.16
Avail Cap(c_a), veh/h	1824	2501	1092	0	3594					1880	0	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	24.2	9.7	6.9	0.0	15.2	0.0				18.2	0.0	15.1
Incr Delay (d2), s/veh	1.7	0.5	0.1	0.0	0.3	0.0				1.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.9	0.6	0.0	2.7	0.0				4.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	10.2	7.0	0.0	15.5	0.0				19.4	0.0	15.3
LnGrp LOS	C	B	A	A	B					B	A	B
Approach Vol, veh/h		1554			929						814	
Approach Delay, s/veh		12.1			15.5						19.0	
Approach LOS		B			B						B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	35.4		21.5	10.7	24.7
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	16.0		12.7	5.4	10.4
Green Ext Time (p_c), s	12.2		3.7	0.8	8.9

Intersection Summary	
HCM 6th Ctrl Delay	14.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	269	145	40	445	258	103
Future Volume (veh/h)	269	145	40	445	258	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	309	149	46	511	297	104
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	417	201	125	913	378	132
Arrive On Green	0.35	0.35	0.07	0.49	0.30	0.30
Sat Flow, veh/h	1192	575	1781	1870	1274	446
Grp Volume(v), veh/h	0	458	46	511	402	0
Grp Sat Flow(s),veh/h/ln	0	1767	1781	1870	1725	0
Q Serve(g_s), s	0.0	10.0	1.1	8.5	9.4	0.0
Cycle Q Clear(g_c), s	0.0	10.0	1.1	8.5	9.4	0.0
Prop In Lane		0.33	1.00		0.74	0.26
Lane Grp Cap(c), veh/h	0	618	125	913	511	0
V/C Ratio(X)	0.00	0.74	0.37	0.56	0.79	0.00
Avail Cap(c_a), veh/h	0	1603	687	1697	1565	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	12.6	19.6	8.0	14.2	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.7	0.7	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	0.4	2.1	3.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	14.7	20.2	8.6	17.5	0.0
LnGrp LOS	A	B	C	A	B	A
Approach Vol, veh/h	458			557	402	
Approach Delay, s/veh	14.7			9.6	17.5	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		26.0		18.1	6.1	19.9
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		40.0		40.0	17.0	40.0
Max Q Clear Time (g_c+I1), s		10.5		11.4	3.1	12.0
Green Ext Time (p_c), s		3.8		1.6	0.0	3.4

Intersection Summary		
HCM 6th Ctrl Delay		13.5
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	412	350	667	717	61	440	310	410	40	210	160
Future Volume (veh/h)	103	412	350	667	717	61	440	310	410	40	210	160
Initial Q (Qb), veh	0	0	0	0	0	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	515	0	834	896	0	550	388	0	50	262	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	842		948	1851		643	826		222	392	
Arrive On Green	0.07	0.16	0.00	0.27	0.36	0.00	0.19	0.23	0.00	0.06	0.11	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	129	515	0	834	896	0	550	388	0	50	262	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.2	8.2	0.0	20.3	11.9	0.0	13.5	8.3	0.0	1.2	6.2	0.0
Cycle Q Clear(g_c), s	3.2	8.2	0.0	20.3	11.9	0.0	13.5	8.3	0.0	1.2	6.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	842		948	1851		643	826		222	392	
V/C Ratio(X)	0.57	0.61		0.88	0.48		0.86	0.47		0.23	0.67	
Avail Cap(c_a), veh/h	736	1965		1122	2477		767	2084		315	1619	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.8	34.1	0.0	30.5	21.6	0.0	34.6	29.0	0.0	39.0	37.5	0.0
Incr Delay (d2), s/veh	0.8	1.0	0.0	7.3	0.3	0.0	8.2	0.4	0.0	0.5	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.2	0.0	8.7	4.4	0.0	6.0	3.3	0.0	0.5	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	35.1	0.0	37.8	21.9	0.0	42.8	29.5	0.0	39.5	39.5	0.0
LnGrp LOS	D	D		D	C		D	C		D	D	
Approach Vol, veh/h		644			1730			938			312	
Approach Delay, s/veh		36.2			29.6			37.3			39.5	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	37.9	21.8	15.8	29.6	20.6	11.1	26.5
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	18.7	42.6	19.5	40.0	28.5	33.8	8.0	51.5
Max Q Clear Time (g_c+I1), s	5.2	13.9	15.5	8.2	22.3	10.2	3.2	10.3
Green Ext Time (p_c), s	0.1	9.0	0.8	1.5	1.8	4.3	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	20	210	110	20	270	360	810	190	450	490	270
Future Volume (veh/h)	80	20	210	110	20	270	360	810	190	450	490	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	87	22	73	147	22	56	391	1080	73	600	653	134
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	415	318	269	237	44	111	565	1440	425	606	1309	1044
Arrive On Green	0.12	0.17	0.17	0.07	0.10	0.10	0.11	0.28	0.28	0.18	0.37	0.37
Sat Flow, veh/h	3510	1900	1610	3456	456	1160	5103	5106	1507	3456	3554	2834
Grp Volume(v), veh/h	87	22	73	147	0	78	391	1080	73	600	653	134
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1616	1701	1702	1507	1728	1777	1417
Q Serve(g_s), s	1.5	0.7	2.7	2.8	0.0	3.1	5.1	13.2	2.5	11.9	9.7	2.1
Cycle Q Clear(g_c), s	1.5	0.7	2.7	2.8	0.0	3.1	5.1	13.2	2.5	11.9	9.7	2.1
Prop In Lane	1.00		1.00	1.00		0.72	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	415	318	269	237	0	155	565	1440	425	606	1309	1044
V/C Ratio(X)	0.21	0.07	0.27	0.62	0.00	0.50	0.69	0.75	0.17	0.99	0.50	0.13
Avail Cap(c_a), veh/h	1641	1177	997	459	0	425	813	1902	562	606	1459	1163
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	24.0	24.9	31.0	0.0	29.4	29.3	22.4	18.5	28.2	16.7	14.3
Incr Delay (d2), s/veh	0.4	0.1	0.5	2.6	0.0	2.5	1.5	0.8	0.1	34.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.3	1.0	1.2	0.0	1.3	1.9	4.6	0.8	7.2	3.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	24.1	25.4	33.7	0.0	31.9	30.8	23.1	18.6	62.1	16.8	14.3
LnGrp LOS	C	C	C	C	A	C	C	C	B	E	B	B
Approach Vol, veh/h		182			225			1544			1387	
Approach Delay, s/veh		26.3			33.1			24.9			36.2	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	31.2	9.2	16.0	18.0	25.3	14.1	11.1
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	10.3	28.1	9.1	42.4	12.0	25.5	32.0	18.0
Max Q Clear Time (g_c+I1), s	7.1	11.7	4.8	4.7	13.9	15.2	3.5	5.1
Green Ext Time (p_c), s	0.5	1.3	0.2	0.3	0.0	3.5	0.4	0.3

Intersection Summary	
HCM 6th Ctrl Delay	30.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	199	335	422	1204	548	455
Future Volume (veh/h)	199	335	422	1204	548	455
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	216	55	459	1309	596	473
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	241	214	408	1493	516	409
Arrive On Green	0.13	0.13	0.23	0.79	0.53	0.53
Sat Flow, veh/h	1810	1610	1810	1900	981	779
Grp Volume(v), veh/h	216	55	459	1309	0	1069
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1760
Q Serve(g_s), s	15.8	4.1	30.3	63.8	0.0	70.7
Cycle Q Clear(g_c), s	15.8	4.1	30.3	63.8	0.0	70.7
Prop In Lane	1.00	1.00	1.00			0.44
Lane Grp Cap(c), veh/h	241	214	408	1493	0	925
V/C Ratio(X)	0.90	0.26	1.13	0.88	0.00	1.16
Avail Cap(c_a), veh/h	256	227	408	1493	0	925
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.4	52.3	52.1	9.9	0.0	31.9
Incr Delay (d2), s/veh	29.9	0.6	83.5	6.4	0.0	82.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.0	22.7	20.5	0.0	48.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	87.3	53.0	135.6	16.3	0.0	114.2
LnGrp LOS	F	D	F	B	A	F
Approach Vol, veh/h	271			1768	1069	
Approach Delay, s/veh	80.3			47.3	114.2	
Approach LOS	F			D	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		111.9		22.6	35.0	76.9
Change Period (Y+Rc), s		6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s		105.7		* 19	* 30	70.7
Max Q Clear Time (g_c+I1), s		65.8		17.8	32.3	72.7
Green Ext Time (p_c), s		24.0		0.1	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		73.2
HCM 6th LOS		E

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)	0	0	0	42	0	510	0	852	55	267	668	0
Future Volume (veh/h)	0	0	0	42	0	510	0	852	55	267	668	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	52	0	456	0	1065	67	334	835	0
Peak Hour Factor	0.92	0.92	0.92	0.80	0.92	0.80	0.92	0.80	0.80	0.80	0.80	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	186	0	482	295	820	52	359	916	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.47	0.47	0.20	0.49	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1741	110	1781	1870	0
Grp Volume(v), veh/h	0	0	0	52	0	456	0	0	1132	334	835	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1851	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	7.8	0.0	0.0	35.8	14.0	31.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.0	0.0	7.8	0.0	0.0	35.8	14.0	31.3	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	186	0	482	295	0	872	359	916	0
V/C Ratio(X)	0.00	0.00	0.00	0.28	0.00	0.95	0.00	0.00	1.30	0.93	0.91	0.00
Avail Cap(c_a), veh/h	0	195	0	186	0	482	295	0	872	359	1078	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	31.5	0.0	25.8	0.0	0.0	20.1	29.8	17.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	28.0	0.0	0.0	142.8	30.6	10.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.9	0.0	11.2	0.0	0.0	46.7	8.4	13.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.3	0.0	53.8	0.0	0.0	162.9	60.4	28.3	0.0
LnGrp LOS	A	A	A	C	A	D	A	A	F	E	C	A
Approach Vol, veh/h		0			508			1132			1169	
Approach Delay, s/veh		0.0			51.6			162.9			37.5	
Approach LOS					D			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	42.0		0.0	18.6	43.4		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 15	35.8		7.8	7.3	* 44		7.8				
Max Q Clear Time (g_c+I1), s	16.0	37.8		0.0	0.0	33.3		9.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		90.6
HCM 6th LOS		F

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)	259	580	218	226	882	195	316	958	143	261	553	125
Future Volume (veh/h)	259	580	218	226	882	195	316	958	143	261	553	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	285	637	0	248	969	104	347	1053	98	287	608	71
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	372	1447		334	1390	424	438	1462	446	405	984	433
Arrive On Green	0.11	0.28	0.00	0.10	0.27	0.27	0.13	0.29	0.29	0.12	0.28	0.28
Sat Flow, veh/h	3456	5106	1585	3456	5106	1557	3456	5106	1558	3456	3554	1563
Grp Volume(v), veh/h	285	637	0	248	969	104	347	1053	98	287	608	71
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1557	1728	1702	1558	1728	1777	1563
Q Serve(g_s), s	8.1	10.4	0.0	7.1	17.3	5.3	9.9	18.8	4.9	8.1	15.2	3.5
Cycle Q Clear(g_c), s	8.1	10.4	0.0	7.1	17.3	5.3	9.9	18.8	4.9	8.1	15.2	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	372	1447		334	1390	424	438	1462	446	405	984	433
V/C Ratio(X)	0.77	0.44		0.74	0.70	0.25	0.79	0.72	0.22	0.71	0.62	0.16
Avail Cap(c_a), veh/h	851	2263		851	2263	690	851	2263	690	851	1575	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	29.8	0.0	44.7	33.2	28.8	43.1	32.6	27.6	43.2	32.0	27.8
Incr Delay (d2), s/veh	3.3	0.2	0.0	3.3	0.6	0.3	3.3	0.7	0.2	4.8	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	4.1	0.0	3.1	7.0	1.9	4.3	7.4	1.8	3.6	6.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	30.0	0.0	47.9	33.8	29.1	46.3	33.3	27.8	48.0	32.7	28.0
LnGrp LOS	D	C		D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		922			1321			1498			966	
Approach Delay, s/veh		35.4			36.1			35.9			36.9	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	34.8	16.9	35.1	15.9	33.6	17.9	34.1
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	9.1	12.4	10.1	20.8	10.1	19.3	11.9	17.2
Green Ext Time (p_c), s	0.7	4.3	1.8	7.7	0.8	7.7	1.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	397	37	87	51	714	204	141	219	296	180	156	228
Future Volume (veh/h)	397	37	87	51	714	204	141	219	296	180	156	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	432	40	50	55	776	214	153	238	282	196	170	215
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	256	973	868	85	637	176	181	140	166	143	119	150
Arrive On Green	0.14	0.54	0.54	0.05	0.44	0.44	0.10	0.18	0.18	0.08	0.16	0.16
Sat Flow, veh/h	1810	1805	1610	1810	1434	395	1810	792	939	1810	762	964
Grp Volume(v), veh/h	432	40	50	55	0	990	153	0	520	196	0	385
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	0	1829	1810	0	1731	1810	0	1726
Q Serve(g_s), s	17.0	1.3	1.8	3.6	0.0	53.3	10.0	0.0	21.2	9.5	0.0	18.7
Cycle Q Clear(g_c), s	17.0	1.3	1.8	3.6	0.0	53.3	10.0	0.0	21.2	9.5	0.0	18.7
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.54	1.00		0.56
Lane Grp Cap(c), veh/h	256	973	868	85	0	812	181	0	306	143	0	269
V/C Ratio(X)	1.69	0.04	0.06	0.65	0.00	1.22	0.84	0.00	1.70	1.37	0.00	1.43
Avail Cap(c_a), veh/h	256	973	868	136	0	812	232	0	306	143	0	269
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.5	13.0	13.2	56.2	0.0	33.4	53.1	0.0	49.4	55.3	0.0	50.7
Incr Delay (d2), s/veh	324.7	0.0	0.0	8.1	0.0	109.5	19.6	0.0	328.9	203.7	0.0	214.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.8	0.5	0.7	1.8	0.0	47.5	5.5	0.0	37.1	12.4	0.0	24.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	376.2	13.1	13.2	64.4	0.0	142.9	72.7	0.0	378.3	258.9	0.0	265.3
LnGrp LOS	F	B	B	E	A	F	E	A	F	F	A	F
Approach Vol, veh/h		522			1045			673			581	
Approach Delay, s/veh		313.6			138.7			308.8			263.1	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	69.4	14.0	27.0	21.0	58.0	16.5	24.5
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	5.6	* 61	9.5	21.2	17.0	* 53	15.4	15.3
Max Q Clear Time (g_c+I1), s	5.6	3.8	11.5	23.2	19.0	55.3	12.0	20.7
Green Ext Time (p_c), s	0.0	0.6	0.0	0.0	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	237.3
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	70	90	100	400	350	350	810	130	50	620	220
Future Volume (veh/h)	90	70	90	100	400	350	350	810	130	50	620	220
Initial Q (Qb), veh	0	0	0	0	0	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	1900	1870	1900	1900	1900	1870	1870	1900	1900	1870	1870
Adj Flow Rate, veh/h	98	76	24	109	435	198	380	880	56	54	674	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	0	0	0	2	2	0	0	2	2
Cap, veh/h	367	797	350	143	698	312	533	1265	573	89	891	397
Arrive On Green	0.11	0.22	0.22	0.08	0.19	0.19	0.15	0.36	0.36	0.05	0.25	0.25
Sat Flow, veh/h	3456	3610	1585	1810	3610	1610	3456	3554	1610	1810	3554	1585
Grp Volume(v), veh/h	98	76	24	109	435	198	380	880	56	54	674	64
Grp Sat Flow(s),veh/h/ln	1728	1805	1585	1810	1805	1610	1728	1777	1610	1810	1777	1585
Q Serve(g_s), s	1.6	1.0	0.7	3.6	6.7	6.9	6.4	12.9	1.4	1.8	10.7	1.9
Cycle Q Clear(g_c), s	1.6	1.0	0.7	3.6	6.7	6.9	6.4	12.9	1.4	1.8	10.7	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	367	797	350	143	698	312	533	1265	573	89	891	397
V/C Ratio(X)	0.27	0.10	0.07	0.76	0.62	0.64	0.71	0.70	0.10	0.61	0.76	0.16
Avail Cap(c_a), veh/h	482	1095	481	341	1273	568	1218	2069	937	193	1195	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	18.9	18.8	27.5	22.6	22.6	24.5	16.8	13.1	28.4	21.1	17.8
Incr Delay (d2), s/veh	0.4	0.1	0.1	8.2	0.9	2.1	1.8	0.7	0.1	6.5	2.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	0.3	1.8	2.8	2.6	2.4	4.3	0.5	0.8	3.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	19.0	18.9	35.7	23.5	24.8	26.3	17.5	13.2	34.9	23.1	18.0
LnGrp LOS	C	B	B	D	C	C	C	B	B	C	C	B
Approach Vol, veh/h		198			742			1316			792	
Approach Delay, s/veh		22.2			25.6			19.9			23.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	19.8	9.3	18.0	7.5	26.2	11.0	16.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	21.5	20.5	11.5	18.5	6.5	35.5	8.5	21.5
Max Q Clear Time (g_c+I1), s	8.4	12.7	5.6	3.0	3.8	14.9	3.6	8.9
Green Ext Time (p_c), s	1.1	2.6	0.1	0.4	0.0	5.7	0.1	2.9

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	1730.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	614	111	333	1640	320	450	643	206	210	240	150
Future Vol, veh/h	74	614	111	333	1640	320	450	643	206	210	240	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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	80	667	121	362	1783	348	489	699	224	228	261	163
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	768.1	2594.7	1343.6	550.3
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	35%	9%	15%	35%
Vol Thru, %	49%	77%	72%	40%
Vol Right, %	16%	14%	14%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1299	799	2293	600
LT Vol	450	74	333	210
Through Vol	643	614	1640	240
RT Vol	206	111	320	150
Lane Flow Rate	1412	868	2492	652
Geometry Grp	1	1	1	1
Degree of Util (X)	3.754	2.3	6.607	1.724
Departure Headway (Hd)	43.976	72.206	31.733	82.937
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	99	61	150	52
Service Time	41.976	70.206	29.733	80.937
HCM Lane V/C Ratio	14.263	14.23	16.613	12.538
HCM Control Delay	1343.6	768.1	2594.7	550.3
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	31.8	11.8	82.9	7.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1451	0	286	0	323	646	0	319	474
Future Volume (veh/h)	0	0	0	1451	0	286	0	323	646	0	319	474
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	0	1900	1900	0	1900	1900
Adj Flow Rate, veh/h				1577	0	163	0	351	281	0	347	206
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				1726	0	1536	0	1618	1270	0	2325	722
Arrive On Green				0.48	0.00	0.48	0.00	0.15	0.15	0.00	0.45	0.45
Sat Flow, veh/h				3619	0	3220	0	3705	2834	0	5358	1610
Grp Volume(v), veh/h				1577	0	163	0	351	281	0	347	206
Grp Sat Flow(s),veh/h/ln				1810	0	1610	0	1805	1417	0	1729	1610
Q Serve(g_s), s				48.5	0.0	3.3	0.0	10.3	10.5	0.0	4.7	9.7
Cycle Q Clear(g_c), s				48.5	0.0	3.3	0.0	10.3	10.5	0.0	4.7	9.7
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1726	0	1536	0	1618	1270	0	2325	722
V/C Ratio(X)				0.91	0.00	0.11	0.00	0.22	0.22	0.00	0.15	0.29
Avail Cap(c_a), veh/h				1930	0	1718	0	1618	1270	0	2325	722
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.98	0.98	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.1	0.0	17.3	0.0	32.6	32.7	0.0	19.6	21.0
Incr Delay (d2), s/veh				6.7	0.0	0.0	0.0	0.3	0.4	0.0	0.1	1.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				21.9	0.0	1.3	0.0	5.0	4.0	0.0	2.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.8	0.0	17.3	0.0	32.9	33.1	0.0	19.7	21.9
LnGrp LOS				D	A	B	A	C	C	A	B	C
Approach Vol, veh/h					1740			632			553	
Approach Delay, s/veh					34.1			33.0			20.5	
Approach LOS					C			C			C	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	58.8		58.8		61.2			
Change Period (Y+Rc), s	5.0		5.0		4.0			
Max Green Setting (Gmax), s	47.0		47.0		64.0			
Max Q Clear Time (g_c+I1), s	12.5		11.7		50.5			
Green Ext Time (p_c), s	3.7		3.3		6.7			

Intersection Summary		
HCM 6th Ctrl Delay	31.3	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	0	121	0	0	0	0	889	899	0	1494	185
Future Volume (veh/h)	88	0	121	0	0	0	0	889	899	0	1494	185
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	96	0	0				0	966	832	0	1624	171
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	154	0					0	4577	2501	0	4577	1421
Arrive On Green	0.04	0.00	0.00				0.00	0.88	0.88	0.00	1.00	1.00
Sat Flow, veh/h	3619	0	3220				0	5358	2834	0	5358	1610
Grp Volume(v), veh/h	96	0	0				0	966	832	0	1624	171
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1729	1417	0	1729	1610
Q Serve(g_s), s	3.1	0.0	0.0				0.0	3.2	5.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.1	0.0	0.0				0.0	3.2	5.9	0.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	154	0					0	4577	2501	0	4577	1421
V/C Ratio(X)	0.62	0.00					0.00	0.21	0.33	0.00	0.35	0.12
Avail Cap(c_a), veh/h	573	0					0	4577	2501	0	4577	1421
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.00	0.60	0.60
Uniform Delay (d), s/veh	56.5	0.0	0.0				0.0	1.0	1.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0				0.0	0.1	0.4	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0				0.0	0.5	0.7	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	0.0	0.0				0.0	1.1	1.5	0.0	0.1	0.1
LnGrp LOS	E	A					A	A	A	A	A	A
Approach Vol, veh/h		96						1798			1795	
Approach Delay, s/veh		60.6						1.3			0.1	
Approach LOS		E						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	110.9	9.1	110.9
Change Period (Y+Rc), s	5.0	4.0	5.0
Max Green Setting (Gmax), s	92.0	19.0	92.0
Max Q Clear Time (g_c+I1), s	7.9	5.1	2.0
Green Ext Time (p_c), s	17.1	0.2	23.6

Intersection Summary	
HCM 6th Ctrl Delay	2.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	706	11	782	0	1836	0	0	2019	404
Future Volume (veh/h)	0	0	0	706	11	782	0	1836	0	0	2019	404
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	0	0	1870	1870
Adj Flow Rate, veh/h				793	0	853	0	2040	0	0	2243	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	0	2	0	0	2	2
Cap, veh/h				1650	0	979	0	2096	0	0	3011	
Arrive On Green				0.31	0.00	0.31	0.00	0.59	0.00	0.00	0.59	0.00
Sat Flow, veh/h				5344	0	3170	0	3741	0	0	5274	1585
Grp Volume(v), veh/h				793	0	853	0	2040	0	0	2243	0
Grp Sat Flow(s),veh/h/ln				1781	0	1585	0	1777	0	0	1702	1585
Q Serve(g_s), s				13.6	0.0	28.8	0.0	62.7	0.0	0.0	36.4	0.0
Cycle Q Clear(g_c), s				13.6	0.0	28.8	0.0	62.7	0.0	0.0	36.4	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1650	0	979	0	2096	0	0	3011	
V/C Ratio(X)				0.48	0.00	0.87	0.00	0.97	0.00	0.00	0.74	
Avail Cap(c_a), veh/h				1990	0	1181	0	2111	0	0	3033	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				31.8	0.0	37.0	0.0	22.4	0.0	0.0	17.0	0.0
Incr Delay (d2), s/veh				0.1	0.0	5.9	0.0	13.7	0.0	0.0	0.9	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.9	0.0	11.8	0.0	26.4	0.0	0.0	12.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				31.9	0.0	42.9	0.0	36.1	0.0	0.0	17.9	0.0
LnGrp LOS				C	A	D	A	D	A	A	B	
Approach Vol, veh/h					1646			2040			2243	
Approach Delay, s/veh					37.6			36.1			17.9	
Approach LOS					D			D			B	

Timer - Assigned Phs	2		6		8							
Phs Duration (G+Y+Rc), s	72.5		72.5		40.8							
Change Period (Y+Rc), s	5.7		5.7		5.8							
Max Green Setting (Gmax), s	67.3		67.3		42.2							
Max Q Clear Time (g_c+I1), s	64.7		38.4		30.8							
Green Ext Time (p_c), s	2.2		14.4		4.2							

Intersection Summary	
HCM 6th Ctrl Delay	29.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	301	11	311	0	0	0	0	1699	962	0	1968	0
Future Volume (veh/h)	301	11	311	0	0	0	0	1699	962	0	1968	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	442	0	217				0	1909	711	0	2211	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	613	0	273				0	2206	1732	0	3170	0
Arrive On Green	0.17	0.00	0.17				0.00	0.62	0.62	0.00	0.62	0.00
Sat Flow, veh/h	3563	0	1585				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	442	0	217				0	1909	711	0	2211	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	6.1	0.0	6.8				0.0	23.0	6.8	0.0	15.1	0.0
Cycle Q Clear(g_c), s	6.1	0.0	6.8				0.0	23.0	6.8	0.0	15.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	613	0	273				0	2206	1732	0	3170	0
V/C Ratio(X)	0.72	0.00	0.80				0.00	0.87	0.41	0.00	0.70	0.00
Avail Cap(c_a), veh/h	2322	0	1033				0	2384	1872	0	3426	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	20.4	0.0	20.7				0.0	8.1	5.0	0.0	6.6	0.0
Incr Delay (d2), s/veh	0.6	0.0	2.0				0.0	3.2	0.1	0.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	2.4				0.0	4.9	0.9	0.0	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	0.0	22.7				0.0	11.3	5.1	0.0	7.1	0.0
LnGrp LOS	C	A	C				A	B	A	A	A	A
Approach Vol, veh/h		659						2620			2211	
Approach Delay, s/veh		21.6						9.6			7.1	
Approach LOS		C						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	38.1	14.1	38.1
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	25.0	8.8	17.1
Green Ext Time (p_c), s	7.4	0.1	10.8

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	238	103	332	64	268	166	1369	132	263	1242	24
Future Volume (veh/h)	52	238	103	332	64	268	166	1369	132	263	1242	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	60	274	21	382	74	111	191	1574	78	302	1428	12
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	305	259	291	530	448	214	1451	647	240	1503	670
Arrive On Green	0.04	0.16	0.16	0.16	0.28	0.28	0.12	0.41	0.41	0.13	0.42	0.42
Sat Flow, veh/h	1781	1870	1585	1781	1870	1583	1781	3554	1584	1781	3554	1585
Grp Volume(v), veh/h	60	274	21	382	74	111	191	1574	78	302	1428	12
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1583	1781	1777	1584	1781	1777	1585
Q Serve(g_s), s	4.7	20.3	1.6	23.0	4.2	7.6	14.9	57.6	4.3	19.0	54.7	0.6
Cycle Q Clear(g_c), s	4.7	20.3	1.6	23.0	4.2	7.6	14.9	57.6	4.3	19.0	54.7	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	305	259	291	530	448	214	1451	647	240	1503	670
V/C Ratio(X)	0.78	0.90	0.08	1.31	0.14	0.25	0.89	1.08	0.12	1.26	0.95	0.02
Avail Cap(c_a), veh/h	126	358	303	291	530	449	227	1451	647	240	1503	670
HCM Platoon Ratio	1.00	1.00	1.00	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	66.8	57.8	50.0	59.0	37.7	39.0	61.1	41.7	26.0	61.0	39.3	23.7
Incr Delay (d2), s/veh	15.5	22.0	0.1	164.1	0.1	0.3	31.6	50.1	0.4	145.5	14.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	11.5	0.6	23.4	1.9	3.0	8.5	34.2	1.7	18.1	25.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.3	79.9	50.2	223.1	37.8	39.2	92.7	91.8	26.3	206.5	53.3	23.7
LnGrp LOS	F	E	D	F	D	D	F	F	C	F	D	C
Approach Vol, veh/h		355			567			1843			1742	
Approach Delay, s/veh		78.5			162.9			89.1			79.6	
Approach LOS		E			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.9	65.5	27.0	27.6	23.0	63.4	10.1	44.5
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	18.0	58.6	23.0	27.0	19.0	57.6	10.0	40.0
Max Q Clear Time (g_c+I1), s	16.9	56.7	25.0	22.3	21.0	59.6	6.7	9.6
Green Ext Time (p_c), s	0.1	1.5	0.0	0.7	0.0	0.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	93.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	65	65	304	93	251	76	1229	511	138	1341	38
Future Volume (veh/h)	54	65	65	304	93	251	76	1229	511	138	1341	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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	70	0	327	100	209	82	1322	371	148	1442	13
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	393		411	304	376	129	1653	736	263	1665	740
Arrive On Green	0.07	0.11	0.00	0.12	0.16	0.16	0.07	0.47	0.47	0.08	0.47	0.47
Sat Flow, veh/h	1781	3647	0	3456	1870	1570	1781	3554	1582	3456	3554	1578
Grp Volume(v), veh/h	58	70	0	327	100	209	82	1322	371	148	1442	13
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1570	1781	1777	1582	1728	1777	1578
Q Serve(g_s), s	4.1	2.3	0.0	12.1	6.2	15.3	5.9	41.5	21.5	5.4	47.5	0.6
Cycle Q Clear(g_c), s	4.1	2.3	0.0	12.1	6.2	15.3	5.9	41.5	21.5	5.4	47.5	0.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	393		411	304	376	129	1653	736	263	1665	740
V/C Ratio(X)	0.49	0.18		0.80	0.33	0.56	0.63	0.80	0.50	0.56	0.87	0.02
Avail Cap(c_a), veh/h	136	820		602	614	636	136	1811	806	272	1819	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.9	52.8	0.0	56.1	48.5	43.8	59.0	29.8	24.5	58.4	31.1	18.6
Incr Delay (d2), s/veh	4.3	0.3	0.0	8.0	0.9	1.8	10.2	2.4	0.5	3.2	4.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.1	0.0	5.6	2.9	6.1	3.0	17.3	7.9	2.4	20.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	53.1	0.0	64.1	49.4	45.6	69.3	32.3	25.0	61.6	35.7	18.6
LnGrp LOS	E	D		E	D	D	E	C	C	E	D	B
Approach Vol, veh/h		128			636			1775			1603	
Approach Delay, s/veh		57.7			55.7			32.4			38.0	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	68.4	23.1	22.0	17.0	68.8	16.3	28.8
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	10.3	66.7	22.8	30.2	10.0	67.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	17.4	43.5	14.1	4.3	7.9	49.5	6.1	17.3
Green Ext Time (p_c), s	0.2	11.5	1.5	0.5	0.0	11.8	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	545	239	53	48	120	456	84	554	42	530	410	120
Future Volume (veh/h)	545	239	53	48	120	456	84	554	42	530	410	120
Initial Q (Qb), veh	0	0	0	0	0	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	699	306	24	62	154	371	108	710	14	679	526	48
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	1364	608	81	918	409	135	859	383	304	1197	534
Arrive On Green	0.17	0.38	0.38	0.05	0.26	0.26	0.08	0.24	0.24	0.17	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	699	306	24	62	154	371	108	710	14	679	526	48
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	20.0	6.8	1.1	4.0	3.9	26.5	7.0	22.2	0.8	20.0	13.5	2.4
Cycle Q Clear(g_c), s	20.0	6.8	1.1	4.0	3.9	26.5	7.0	22.2	0.8	20.0	13.5	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	1364	608	81	918	409	135	859	383	304	1197	534
V/C Ratio(X)	2.30	0.22	0.04	0.77	0.17	0.91	0.80	0.83	0.04	2.23	0.44	0.09
Avail Cap(c_a), veh/h	304	1364	608	304	1215	542	304	1215	542	304	1215	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.5	24.3	22.6	55.3	33.7	42.0	53.2	42.0	33.9	48.5	30.2	26.5
Incr Delay (d2), s/veh	593.6	0.1	0.0	14.1	0.1	15.7	10.3	3.3	0.0	564.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	58.8	2.8	0.4	2.1	1.7	11.7	3.5	9.8	0.3	56.3	5.6	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	642.1	24.4	22.6	69.4	33.7	57.7	63.5	45.4	34.0	612.8	30.5	26.6
LnGrp LOS	F	C	C	E	C	E	E	D	C	F	C	C
Approach Vol, veh/h		1029			587			832			1253	
Approach Delay, s/veh		444.0			52.6			47.5			345.9	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	49.6	24.0	34.1	24.0	34.9	12.9	45.2
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	6.0	8.8	22.0	24.2	22.0	28.5	9.0	15.5
Green Ext Time (p_c), s	0.1	1.9	0.0	4.2	0.0	1.7	0.2	3.4

Intersection Summary	
HCM 6th Ctrl Delay	259.6
HCM 6th LOS	F

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)	267	501	256	107	235	96	120	807	131	387	847	335
Future Volume (veh/h)	267	501	256	107	235	96	120	807	131	387	847	335
Initial Q (Qb), veh	0	0	0	0	0	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	322	604	155	129	283	40	145	972	154	466	1020	285
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	660	560	150	642	544	165	540	86	167	642	544
Arrive On Green	0.09	0.35	0.35	0.08	0.34	0.34	0.09	0.34	0.34	0.09	0.34	0.34
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1576	250	1781	1870	1585
Grp Volume(v), veh/h	322	604	155	129	283	40	145	0	1126	466	1020	285
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1825	1781	1870	1585
Q Serve(g_s), s	15.0	49.4	11.2	11.5	18.7	2.7	12.9	0.0	54.9	15.0	55.0	23.1
Cycle Q Clear(g_c), s	15.0	49.4	11.2	11.5	18.7	2.7	12.9	0.0	54.9	15.0	55.0	23.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	167	660	560	150	642	544	165	0	625	167	642	544
V/C Ratio(X)	1.93	0.91	0.28	0.86	0.44	0.07	0.88	0.00	1.80	2.79	1.59	0.52
Avail Cap(c_a), veh/h	167	660	560	167	642	544	167	0	625	167	642	544
HCM Platoon Ratio	1.00	1.00	1.00	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	72.6	49.5	37.1	72.4	40.7	35.4	71.8	0.0	52.7	72.6	52.6	42.1
Incr Delay (d2), s/veh	439.8	19.4	1.2	32.0	2.2	0.3	37.1	0.0	366.8	823.4	272.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.2	26.3	4.5	6.5	8.9	1.1	7.5	0.0	88.1	44.9	73.6	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	512.4	68.9	38.4	104.4	42.9	35.7	108.8	0.0	419.4	896.0	324.6	43.3
LnGrp LOS	F	E	D	F	D	D	F	A	F	F	F	D
Approach Vol, veh/h		1081			452			1271			1771	
Approach Delay, s/veh		196.6			59.8			384.0			429.7	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	63.0	19.0	60.7	19.0	61.5	18.9	60.8
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	15.0	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	13.5	51.4	17.0	56.9	17.0	20.7	14.9	57.0
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	2.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	325.4
HCM 6th LOS	F

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)	370	1852	525	0	1473	853	0	0	0	1165	204	777
Future Volume (veh/h)	370	1852	525	0	1473	853	0	0	0	1165	204	777
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	374	1871	434	0	1488	0				1324	0	456
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	485	2023	896	0	1935					1137	0	501
Arrive On Green	0.14	0.57	0.57	0.00	0.38	0.00				0.32	0.00	0.32
Sat Flow, veh/h	3456	3554	1574	0	5274	1585				3563	0	1572
Grp Volume(v), veh/h	374	1871	434	0	1488	0				1324	0	456
Grp Sat Flow(s),veh/h/ln	1728	1777	1574	0	1702	1585				1781	0	1572
Q Serve(g_s), s	9.8	45.0	15.4	0.0	24.0	0.0				30.0	0.0	26.2
Cycle Q Clear(g_c), s	9.8	45.0	15.4	0.0	24.0	0.0				30.0	0.0	26.2
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	485	2023	896	0	1935					1137	0	501
V/C Ratio(X)	0.77	0.92	0.48	0.00	0.77					1.16	0.00	0.91
Avail Cap(c_a), veh/h	1103	2023	896	0	2172					1137	0	501
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	39.0	18.4	12.0	0.0	25.6	0.0				32.0	0.0	30.7
Incr Delay (d2), s/veh	3.0	7.9	0.5	0.0	1.7	0.0				84.1	0.0	20.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	17.9	4.9	0.0	9.3	0.0				25.5	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	26.3	12.6	0.0	27.3	0.0				116.1	0.0	51.4
LnGrp LOS	D	C	B	A	C					F	A	D
Approach Vol, veh/h		2679			1488						1780	
Approach Delay, s/veh		26.3			27.3						99.5	
Approach LOS		C			C						F	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	58.9		35.1	17.9	41.0
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	47.0		32.0	11.8	26.0
Green Ext Time (p_c), s	0.0		0.0	1.4	9.6

Intersection Summary	
HCM 6th Ctrl Delay	48.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	850	496	30	792	749	51
Future Volume (veh/h)	850	496	30	792	749	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	859	483	30	800	757	50
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	468	263	67	907	689	46
Arrive On Green	0.42	0.42	0.04	0.48	0.42	0.42
Sat Flow, veh/h	1124	632	1781	1870	1656	109
Grp Volume(v), veh/h	0	1342	30	800	808	0
Grp Sat Flow(s),veh/h/ln	0	1757	1781	1870	1768	0
Q Serve(g_s), s	0.0	40.0	1.6	37.0	40.0	0.0
Cycle Q Clear(g_c), s	0.0	40.0	1.6	37.0	40.0	0.0
Prop In Lane		0.36	1.00		0.94	0.06
Lane Grp Cap(c), veh/h	0	731	67	907	736	0
V/C Ratio(X)	0.00	1.84	0.45	0.88	1.10	0.00
Avail Cap(c_a), veh/h	0	731	315	907	736	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	28.0	45.3	22.3	28.0	0.0
Incr Delay (d2), s/veh	0.0	381.2	1.8	10.3	63.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	92.5	0.7	16.8	27.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	409.2	47.1	32.6	91.2	0.0
LnGrp LOS	A	F	D	C	F	A
Approach Vol, veh/h	1342			830	808	
Approach Delay, s/veh	409.2			33.1	91.2	
Approach LOS	F			C	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		51.1		45.0	6.6	44.5
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		40.0		40.0	17.0	40.0
Max Q Clear Time (g_c+I1), s		39.0		42.0	3.6	42.0
Green Ext Time (p_c), s		0.6		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	218.2
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	1310	400	390	850	100	640	460	830	70	300	150
Future Volume (veh/h)	340	1310	400	390	850	100	640	460	830	70	300	150
Initial Q (Qb), veh	0	0	0	0	0	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	415	1598	0	476	1037	0	780	561	0	85	366	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	474	1779		430	1671		667	937		222	479	
Arrive On Green	0.14	0.35	0.00	0.12	0.33	0.00	0.19	0.26	0.00	0.06	0.13	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	415	1598	0	476	1037	0	780	561	0	85	366	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	13.7	34.6	0.0	14.5	20.0	0.0	22.5	16.1	0.0	2.7	11.6	0.0
Cycle Q Clear(g_c), s	13.7	34.6	0.0	14.5	20.0	0.0	22.5	16.1	0.0	2.7	11.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	474	1779		430	1671		667	937		222	479	
V/C Ratio(X)	0.88	0.90		1.11	0.62		1.17	0.60		0.38	0.76	
Avail Cap(c_a), veh/h	549	1814		430	1671		667	1766		237	1324	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.3	36.0	0.0	51.0	33.1	0.0	47.0	37.5	0.0	52.3	48.6	0.0
Incr Delay (d2), s/veh	12.1	6.5	0.0	75.6	0.8	0.0	91.5	0.6	0.0	1.1	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	14.3	0.0	10.6	8.0	0.0	17.7	6.7	0.0	1.2	5.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	42.5	0.0	126.7	33.9	0.0	138.5	38.1	0.0	53.4	51.2	0.0
LnGrp LOS	E	D		F	C		F	D		D	D	
Approach Vol, veh/h		2013			1513			1341			451	
Approach Delay, s/veh		46.4			63.1			96.5			51.6	
Approach LOS		D			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	44.2	28.0	21.8	20.0	46.7	13.0	36.8
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	18.5	36.4	22.5	43.4	14.5	41.4	8.0	57.9
Max Q Clear Time (g_c+I1), s	15.7	22.0	24.5	13.6	16.5	36.6	4.7	18.1
Green Ext Time (p_c), s	0.3	7.4	0.0	2.1	0.0	4.0	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	64.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	714	20	755	140	50	270	500	960	50	110	500	480
Future Volume (veh/h)	714	20	755	140	50	270	500	960	50	110	500	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	776	22	709	187	54	232	543	1280	16	147	667	190
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	890	806	683	214	65	278	594	1282	378	249	783	624
Arrive On Green	0.25	0.42	0.42	0.06	0.22	0.22	0.12	0.25	0.25	0.07	0.22	0.22
Sat Flow, veh/h	3510	1900	1610	3456	296	1270	5103	5106	1506	3456	3554	2834
Grp Volume(v), veh/h	776	22	709	187	0	286	543	1280	16	147	667	190
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1565	1701	1702	1506	1728	1777	1417
Q Serve(g_s), s	23.3	0.7	46.6	5.9	0.0	19.2	11.6	27.5	0.9	4.5	19.8	6.2
Cycle Q Clear(g_c), s	23.3	0.7	46.6	5.9	0.0	19.2	11.6	27.5	0.9	4.5	19.8	6.2
Prop In Lane	1.00		1.00	1.00		0.81	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	890	806	683	214	0	342	594	1282	378	249	783	624
V/C Ratio(X)	0.87	0.03	1.04	0.87	0.00	0.84	0.91	1.00	0.04	0.59	0.85	0.30
Avail Cap(c_a), veh/h	1022	806	683	214	0	342	594	1282	378	252	786	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	18.4	31.7	51.1	0.0	41.0	48.0	41.1	31.2	49.4	41.1	35.8
Incr Delay (d2), s/veh	8.1	0.0	44.8	30.6	0.0	16.2	18.7	24.7	0.0	2.4	8.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	0.3	26.2	3.5	0.0	9.0	5.7	13.8	0.3	2.0	9.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	18.5	76.5	81.7	0.0	57.2	66.7	65.8	31.2	51.9	49.6	35.9
LnGrp LOS	D	B	F	F	A	E	E	E	C	D	D	D
Approach Vol, veh/h		1507			473			1839			1004	
Approach Delay, s/veh		60.7			66.9			65.8			47.4	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	30.2	11.3	51.1	13.9	33.6	33.8	28.6
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	12.8	24.3	6.8	46.6	8.0	27.6	32.0	19.9
Max Q Clear Time (g_c+I1), s	13.6	21.8	7.9	48.6	6.5	29.5	25.3	21.2
Green Ext Time (p_c), s	0.0	0.6	0.0	0.0	0.0	0.0	2.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	60.5
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	646	363	51	1412	1240	196
Future Volume (veh/h)	646	363	51	1412	1240	196
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	702	303	55	1535	1348	209
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	650	579	93	1031	721	112
Arrive On Green	0.36	0.36	0.05	0.54	0.45	0.45
Sat Flow, veh/h	1810	1610	1810	1900	1606	249
Grp Volume(v), veh/h	702	303	55	1535	0	1557
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1855
Q Serve(g_s), s	40.0	16.5	3.3	60.4	0.0	50.0
Cycle Q Clear(g_c), s	40.0	16.5	3.3	60.4	0.0	50.0
Prop In Lane	1.00	1.00	1.00			0.13
Lane Grp Cap(c), veh/h	650	579	93	1031	0	833
V/C Ratio(X)	1.08	0.52	0.59	1.49	0.00	1.87
Avail Cap(c_a), veh/h	650	579	488	1031	0	833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.7	28.1	51.7	25.5	0.0	30.7
Incr Delay (d2), s/veh	58.7	0.9	4.4	225.0	0.0	395.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.8	0.1	1.6	87.8	0.0	111.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	94.4	29.0	56.0	250.5	0.0	426.1
LnGrp LOS	F	C	E	F	A	F
Approach Vol, veh/h	1005			1590	1557	
Approach Delay, s/veh	74.7			243.7	426.1	
Approach LOS	E			F	F	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	66.6		44.7	10.4	56.2
Change Period (Y+Rc), s	6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	50.0		* 40	* 30	50.0
Max Q Clear Time (g_c+I1), s	62.4		42.0	5.3	52.0
Green Ext Time (p_c), s	0.0		0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	271.2
HCM 6th LOS	F

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)	0	0	0	40	0	352	0	1263	42	342	1046	0
Future Volume (veh/h)	0	0	0	40	0	352	0	1263	42	342	1046	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	48	0	325	0	1504	49	407	1245	0
Peak Hour Factor	0.80	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	115	0	488	159	996	32	435	1303	0
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.55	0.55	0.24	0.70	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1801	59	1781	1870	0
Grp Volume(v), veh/h	0	0	0	48	0	325	0	0	1553	407	1245	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1860	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	3.1	0.0	7.8	0.0	0.0	67.8	27.5	74.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.1	0.0	7.8	0.0	0.0	67.8	27.5	74.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	115	0	488	159	0	1028	435	1303	0
V/C Ratio(X)	0.00	0.00	0.00	0.42	0.00	0.67	0.00	0.00	1.51	0.94	0.96	0.00
Avail Cap(c_a), veh/h	0	121	0	115	0	488	159	0	1028	484	1415	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	55.2	0.0	37.0	0.0	0.0	27.4	45.4	16.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.4	0.0	3.4	0.0	0.0	234.8	24.5	14.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.5	0.0	8.8	0.0	0.0	93.4	14.5	29.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	57.6	0.0	40.4	0.0	0.0	262.2	70.0	31.0	0.0
LnGrp LOS	A	A	A	E	A	D	A	A	F	E	C	A
Approach Vol, veh/h		0			373			1553			1652	
Approach Delay, s/veh		0.0			42.6			262.2			40.6	
Approach LOS					D			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.6	74.0		0.0	17.0	91.6		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 33	67.8		7.8	8.3	* 93		7.8				
Max Q Clear Time (g_c+I1), s	29.5	69.8		0.0	0.0	76.0		9.8				
Green Ext Time (p_c), s	0.5	0.0		0.0	0.0	9.4		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		137.0
HCM 6th LOS		F

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)	695	1011	552	353	858	444	243	657	192	567	1234	162
Future Volume (veh/h)	695	1011	552	353	858	444	243	657	192	567	1234	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	716	1042	0	364	885	230	251	677	88	585	1272	107
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	633	1505		429	1204	367	313	1215	370	629	1171	514
Arrive On Green	0.18	0.29	0.00	0.12	0.24	0.24	0.09	0.24	0.24	0.18	0.33	0.33
Sat Flow, veh/h	3456	5106	1585	3456	5106	1555	3456	5106	1555	3456	3554	1561
Grp Volume(v), veh/h	716	1042	0	364	885	230	251	677	88	585	1272	107
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1555	1728	1702	1555	1728	1777	1561
Q Serve(g_s), s	25.0	24.7	0.0	14.1	21.9	18.1	9.7	15.9	6.2	22.8	45.0	6.7
Cycle Q Clear(g_c), s	25.0	24.7	0.0	14.1	21.9	18.1	9.7	15.9	6.2	22.8	45.0	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	633	1505		429	1204	367	313	1215	370	629	1171	514
V/C Ratio(X)	1.13	0.69		0.85	0.74	0.63	0.80	0.56	0.24	0.93	1.09	0.21
Avail Cap(c_a), veh/h	633	1682		633	1682	512	633	1682	512	633	1171	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	42.7	0.0	58.6	48.2	46.8	60.9	45.7	42.0	55.0	45.8	33.0
Incr Delay (d2), s/veh	78.0	1.1	0.0	7.1	1.1	1.8	4.8	0.4	0.3	20.9	53.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.5	10.3	0.0	6.6	9.4	7.1	4.4	6.6	2.4	11.6	27.9	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	133.8	43.8	0.0	65.7	49.3	48.6	65.7	46.1	42.4	75.9	98.9	33.2
LnGrp LOS	F	D		E	D	D	E	D	D	E	F	C
Approach Vol, veh/h		1758			1479			1016			1964	
Approach Delay, s/veh		80.4			53.2			50.6			88.4	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	46.3	29.9	38.5	30.0	38.2	17.4	51.0
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	16.1	26.7	24.8	17.9	27.0	23.9	11.7	47.0
Green Ext Time (p_c), s	0.9	6.5	0.1	4.8	0.0	7.0	0.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	71.6
HCM 6th LOS	E

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	737	61	61	133	61	42	84	42	526	489	100
Future Volume (veh/h)	101	737	61	61	133	61	42	84	42	526	489	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	110	801	59	66	145	49	46	91	32	572	532	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	145	1144	84	138	451	152	78	205	72	263	392	78
Arrive On Green	0.08	0.34	0.34	0.08	0.33	0.33	0.04	0.15	0.15	0.15	0.25	0.25
Sat Flow, veh/h	1810	3409	251	1810	1358	459	1810	1343	472	1810	1538	307
Grp Volume(v), veh/h	110	424	436	66	0	194	46	0	123	572	0	638
Grp Sat Flow(s),veh/h/ln	1810	1805	1855	1810	0	1817	1810	0	1815	1810	0	1845
Q Serve(g_s), s	3.9	13.4	13.4	2.3	0.0	5.2	1.6	0.0	4.0	9.5	0.0	16.7
Cycle Q Clear(g_c), s	3.9	13.4	13.4	2.3	0.0	5.2	1.6	0.0	4.0	9.5	0.0	16.7
Prop In Lane	1.00		0.14	1.00		0.25	1.00		0.26	1.00		0.17
Lane Grp Cap(c), veh/h	145	606	623	138	0	603	78	0	277	263	0	470
V/C Ratio(X)	0.76	0.70	0.70	0.48	0.00	0.32	0.59	0.00	0.44	2.18	0.00	1.36
Avail Cap(c_a), veh/h	470	1690	1737	249	0	1479	426	0	588	263	0	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	18.9	18.9	29.0	0.0	16.4	30.7	0.0	25.2	28.0	0.0	24.4
Incr Delay (d2), s/veh	7.8	1.5	1.4	2.6	0.0	0.3	6.8	0.0	1.1	542.7	0.0	174.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	5.3	5.5	1.0	0.0	2.1	0.8	0.0	1.7	43.5	0.0	29.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	20.4	20.3	31.5	0.0	16.7	37.6	0.0	26.3	570.7	0.0	199.2
LnGrp LOS	D	C	C	C	A	B	D	A	C	F	A	F
Approach Vol, veh/h		970			260			169			1210	
Approach Delay, s/veh		22.3			20.4			29.4			374.8	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	26.7	14.0	15.8	9.3	26.4	7.3	22.5
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	5.0	* 61	9.5	21.2	17.0	* 53	15.4	15.3
Max Q Clear Time (g_c+I1), s	4.3	15.4	11.5	6.0	5.9	7.2	3.6	18.7
Green Ext Time (p_c), s	0.0	6.6	0.0	0.5	0.2	1.2	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	186.1
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	510	890	360	50	480	340	460	590	310	290	890	160
Future Volume (veh/h)	510	890	360	50	480	340	460	590	310	290	890	160
Initial Q (Qb), veh	0	0	0	0	0	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	1900	1870	1900	1900	1900	1870	1870	1900	1900	1870	1870
Adj Flow Rate, veh/h	554	967	149	54	522	128	500	641	189	315	967	51
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	0	2	0	0	0	2	2	0	0	2	2
Cap, veh/h	550	1370	602	70	492	417	487	824	373	337	985	439
Arrive On Green	0.16	0.38	0.38	0.04	0.26	0.26	0.14	0.23	0.23	0.19	0.28	0.28
Sat Flow, veh/h	3456	3610	1585	1810	1900	1610	3456	3554	1610	1810	3554	1585
Grp Volume(v), veh/h	554	967	149	54	522	128	500	641	189	315	967	51
Grp Sat Flow(s),veh/h/ln	1728	1805	1585	1810	1900	1610	1728	1777	1610	1810	1777	1585
Q Serve(g_s), s	17.5	25.0	7.1	3.3	28.5	7.0	15.5	18.6	11.2	18.9	29.7	2.6
Cycle Q Clear(g_c), s	17.5	25.0	7.1	3.3	28.5	7.0	15.5	18.6	11.2	18.9	29.7	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	550	1370	602	70	492	417	487	824	373	337	985	439
V/C Ratio(X)	1.01	0.71	0.25	0.77	1.06	0.31	1.03	0.78	0.51	0.93	0.98	0.12
Avail Cap(c_a), veh/h	550	1370	602	90	492	417	487	824	373	337	985	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	28.9	23.4	52.4	40.7	32.8	47.3	39.6	36.8	44.1	39.5	29.7
Incr Delay (d2), s/veh	40.3	1.7	0.2	25.8	57.5	0.4	47.8	4.8	1.1	32.4	24.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	10.9	2.7	2.0	21.0	2.8	9.6	8.2	4.5	11.1	15.5	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	30.6	23.6	78.2	98.3	33.2	95.1	44.4	37.9	76.5	63.6	29.8
LnGrp LOS	F	C	C	E	F	C	F	D	D	E	E	C
Approach Vol, veh/h		1670			704			1330			1333	
Approach Delay, s/veh		48.5			84.9			62.5			65.3	
Approach LOS		D			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	35.0	8.7	46.3	25.0	30.0	22.0	33.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	15.5	30.5	5.5	40.5	20.5	25.5	17.5	28.5
Max Q Clear Time (g_c+I1), s	17.5	31.7	5.3	27.0	20.9	20.6	19.5	30.5
Green Ext Time (p_c), s	0.0	0.0	0.0	6.2	0.0	2.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	61.7
HCM 6th LOS	E

Intersection	
Intersection Delay, s/veh	2029.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	266	1289	877	540	948	252	261	282	387	410	480	180
Future Vol, veh/h	266	1289	877	540	948	252	261	282	387	410	480	180
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	289	1401	953	587	1030	274	284	307	421	446	522	196
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	2799.8	2004.4	1029.6	1189.2
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	11%	31%	38%
Vol Thru, %	30%	53%	54%	45%
Vol Right, %	42%	36%	14%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	930	2432	1740	1070
LT Vol	261	266	540	410
Through Vol	282	1289	948	480
RT Vol	387	877	252	180
Lane Flow Rate	1011	2643	1891	1163
Geometry Grp	1	1	1	1
Degree of Util (X)	2.641	6.905	5.029	3.093
Departure Headway (Hd)	124.343	65.279	86.321	106.724
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	40	106	76	47
Service Time	122.343	63.279	84.321	104.724
HCM Lane V/C Ratio	25.275	24.934	24.882	24.745
HCM Control Delay	1029.6	2799.8	2004.4	1189.2
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	9.1	44	24.2	12.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1227	0	1140	0	850	260	0	1090	270
Future Volume (veh/h)	0	0	0	1227	0	1140	0	850	260	0	1090	270
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	0	1900	1900	0	1900	1900
Adj Flow Rate, veh/h				1334	0	1061	0	924	165	0	1185	171
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				1237	0	1100	0	2106	1653	0	3026	939
Arrive On Green				0.34	0.00	0.34	0.00	1.00	1.00	0.00	0.58	0.58
Sat Flow, veh/h				3619	0	3220	0	3705	2834	0	5358	1610
Grp Volume(v), veh/h				1334	0	1061	0	924	165	0	1185	171
Grp Sat Flow(s),veh/h/ln				1810	0	1610	0	1805	1417	0	1729	1610
Q Serve(g_s), s				41.0	0.0	38.8	0.0	0.0	0.0	0.0	14.8	5.9
Cycle Q Clear(g_c), s				41.0	0.0	38.8	0.0	0.0	0.0	0.0	14.8	5.9
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1237	0	1100	0	2106	1653	0	3026	939
V/C Ratio(X)				1.08	0.00	0.96	0.00	0.44	0.10	0.00	0.39	0.18
Avail Cap(c_a), veh/h				1237	0	1100	0	2106	1653	0	3026	939
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.86	0.86	0.00	1.00	1.00
Uniform Delay (d), s/veh				39.5	0.0	38.8	0.0	0.0	0.0	0.0	13.5	11.7
Incr Delay (d2), s/veh				49.7	0.0	19.1	0.0	0.6	0.1	0.0	0.4	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				26.4	0.0	18.0	0.0	0.2	0.0	0.0	5.7	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				89.2	0.0	57.9	0.0	0.6	0.1	0.0	13.9	12.1
LnGrp LOS				F	A	E	A	A	A	A	B	B
Approach Vol, veh/h					2395			1089			1356	
Approach Delay, s/veh					75.3			0.5			13.7	
Approach LOS					E			A			B	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	75.0		75.0		45.0			
Change Period (Y+Rc), s	5.0		5.0		4.0			
Max Green Setting (Gmax), s	70.0		70.0		41.0			
Max Q Clear Time (g_c+I1), s	2.0		16.8		43.0			
Green Ext Time (p_c), s	9.6		12.8		0.0			

Intersection Summary		
HCM 6th Ctrl Delay	41.2	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	532	0	652	0	0	0	0	620	1580	0	1470	750
Future Volume (veh/h)	532	0	652	0	0	0	0	620	1580	0	1470	750
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	578	0	0				0	674	1359	0	1598	645
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	483	0					0	4106	2244	0	4106	1275
Arrive On Green	0.13	0.00	0.00				0.00	0.79	0.79	0.00	1.00	1.00
Sat Flow, veh/h	3619	0	3220				0	5358	2834	0	5358	1610
Grp Volume(v), veh/h	578	0	0				0	674	1359	0	1598	645
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1729	1417	0	1729	1610
Q Serve(g_s), s	16.0	0.0	0.0				0.0	3.7	23.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	16.0	0.0	0.0				0.0	3.7	23.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	483	0					0	4106	2244	0	4106	1275
V/C Ratio(X)	1.20	0.00					0.00	0.16	0.61	0.00	0.39	0.51
Avail Cap(c_a), veh/h	483	0					0	4106	2244	0	4106	1275
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.00	0.54	0.54
Uniform Delay (d), s/veh	52.0	0.0	0.0				0.0	3.0	5.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	107.7	0.0	0.0				0.0	0.1	1.2	0.0	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
%ile BackOfQ(50%),veh/ln	14.5	0.0	0.0				0.0	1.1	5.7	0.0	0.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	159.7	0.0	0.0				0.0	3.1	6.2	0.0	0.2	0.8
LnGrp LOS	F	A					A	A	A	A	A	A
Approach Vol, veh/h		578						2033			2243	
Approach Delay, s/veh		159.7						5.2			0.3	
Approach LOS		F						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	100.0	20.0	100.0
Change Period (Y+Rc), s	5.0	4.0	5.0
Max Green Setting (Gmax), s	95.0	16.0	95.0
Max Q Clear Time (g_c+I1), s	25.0	18.0	2.0
Green Ext Time (p_c), s	19.0	0.0	31.1

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	858	319	836	0	1665	0	0	1163	524
Future Volume (veh/h)	0	0	0	858	319	836	0	1665	0	0	1163	524
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	0	0	1870	1870
Adj Flow Rate, veh/h				847	382	844	0	1716	0	0	1199	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	0	2	0	0	2	2
Cap, veh/h				1191	625	1060	0	1938	0	0	2785	
Arrive On Green				0.33	0.33	0.33	0.00	0.55	0.00	0.00	0.55	0.00
Sat Flow, veh/h				3563	1870	3170	0	3741	0	0	5274	1585
Grp Volume(v), veh/h				847	382	844	0	1716	0	0	1199	0
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	0	1777	0	0	1702	1585
Q Serve(g_s), s				19.9	16.3	23.1	0.0	40.6	0.0	0.0	13.3	0.0
Cycle Q Clear(g_c), s				19.9	16.3	23.1	0.0	40.6	0.0	0.0	13.3	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1191	625	1060	0	1938	0	0	2785	
V/C Ratio(X)				0.71	0.61	0.80	0.00	0.89	0.00	0.00	0.43	
Avail Cap(c_a), veh/h				1571	825	1398	0	2499	0	0	3591	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				27.8	26.6	28.9	0.0	19.1	0.0	0.0	12.9	0.0
Incr Delay (d2), s/veh				0.7	0.6	2.0	0.0	2.9	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	0.0
%ile BackOfQ(50%),veh/ln				8.3	7.2	8.8	0.0	15.0	0.0	0.0	4.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.5	27.2	30.9	0.0	22.0	0.0	0.0	13.0	0.0
LnGrp LOS				C	C	C	A	C	A	A	B	
Approach Vol, veh/h					2073			1716			1199	A
Approach Delay, s/veh					29.3			22.0			13.0	
Approach LOS					C			C			B	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	57.9		57.9		37.8			
Change Period (Y+Rc), s	5.7		5.7		5.8			
Max Green Setting (Gmax), s	67.3		67.3		42.2			
Max Q Clear Time (g_c+I1), s	42.6		15.3		25.1			
Green Ext Time (p_c), s	9.6		6.0		6.9			

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	0	412	0	0	0	0	1899	885	0	1530	0
Future Volume (veh/h)	95	0	412	0	0	0	0	1899	885	0	1530	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	65	0	400				0	1958	615	0	1577	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	289	0	514				0	2237	1756	0	3215	0
Arrive On Green	0.16	0.00	0.16				0.00	0.63	0.63	0.00	0.63	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	65	0	400				0	1958	615	0	1577	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	1.6	0.0	6.3				0.0	23.6	5.4	0.0	8.6	0.0
Cycle Q Clear(g_c), s	1.6	0.0	6.3				0.0	23.6	5.4	0.0	8.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	289	0	514				0	2237	1756	0	3215	0
V/C Ratio(X)	0.23	0.00	0.78				0.00	0.88	0.35	0.00	0.49	0.00
Avail Cap(c_a), veh/h	1168	0	2079				0	2399	1883	0	3447	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	18.9	0.0	20.8				0.0	7.9	4.6	0.0	5.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	1.0				0.0	3.5	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	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.2				0.0	5.0	0.7	0.0	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	0.0	21.8				0.0	11.4	4.6	0.0	5.2	0.0
LnGrp LOS	B	A	C				A	B	A	A	A	A
Approach Vol, veh/h		465						2573			1577	
Approach Delay, s/veh		21.4						9.8			5.2	
Approach LOS		C						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	38.3	13.5	38.3
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	25.6	8.3	10.6
Green Ext Time (p_c), s	7.1	0.1	8.0

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	15	29	147	53	698	46	950	91	397	1132	58
Future Volume (veh/h)	15	15	29	147	53	698	46	950	91	397	1132	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	16	4	158	57	424	49	1022	30	427	1217	30
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	381	323	171	527	446	63	1084	482	419	1794	800
Arrive On Green	0.02	0.20	0.20	0.10	0.28	0.28	0.04	0.30	0.30	0.24	0.50	0.50
Sat Flow, veh/h	1781	1870	1585	1781	1870	1582	1781	3554	1582	1781	3554	1585
Grp Volume(v), veh/h	16	16	4	158	57	424	49	1022	30	427	1217	30
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1582	1781	1777	1582	1781	1777	1585
Q Serve(g_s), s	1.0	0.8	0.2	10.1	2.6	30.2	3.1	32.2	1.5	27.0	29.6	1.1
Cycle Q Clear(g_c), s	1.0	0.8	0.2	10.1	2.6	30.2	3.1	32.2	1.5	27.0	29.6	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	381	323	171	527	446	63	1084	482	419	1794	800
V/C Ratio(X)	0.52	0.04	0.01	0.93	0.11	0.95	0.78	0.94	0.06	1.02	0.68	0.04
Avail Cap(c_a), veh/h	78	440	373	171	538	455	124	1084	482	419	1794	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	36.7	36.5	51.5	30.5	40.4	54.9	38.9	28.3	43.9	21.4	14.3
Incr Delay (d2), s/veh	12.6	0.0	0.0	47.7	0.1	29.7	18.1	16.6	0.2	48.8	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	0.1	6.6	1.1	14.9	1.7	15.8	0.6	17.1	11.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	36.8	36.5	99.2	30.6	70.1	73.0	55.6	28.5	92.7	23.5	14.4
LnGrp LOS	E	D	D	F	C	E	E	E	C	F	C	B
Approach Vol, veh/h		36			639			1101			1674	
Approach Delay, s/veh		50.9			73.8			55.6			41.0	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	63.7	15.0	28.0	31.0	40.8	6.0	37.0
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	8.0	54.0	11.0	27.0	27.0	35.0	5.0	33.0
Max Q Clear Time (g_c+I1), s	5.1	31.6	12.1	2.8	29.0	34.2	3.0	32.2
Green Ext Time (p_c), s	0.0	8.8	0.0	0.0	0.0	0.5	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	51.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	176	94	843	98	288	92	798	975	192	1066	48
Future Volume (veh/h)	47	176	94	843	98	288	92	798	975	192	1066	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	181	0	869	101	235	95	823	591	198	1099	18
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	279		944	551	572	116	1351	602	246	1373	597
Arrive On Green	0.06	0.08	0.00	0.27	0.29	0.29	0.07	0.38	0.38	0.07	0.39	0.39
Sat Flow, veh/h	1781	3647	0	3456	1870	1557	1781	3554	1583	3456	3554	1544
Grp Volume(v), veh/h	48	181	0	869	101	235	95	823	591	198	1099	18
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1557	1781	1777	1583	1728	1777	1544
Q Serve(g_s), s	4.0	7.5	0.0	37.2	6.1	17.2	8.0	28.5	56.3	8.6	41.9	1.1
Cycle Q Clear(g_c), s	4.0	7.5	0.0	37.2	6.1	17.2	8.0	28.5	56.3	8.6	41.9	1.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	279		944	551	572	116	1351	602	246	1373	597
V/C Ratio(X)	0.47	0.65		0.92	0.18	0.41	0.82	0.61	0.98	0.80	0.80	0.03
Avail Cap(c_a), veh/h	117	342		985	591	605	146	1351	602	313	1382	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.7	68.2	0.0	53.8	40.1	36.1	70.4	38.1	46.7	69.8	41.6	29.0
Incr Delay (d2), s/veh	4.8	4.0	0.0	13.9	0.2	0.7	27.4	0.8	32.0	12.9	3.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.6	0.0	17.8	2.9	6.6	4.5	12.3	27.0	4.2	18.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	72.2	0.0	67.7	40.3	36.8	97.8	38.9	78.7	82.7	45.2	29.1
LnGrp LOS	E	E		E	D	D	F	D	E	F	D	C
Approach Vol, veh/h		229	A		1205			1509			1315	
Approach Delay, s/veh		72.7			59.4			58.2			50.6	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	65.5	49.2	19.5	17.4	66.5	16.2	52.5
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	13.8	58.0	43.5	14.7	12.5	59.3	10.0	48.2
Max Q Clear Time (g_c+I1), s	10.6	58.3	39.2	9.5	10.0	43.9	6.0	19.2
Green Ext Time (p_c), s	0.3	0.0	2.4	0.6	0.1	8.4	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	57.0
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	147	86	53	338	13	219	389	51	22	636	180
Future Volume (veh/h)	37	147	86	53	338	13	219	389	51	22	636	180
Initial Q (Qb), veh	0	0	0	0	0	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	162	16	58	371	3	241	427	29	24	699	62
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	582	259	93	620	276	302	1548	690	49	1044	465
Arrive On Green	0.04	0.16	0.16	0.05	0.17	0.17	0.17	0.44	0.44	0.03	0.29	0.29
Sat Flow, veh/h	1781	3554	1582	1781	3554	1581	1781	3554	1583	1781	3554	1582
Grp Volume(v), veh/h	41	162	16	58	371	3	241	427	29	24	699	62
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1781	1777	1581	1781	1777	1583	1781	1777	1582
Q Serve(g_s), s	1.3	2.3	0.5	1.8	5.6	0.1	7.5	4.5	0.6	0.8	10.0	1.7
Cycle Q Clear(g_c), s	1.3	2.3	0.5	1.8	5.6	0.1	7.5	4.5	0.6	0.8	10.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	74	582	259	93	620	276	302	1548	690	49	1044	465
V/C Ratio(X)	0.55	0.28	0.06	0.62	0.60	0.01	0.80	0.28	0.04	0.49	0.67	0.13
Avail Cap(c_a), veh/h	617	2462	1096	617	2462	1095	617	2462	1097	617	2462	1096
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	21.1	20.4	26.8	22.0	19.7	23.0	10.5	9.4	27.7	17.9	15.0
Incr Delay (d2), s/veh	6.2	0.3	0.1	6.6	0.9	0.0	4.9	0.1	0.0	7.3	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.9	0.2	0.9	2.1	0.0	3.2	1.4	0.2	0.4	3.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	21.4	20.5	33.4	22.9	19.7	27.9	10.5	9.4	34.9	18.7	15.1
LnGrp LOS	C	C	C	C	C	B	C	B	A	C	B	B
Approach Vol, veh/h		219			432			697			785	
Approach Delay, s/veh		23.6			24.3			16.5			18.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	14.2	5.6	30.9	6.4	14.8	13.8	22.8
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	3.3	4.3	2.8	6.5	3.3	7.6	9.5	12.0
Green Ext Time (p_c), s	0.1	1.0	0.0	2.9	0.1	2.3	0.5	4.9

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)	318	735	121	86	619	373	261	460	467	12	523	309
Future Volume (veh/h)	318	735	121	86	619	373	261	460	467	12	523	309
Initial Q (Qb), veh	0	0	0	0	0	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	342	790	75	92	666	205	281	495	480	13	562	167
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	723	612	112	661	559	172	345	334	44	606	513
Arrive On Green	0.10	0.39	0.39	0.06	0.35	0.35	0.10	0.40	0.40	0.02	0.32	0.32
Sat Flow, veh/h	1781	1870	1585	1781	1870	1583	1781	872	845	1781	1870	1585
Grp Volume(v), veh/h	342	790	75	92	666	205	281	0	975	13	562	167
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1583	1781	0	1717	1781	1870	1585
Q Serve(g_s), s	15.0	60.2	4.7	7.9	55.0	15.0	15.0	0.0	61.6	1.1	45.2	12.4
Cycle Q Clear(g_c), s	15.0	60.2	4.7	7.9	55.0	15.0	15.0	0.0	61.6	1.1	45.2	12.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	172	723	612	112	661	559	172	0	679	44	606	513
V/C Ratio(X)	1.99	1.09	0.12	0.82	1.01	0.37	1.64	0.00	1.44	0.29	0.93	0.33
Avail Cap(c_a), veh/h	172	723	612	172	661	559	172	0	679	172	661	560
HCM Platoon Ratio	1.00	1.00	1.00	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	70.4	47.8	30.8	72.1	50.4	37.4	70.4	0.0	47.1	74.6	50.9	39.8
Incr Delay (d2), s/veh	467.1	61.8	0.4	16.4	37.1	1.9	311.8	0.0	204.6	3.6	19.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.1	39.7	1.9	4.1	31.5	6.0	21.6	0.0	64.0	0.5	23.8	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	537.5	109.6	31.2	88.5	87.4	39.3	382.2	0.0	251.7	78.2	70.0	40.3
LnGrp LOS	F	F	C	F	F	D	F	A	F	E	E	D
Approach Vol, veh/h		1207			963			1256			742	
Approach Delay, s/veh		225.9			77.3			280.9			63.4	
Approach LOS		F			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	66.7	7.9	67.4	19.0	61.5	19.0	56.2
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	15.0	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	19.9	62.2	3.1	63.6	17.0	57.0	17.0	47.2
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	3.2

Intersection Summary	
HCM 6th Ctrl Delay	179.2
HCM 6th LOS	F

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)	193	1082	161	0	827	310	0	0	0	639	33	187
Future Volume (veh/h)	193	1082	161	0	827	310	0	0	0	639	33	187
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	217	1216	121	0	929	0				744	0	70
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	365	1873	818	0	1730					1026	0	451
Arrive On Green	0.11	0.53	0.53	0.00	0.34	0.00				0.29	0.00	0.29
Sat Flow, veh/h	3456	3554	1551	0	5274	1585				3563	0	1565
Grp Volume(v), veh/h	217	1216	121	0	929	0				744	0	70
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	0	1702	1585				1781	0	1565
Q Serve(g_s), s	3.4	14.0	2.3	0.0	8.4	0.0				10.7	0.0	1.9
Cycle Q Clear(g_c), s	3.4	14.0	2.3	0.0	8.4	0.0				10.7	0.0	1.9
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	365	1873	818	0	1730					1026	0	451
V/C Ratio(X)	0.59	0.65	0.15	0.00	0.54					0.72	0.00	0.16
Avail Cap(c_a), veh/h	1824	2501	1092	0	3594					1880	0	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	24.2	9.7	6.9	0.0	15.2	0.0				18.2	0.0	15.1
Incr Delay (d2), s/veh	1.7	0.5	0.1	0.0	0.3	0.0				1.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.9	0.6	0.0	2.7	0.0				4.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	10.2	7.0	0.0	15.5	0.0				19.4	0.0	15.3
LnGrp LOS	C	B	A	A	B					B	A	B
Approach Vol, veh/h		1554			929	A					814	
Approach Delay, s/veh		12.1			15.5						19.0	
Approach LOS		B			B						B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	35.4		21.5	10.7	24.7
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	16.0		12.7	5.4	10.4
Green Ext Time (p_c), s	12.2		3.7	0.8	8.9

Intersection Summary		
HCM 6th Ctrl Delay	14.8	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	269	145	40	445	258	103
Future Volume (veh/h)	269	145	40	445	258	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	309	149	46	511	297	104
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	417	201	125	913	378	132
Arrive On Green	0.35	0.35	0.07	0.49	0.30	0.30
Sat Flow, veh/h	1192	575	1781	1870	1274	446
Grp Volume(v), veh/h	0	458	46	511	402	0
Grp Sat Flow(s),veh/h/ln	0	1767	1781	1870	1725	0
Q Serve(g_s), s	0.0	10.0	1.1	8.5	9.4	0.0
Cycle Q Clear(g_c), s	0.0	10.0	1.1	8.5	9.4	0.0
Prop In Lane		0.33	1.00		0.74	0.26
Lane Grp Cap(c), veh/h	0	618	125	913	511	0
V/C Ratio(X)	0.00	0.74	0.37	0.56	0.79	0.00
Avail Cap(c_a), veh/h	0	1603	687	1697	1565	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	12.6	19.6	8.0	14.2	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.7	0.7	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	0.4	2.1	3.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	14.7	20.2	8.6	17.5	0.0
LnGrp LOS	A	B	C	A	B	A
Approach Vol, veh/h	458			557	402	
Approach Delay, s/veh	14.7			9.6	17.5	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		26.0		18.1	6.1	19.9
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		40.0		40.0	17.0	40.0
Max Q Clear Time (g_c+I1), s		10.5		11.4	3.1	12.0
Green Ext Time (p_c), s		3.8		1.6	0.0	3.4

Intersection Summary		
HCM 6th Ctrl Delay		13.5
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	412	452	687	717	61	462	310	415	40	210	160
Future Volume (veh/h)	103	412	452	687	717	61	462	310	415	40	210	160
Initial Q (Qb), veh	0	0	0	0	0	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	515	0	859	896	0	578	388	0	50	262	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	221	832		963	1873		663	846		219	389	
Arrive On Green	0.06	0.16	0.00	0.28	0.37	0.00	0.19	0.24	0.00	0.06	0.11	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	129	515	0	859	896	0	578	388	0	50	262	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.3	8.5	0.0	21.5	12.2	0.0	14.7	8.4	0.0	1.2	6.4	0.0
Cycle Q Clear(g_c), s	3.3	8.5	0.0	21.5	12.2	0.0	14.7	8.4	0.0	1.2	6.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	832		963	1873		663	846		219	389	
V/C Ratio(X)	0.58	0.62		0.89	0.48		0.87	0.46		0.23	0.67	
Avail Cap(c_a), veh/h	716	1912		1091	2410		747	2028		306	1575	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.1	35.2	0.0	31.2	21.9	0.0	35.4	29.4	0.0	40.2	38.6	0.0
Incr Delay (d2), s/veh	0.9	1.1	0.0	8.7	0.3	0.0	10.2	0.4	0.0	0.5	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.3	0.0	9.5	4.5	0.0	6.7	3.4	0.0	0.5	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	36.2	0.0	40.0	22.2	0.0	45.5	29.8	0.0	40.7	40.7	0.0
LnGrp LOS	D	D		D	C		D	C		D	D	
Approach Vol, veh/h		644	A		1755	A		966	A		312	A
Approach Delay, s/veh		37.4			30.9			39.2			40.7	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	39.2	22.8	16.0	30.7	20.8	11.2	27.6
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	18.7	42.6	19.5	40.0	28.5	33.8	8.0	51.5
Max Q Clear Time (g_c+I1), s	5.3	14.2	16.7	8.4	23.5	10.5	3.2	10.4
Green Ext Time (p_c), s	0.1	8.9	0.7	1.5	1.6	4.2	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	20	210	110	20	270	360	837	190	450	612	270
Future Volume (veh/h)	80	20	210	110	20	270	360	837	190	450	612	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	87	22	73	147	22	55	391	1116	74	600	816	135
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	413	315	267	236	44	110	564	1468	434	601	1324	1056
Arrive On Green	0.12	0.17	0.17	0.07	0.09	0.09	0.11	0.29	0.29	0.17	0.37	0.37
Sat Flow, veh/h	3510	1900	1610	3456	462	1155	5103	5106	1508	3456	3554	2834
Grp Volume(v), veh/h	87	22	73	147	0	77	391	1116	74	600	816	135
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1616	1701	1702	1508	1728	1777	1417
Q Serve(g_s), s	1.5	0.7	2.7	2.9	0.0	3.1	5.1	13.8	2.5	12.0	12.9	2.2
Cycle Q Clear(g_c), s	1.5	0.7	2.7	2.9	0.0	3.1	5.1	13.8	2.5	12.0	12.9	2.2
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	413	315	267	236	0	153	564	1468	434	601	1324	1056
V/C Ratio(X)	0.21	0.07	0.27	0.62	0.00	0.50	0.69	0.76	0.17	1.00	0.62	0.13
Avail Cap(c_a), veh/h	1628	1168	989	456	0	422	806	1887	557	601	1447	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	24.3	25.1	31.3	0.0	29.7	29.6	22.4	18.4	28.5	17.6	14.3
Incr Delay (d2), s/veh	0.4	0.1	0.5	2.7	0.0	2.5	1.5	1.0	0.1	36.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.3	1.1	1.3	0.0	1.3	2.0	4.8	0.9	7.4	4.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	24.4	25.7	34.0	0.0	32.2	31.1	23.4	18.5	64.7	18.1	14.3
LnGrp LOS	C	C	C	C	A	C	C	C	B	E	B	B
Approach Vol, veh/h		182			224			1581			1551	
Approach Delay, s/veh		26.6			33.3			25.1			35.8	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	31.7	9.2	16.0	18.0	25.8	14.1	11.1
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	10.3	28.1	9.1	42.4	12.0	25.5	32.0	18.0
Max Q Clear Time (g_c+I1), s	7.1	14.9	4.9	4.7	14.0	15.8	3.5	5.1
Green Ext Time (p_c), s	0.5	1.7	0.2	0.3	0.0	3.6	0.4	0.3

Intersection Summary	
HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	224	352	493	1204	548	567
Future Volume (veh/h)	224	352	493	1204	548	567
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	243	96	536	1309	596	590
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	254	226	404	1481	457	452
Arrive On Green	0.14	0.14	0.22	0.78	0.52	0.52
Sat Flow, veh/h	1810	1610	1810	1900	876	868
Grp Volume(v), veh/h	243	96	536	1309	0	1186
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1744
Q Serve(g_s), s	18.1	7.4	30.3	66.2	0.0	70.7
Cycle Q Clear(g_c), s	18.1	7.4	30.3	66.2	0.0	70.7
Prop In Lane	1.00	1.00	1.00			0.50
Lane Grp Cap(c), veh/h	254	226	404	1481	0	909
V/C Ratio(X)	0.96	0.43	1.33	0.88	0.00	1.30
Avail Cap(c_a), veh/h	254	226	404	1481	0	909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.9	53.3	52.6	10.6	0.0	32.5
Incr Delay (d2), s/veh	45.0	1.3	162.8	6.9	0.0	145.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	6.8	31.5	21.9	0.0	63.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	102.9	54.6	215.5	17.5	0.0	177.5
LnGrp LOS	F	D	F	B	A	F
Approach Vol, veh/h	339			1845	1186	
Approach Delay, s/veh	89.2			75.0	177.5	
Approach LOS	F			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		111.9		23.7	35.0	76.9
Change Period (Y+Rc), s		6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s		105.7		* 19	* 30	70.7
Max Q Clear Time (g_c+I1), s		68.2		20.1	32.3	72.7
Green Ext Time (p_c), s		23.0		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		112.5
HCM 6th LOS		F

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)	0	0	0	42	0	530	0	903	55	272	680	0
Future Volume (veh/h)	0	0	0	42	0	530	0	903	55	272	680	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	52	0	438	0	1129	67	340	850	0
Peak Hour Factor	0.92	0.92	0.92	0.80	0.92	0.80	0.92	0.80	0.80	0.80	0.80	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	186	0	482	282	823	49	359	929	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.47	0.47	0.20	0.50	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1748	104	1781	1870	0
Grp Volume(v), veh/h	0	0	0	52	0	438	0	0	1196	340	850	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1852	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	7.8	0.0	0.0	35.8	14.3	31.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.0	0.0	7.8	0.0	0.0	35.8	14.3	31.9	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	186	0	482	282	0	872	359	929	0
V/C Ratio(X)	0.00	0.00	0.00	0.28	0.00	0.91	0.00	0.00	1.37	0.95	0.92	0.00
Avail Cap(c_a), veh/h	0	195	0	186	0	482	282	0	872	359	1078	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	31.5	0.0	25.4	0.0	0.0	20.1	30.0	17.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	21.1	0.0	0.0	174.3	34.2	10.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.9	0.0	9.8	0.0	0.0	54.4	8.9	13.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.3	0.0	46.6	0.0	0.0	194.4	64.2	28.5	0.0
LnGrp LOS	A	A	A	C	A	D	A	A	F	E	C	A
Approach Vol, veh/h		0			490			1196			1190	
Approach Delay, s/veh		0.0			45.1			194.4			38.7	
Approach LOS					D			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	42.0		0.0	18.1	43.9		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 15	35.8		7.8	7.3	* 44		7.8				
Max Q Clear Time (g_c+I1), s	16.3	37.8		0.0	0.0	33.9		9.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		104.6
HCM 6th LOS		F

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)	259	585	218	226	902	195	316	958	143	261	553	125
Future Volume (veh/h)	259	585	218	226	902	195	316	958	143	261	553	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	285	643	0	248	991	107	347	1053	97	287	608	71
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	1468		333	1410	430	437	1456	444	403	979	431
Arrive On Green	0.11	0.29	0.00	0.10	0.28	0.28	0.13	0.29	0.29	0.12	0.28	0.28
Sat Flow, veh/h	3456	5106	1585	3456	5106	1558	3456	5106	1558	3456	3554	1563
Grp Volume(v), veh/h	285	643	0	248	991	107	347	1053	97	287	608	71
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1558	1728	1702	1558	1728	1777	1563
Q Serve(g_s), s	8.2	10.5	0.0	7.2	17.9	5.5	10.0	19.1	4.9	8.2	15.3	3.5
Cycle Q Clear(g_c), s	8.2	10.5	0.0	7.2	17.9	5.5	10.0	19.1	4.9	8.2	15.3	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	371	1468		333	1410	430	437	1456	444	403	979	431
V/C Ratio(X)	0.77	0.44		0.75	0.70	0.25	0.79	0.72	0.22	0.71	0.62	0.16
Avail Cap(c_a), veh/h	842	2239		842	2239	683	842	2239	683	842	1558	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	29.8	0.0	45.1	33.4	28.9	43.5	33.0	28.0	43.7	32.5	28.2
Incr Delay (d2), s/veh	3.4	0.2	0.0	3.3	0.6	0.3	3.3	0.7	0.2	4.9	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.1	0.0	3.2	7.3	2.0	4.3	7.5	1.8	3.7	6.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.9	30.0	0.0	48.5	34.0	29.2	46.9	33.7	28.2	48.6	33.1	28.4
LnGrp LOS	D	C		D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		928	A		1346			1497			966	
Approach Delay, s/veh		35.5			36.3			36.4			37.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	35.5	17.0	35.3	16.0	34.3	18.0	34.3
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	9.2	12.5	10.2	21.1	10.2	19.9	12.0	17.3
Green Ext Time (p_c), s	0.7	4.4	1.8	7.7	0.8	7.9	1.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	397	890	87	63	805	216	141	270	347	349	168	228
Future Volume (veh/h)	397	890	87	63	805	216	141	270	347	349	168	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	432	967	88	68	875	227	153	293	338	379	183	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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	256	1780	162	97	646	168	181	142	164	143	122	147
Arrive On Green	0.14	0.53	0.53	0.05	0.44	0.44	0.10	0.18	0.18	0.08	0.16	0.16
Sat Flow, veh/h	1810	3346	304	1810	1455	377	1810	805	928	1810	786	944
Grp Volume(v), veh/h	432	522	533	68	0	1102	153	0	631	379	0	403
Grp Sat Flow(s),veh/h/ln	1810	1805	1845	1810	0	1832	1810	0	1733	1810	0	1730
Q Serve(g_s), s	17.0	22.8	22.8	4.4	0.0	53.3	10.0	0.0	21.2	9.5	0.0	18.7
Cycle Q Clear(g_c), s	17.0	22.8	22.8	4.4	0.0	53.3	10.0	0.0	21.2	9.5	0.0	18.7
Prop In Lane	1.00		0.16	1.00		0.21	1.00		0.54	1.00		0.55
Lane Grp Cap(c), veh/h	256	960	982	97	0	814	181	0	306	143	0	269
V/C Ratio(X)	1.69	0.54	0.54	0.70	0.00	1.35	0.84	0.00	2.06	2.65	0.00	1.50
Avail Cap(c_a), veh/h	256	960	982	136	0	814	232	0	306	143	0	269
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.5	18.5	18.5	55.8	0.0	33.4	53.1	0.0	49.4	55.3	0.0	50.7
Incr Delay (d2), s/veh	324.7	0.6	0.6	8.7	0.0	167.5	19.6	0.0	488.7	760.2	0.0	241.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.8	9.5	9.7	2.3	0.0	60.7	5.5	0.0	50.7	34.6	0.0	26.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	376.2	19.1	19.1	64.6	0.0	200.8	72.7	0.0	538.1	815.5	0.0	292.5
LnGrp LOS	F	B	B	E	A	F	E	A	F	F	A	F
Approach Vol, veh/h		1487			1170			784			782	
Approach Delay, s/veh		122.9			192.9			447.2			546.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	68.5	14.0	27.0	21.0	58.0	16.5	24.5
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	9.0	* 61	9.5	21.2	17.0	* 53	15.4	15.3
Max Q Clear Time (g_c+I1), s	6.4	24.8	11.5	23.2	19.0	55.3	12.0	20.7
Green Ext Time (p_c), s	0.0	8.6	0.0	0.0	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	280.8
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	82	90	100	451	350	350	835	130	50	732	230
Future Volume (veh/h)	93	82	90	100	451	350	350	835	130	50	732	230
Initial Q (Qb), veh	0	0	0	0	0	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	1900	1870	1900	1900	1900	1870	1870	1900	1900	1870	1870
Adj Flow Rate, veh/h	101	89	24	109	490	204	380	908	57	54	796	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	0	2	0	0	0	2	2	0	0	2	2
Cap, veh/h	317	1051	462	141	527	447	499	1256	569	80	901	402
Arrive On Green	0.09	0.29	0.29	0.08	0.28	0.28	0.14	0.35	0.35	0.04	0.25	0.25
Sat Flow, veh/h	3456	3610	1585	1810	1900	1610	3456	3554	1610	1810	3554	1585
Grp Volume(v), veh/h	101	89	24	109	490	204	380	908	57	54	796	70
Grp Sat Flow(s),veh/h/ln	1728	1805	1585	1810	1900	1610	1728	1777	1610	1810	1777	1585
Q Serve(g_s), s	2.1	1.4	0.8	4.6	19.4	8.1	8.2	17.1	1.8	2.3	16.7	2.7
Cycle Q Clear(g_c), s	2.1	1.4	0.8	4.6	19.4	8.1	8.2	17.1	1.8	2.3	16.7	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	317	1051	462	141	527	447	499	1256	569	80	901	402
V/C Ratio(X)	0.32	0.08	0.05	0.77	0.93	0.46	0.76	0.72	0.10	0.67	0.88	0.17
Avail Cap(c_a), veh/h	380	1051	462	269	529	448	961	1632	740	152	943	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	19.9	19.7	35.0	27.2	23.1	31.8	21.7	16.7	36.4	27.7	22.5
Incr Delay (d2), s/veh	0.6	0.0	0.0	8.7	23.1	0.7	2.4	1.1	0.1	9.3	9.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.6	0.3	2.3	11.7	3.0	3.3	6.3	0.7	1.1	7.5	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	19.9	19.8	43.6	50.2	23.8	34.2	22.8	16.8	45.7	37.4	22.7
LnGrp LOS	C	B	B	D	D	C	C	C	B	D	D	C
Approach Vol, veh/h		214			803			1345			920	
Approach Delay, s/veh		26.3			42.6			25.8			36.8	
Approach LOS		C			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	24.1	10.5	27.0	7.9	31.8	11.6	25.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	21.5	20.5	11.5	18.5	6.5	35.5	8.5	21.5
Max Q Clear Time (g_c+I1), s	10.2	18.7	6.6	3.4	4.3	19.1	4.1	21.4
Green Ext Time (p_c), s	1.0	0.9	0.1	0.4	0.0	5.3	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.0
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	2074.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	614	121	485	1640	556	453	677	293	210	388	150
Future Vol, veh/h	74	614	121	485	1640	556	453	677	293	210	388	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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	80	667	132	527	1783	604	492	736	318	228	422	163
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	846.7	3097.4	1530.5	773.1
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	9%	18%	28%
Vol Thru, %	48%	76%	61%	52%
Vol Right, %	21%	15%	21%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1423	809	2681	748
LT Vol	453	74	485	210
Through Vol	677	614	1640	388
RT Vol	293	121	556	150
Lane Flow Rate	1547	879	2914	813
Geometry Grp	1	1	1	1
Degree of Util (X)	4.098	2.327	7.697	2.153
Departure Headway (Hd)	59.128	102.197	37.848	102.489
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	77	53	146	49
Service Time	57.128	100.197	35.848	100.489
HCM Lane V/C Ratio	20.091	16.585	19.959	16.592
HCM Control Delay	1530.5	846.7	3097.4	773.1
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	27	9.2	82.9	8.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1705	0	514	0	323	648	0	319	474
Future Volume (veh/h)	0	0	0	1705	0	514	0	323	648	0	319	474
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	0	1900	1900	0	1900	1900
Adj Flow Rate, veh/h				1853	0	298	0	351	276	0	347	202
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				1915	0	1704	0	1429	1122	0	2053	637
Arrive On Green				0.53	0.00	0.53	0.00	0.13	0.13	0.00	0.40	0.40
Sat Flow, veh/h				3619	0	3220	0	3705	2834	0	5358	1610
Grp Volume(v), veh/h				1853	0	298	0	351	276	0	347	202
Grp Sat Flow(s),veh/h/ln				1810	0	1610	0	1805	1417	0	1729	1610
Q Serve(g_s), s				59.3	0.0	5.8	0.0	10.5	10.5	0.0	5.2	10.4
Cycle Q Clear(g_c), s				59.3	0.0	5.8	0.0	10.5	10.5	0.0	5.2	10.4
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1915	0	1704	0	1429	1122	0	2053	637
V/C Ratio(X)				0.97	0.00	0.17	0.00	0.25	0.25	0.00	0.17	0.32
Avail Cap(c_a), veh/h				1930	0	1718	0	1429	1122	0	2053	637
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.98	0.98	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.3	0.0	14.7	0.0	36.1	36.1	0.0	23.5	25.0
Incr Delay (d2), s/veh				13.6	0.0	0.0	0.0	0.4	0.5	0.0	0.2	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				28.0	0.0	2.1	0.0	5.1	4.1	0.0	2.2	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.9	0.0	14.7	0.0	36.5	36.6	0.0	23.6	26.3
LnGrp LOS				D	A	B	A	D	D	A	C	C
Approach Vol, veh/h					2151			627			549	
Approach Delay, s/veh					37.3			36.5			24.6	
Approach LOS					D			D			C	

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	52.5		52.5		67.5	
Change Period (Y+Rc), s	5.0		5.0		4.0	
Max Green Setting (Gmax), s	47.0		47.0		64.0	
Max Q Clear Time (g_c+I1), s	12.5		12.4		61.3	
Green Ext Time (p_c), s	3.7		3.2		2.2	

Intersection Summary		
HCM 6th Ctrl Delay		35.0
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	0	129	0	0	0	0	891	1006	0	1976	185
Future Volume (veh/h)	88	0	129	0	0	0	0	891	1006	0	1976	185
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	96	0	0				0	968	925	0	2148	169
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	154	0					0	4577	2501	0	4577	1421
Arrive On Green	0.04	0.00	0.00				0.00	0.88	0.88	0.00	1.00	1.00
Sat Flow, veh/h	3619	0	3220				0	5358	2834	0	5358	1610
Grp Volume(v), veh/h	96	0	0				0	968	925	0	2148	169
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1729	1417	0	1729	1610
Q Serve(g_s), s	3.1	0.0	0.0				0.0	3.2	6.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.1	0.0	0.0				0.0	3.2	6.8	0.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	154	0					0	4577	2501	0	4577	1421
V/C Ratio(X)	0.62	0.00					0.00	0.21	0.37	0.00	0.47	0.12
Avail Cap(c_a), veh/h	573	0					0	4577	2501	0	4577	1421
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.00	0.39	0.39
Uniform Delay (d), s/veh	56.5	0.0	0.0				0.0	1.0	1.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0				0.0	0.1	0.4	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0				0.0	0.5	0.9	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	0.0	0.0				0.0	1.1	1.7	0.0	0.1	0.1
LnGrp LOS	E	A					A	A	A	A	A	A
Approach Vol, veh/h		96	A					1893			2317	
Approach Delay, s/veh		60.6						1.4			0.1	
Approach LOS		E						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	110.9	9.1	110.9
Change Period (Y+Rc), s	5.0	4.0	5.0
Max Green Setting (Gmax), s	92.0	19.0	92.0
Max Q Clear Time (g_c+I1), s	8.8	5.1	2.0
Green Ext Time (p_c), s	18.5	0.2	42.3

Intersection Summary	
HCM 6th Ctrl Delay	2.0
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	706	11	782	0	1858	159	0	2033	404
Future Volume (veh/h)	0	0	0	706	11	782	0	1858	159	0	2033	404
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				793	0	853	0	2064	177	0	2259	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	0	2	2	0	2	2
Cap, veh/h				1648	0	978	0	1959	166	0	3016	
Arrive On Green				0.31	0.00	0.31	0.00	0.59	0.59	0.00	0.59	0.00
Sat Flow, veh/h				5344	0	3170	0	3410	280	0	5274	1585
Grp Volume(v), veh/h				793	0	853	0	1092	1149	0	2259	0
Grp Sat Flow(s),veh/h/ln				1781	0	1585	0	1777	1820	0	1702	1585
Q Serve(g_s), s				13.7	0.0	29.0	0.0	67.3	67.3	0.0	37.0	0.0
Cycle Q Clear(g_c), s				13.7	0.0	29.0	0.0	67.3	67.3	0.0	37.0	0.0
Prop In Lane				1.00		1.00	0.00		0.15	0.00		1.00
Lane Grp Cap(c), veh/h				1648	0	978	0	1050	1075	0	3016	
V/C Ratio(X)				0.48	0.00	0.87	0.00	1.04	1.07	0.00	0.75	
Avail Cap(c_a), veh/h				1979	0	1174	0	1050	1075	0	3016	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				32.0	0.0	37.3	0.0	23.3	23.3	0.0	17.1	0.0
Incr Delay (d2), s/veh				0.1	0.0	6.0	0.0	38.8	47.9	0.0	1.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.9	0.0	11.9	0.0	35.4	39.0	0.0	12.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.1	0.0	43.3	0.0	62.1	71.2	0.0	18.1	0.0
LnGrp LOS				C	A	D	A	F	F	A	B	
Approach Vol, veh/h					1646			2241			2259	A
Approach Delay, s/veh					37.9			66.8			18.1	
Approach LOS					D			E			B	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	73.0		73.0		40.9			
Change Period (Y+Rc), s	5.7		5.7		5.8			
Max Green Setting (Gmax), s	67.3		67.3		42.2			
Max Q Clear Time (g_c+I1), s	69.3		39.0		31.0			
Green Ext Time (p_c), s	0.0		14.4		4.1			

Intersection Summary		
HCM 6th Ctrl Delay	41.1	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	301	11	321	0	0	0	0	1737	962	0	1982	0
Future Volume (veh/h)	301	11	321	0	0	0	0	1737	962	0	1982	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	446	0	225				0	1952	712	0	2227	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	628	0	279				0	2208	1733	0	3172	0
Arrive On Green	0.18	0.00	0.18				0.00	0.62	0.62	0.00	0.62	0.00
Sat Flow, veh/h	3563	0	1585				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	446	0	225				0	1952	712	0	2227	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	6.3	0.0	7.3				0.0	24.6	6.9	0.0	15.6	0.0
Cycle Q Clear(g_c), s	6.3	0.0	7.3				0.0	24.6	6.9	0.0	15.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	628	0	279				0	2208	1733	0	3172	0
V/C Ratio(X)	0.71	0.00	0.81				0.00	0.88	0.41	0.00	0.70	0.00
Avail Cap(c_a), veh/h	2272	0	1011				0	2333	1831	0	3352	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	20.7	0.0	21.1				0.0	8.5	5.1	0.0	6.8	0.0
Incr Delay (d2), s/veh	0.6	0.0	2.1				0.0	4.0	0.1	0.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	2.6				0.0	5.7	1.0	0.0	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	0.0	23.2				0.0	12.5	5.2	0.0	7.3	0.0
LnGrp LOS	C	A	C				A	B	A	A	A	A
Approach Vol, veh/h		671						2664			2227	
Approach Delay, s/veh		21.9						10.6			7.3	
Approach LOS		C						B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	38.8	14.5	38.8
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	26.6	9.3	17.6
Green Ext Time (p_c), s	6.5	0.1	10.7

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

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	238	103	332	64	284	166	1389	132	275	1254	24
Future Volume (veh/h)	52	238	103	332	64	284	166	1389	132	275	1254	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	60	274	21	382	74	129	191	1597	80	316	1441	12
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	305	259	291	530	448	214	1451	647	240	1503	670
Arrive On Green	0.04	0.16	0.16	0.16	0.28	0.28	0.12	0.41	0.41	0.13	0.42	0.42
Sat Flow, veh/h	1781	1870	1585	1781	1870	1583	1781	3554	1584	1781	3554	1585
Grp Volume(v), veh/h	60	274	21	382	74	129	191	1597	80	316	1441	12
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1583	1781	1777	1584	1781	1777	1585
Q Serve(g_s), s	4.7	20.3	1.6	23.0	4.2	9.0	14.9	57.6	4.4	19.0	55.5	0.6
Cycle Q Clear(g_c), s	4.7	20.3	1.6	23.0	4.2	9.0	14.9	57.6	4.4	19.0	55.5	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	305	259	291	530	448	214	1451	647	240	1503	670
V/C Ratio(X)	0.78	0.90	0.08	1.31	0.14	0.29	0.89	1.10	0.12	1.32	0.96	0.02
Avail Cap(c_a), veh/h	126	358	303	291	530	449	227	1451	647	240	1503	670
HCM Platoon Ratio	1.00	1.00	1.00	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	66.8	57.8	50.0	59.0	37.7	39.4	61.1	41.7	26.0	61.0	39.5	23.7
Incr Delay (d2), s/veh	15.5	22.0	0.1	164.1	0.1	0.3	31.6	56.1	0.4	168.9	15.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	11.5	0.6	23.4	1.9	3.5	8.5	35.4	1.7	19.7	26.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.3	79.9	50.2	223.1	37.8	39.8	92.7	97.8	26.4	229.9	54.7	23.7
LnGrp LOS	F	E	D	F	D	D	F	F	C	F	D	C
Approach Vol, veh/h		355			585			1868			1769	
Approach Delay, s/veh		78.5			159.2			94.2			85.8	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.9	65.5	27.0	27.6	23.0	63.4	10.1	44.5
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	18.0	58.6	23.0	27.0	19.0	57.6	10.0	40.0
Max Q Clear Time (g_c+I1), s	16.9	57.5	25.0	22.3	21.0	59.6	6.7	11.0
Green Ext Time (p_c), s	0.1	0.9	0.0	0.7	0.0	0.0	0.0	0.7

Intersection Summary		
HCM 6th Ctrl Delay		98.1
HCM 6th LOS		F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	65	65	508	93	387	76	1229	724	150	1341	38
Future Volume (veh/h)	54	65	65	508	93	387	76	1229	724	150	1341	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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	70	0	546	100	358	82	1322	515	161	1442	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	399		641	443	479	115	1546	688	231	1553	690
Arrive On Green	0.06	0.11	0.00	0.19	0.24	0.24	0.06	0.43	0.43	0.07	0.44	0.44
Sat Flow, veh/h	1781	3647	0	3456	1870	1575	1781	3554	1581	3456	3554	1578
Grp Volume(v), veh/h	58	70	0	546	100	358	82	1322	515	161	1442	11
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1575	1781	1777	1581	1728	1777	1578
Q Serve(g_s), s	4.7	2.7	0.0	22.9	6.4	30.6	6.8	50.1	40.8	6.8	57.5	0.6
Cycle Q Clear(g_c), s	4.7	2.7	0.0	22.9	6.4	30.6	6.8	50.1	40.8	6.8	57.5	0.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	399		641	443	479	115	1546	688	231	1553	690
V/C Ratio(X)	0.54	0.18		0.85	0.23	0.75	0.71	0.86	0.75	0.70	0.93	0.02
Avail Cap(c_a), veh/h	119	437		799	537	558	119	1560	694	261	1591	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.2	60.2	0.0	58.9	46.0	46.9	68.6	38.0	35.4	68.3	39.9	23.9
Incr Delay (d2), s/veh	5.7	0.3	0.0	9.3	0.4	5.3	19.2	4.9	4.5	8.0	10.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.2	0.0	10.7	3.0	12.6	3.6	22.0	16.2	3.2	26.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.9	60.5	0.0	68.2	46.4	52.3	87.8	42.9	39.9	76.4	49.9	23.9
LnGrp LOS	E	E		E	D	D	F	D	D	E	D	C
Approach Vol, veh/h		128	A		1004			1919			1614	
Approach Delay, s/veh		66.6			60.4			44.0			52.3	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	72.6	35.3	24.3	17.2	72.9	16.6	43.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	10.0	65.7	34.6	18.4	10.0	67.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	8.8	52.1	24.9	4.7	8.8	59.5	6.7	32.6
Green Ext Time (p_c), s	0.2	8.7	2.9	0.3	0.0	5.9	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	51.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	545	251	53	48	136	456	84	562	42	535	410	120
Future Volume (veh/h)	545	251	53	48	136	456	84	562	42	535	410	120
Initial Q (Qb), veh	0	0	0	0	0	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	699	322	24	62	174	372	108	721	14	686	526	48
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	302	1363	608	81	921	411	135	869	388	302	1203	536
Arrive On Green	0.17	0.38	0.38	0.05	0.26	0.26	0.08	0.24	0.24	0.17	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	699	322	24	62	174	372	108	721	14	686	526	48
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	20.0	7.2	1.1	4.1	4.5	26.8	7.0	22.7	0.8	20.0	13.5	2.4
Cycle Q Clear(g_c), s	20.0	7.2	1.1	4.1	4.5	26.8	7.0	22.7	0.8	20.0	13.5	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	302	1363	608	81	921	411	135	869	388	302	1203	536
V/C Ratio(X)	2.31	0.24	0.04	0.77	0.19	0.91	0.80	0.83	0.04	2.27	0.44	0.09
Avail Cap(c_a), veh/h	302	1363	608	302	1206	538	302	1206	538	302	1206	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	24.6	22.7	55.7	34.0	42.3	53.6	42.2	33.9	48.9	30.3	26.6
Incr Delay (d2), s/veh	601.2	0.1	0.0	14.1	0.1	15.8	10.4	3.6	0.0	582.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	59.1	3.0	0.4	2.1	1.9	11.9	3.5	10.1	0.3	57.4	5.6	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	650.2	24.7	22.8	69.8	34.1	58.1	64.0	45.8	34.0	630.9	30.5	26.7
LnGrp LOS	F	C	C	E	C	E	E	D	C	F	C	C
Approach Vol, veh/h		1045			608			843			1260	
Approach Delay, s/veh		443.0			52.4			47.9			357.3	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	49.9	24.0	34.6	24.0	35.3	12.9	45.7
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	6.1	9.2	22.0	24.7	22.0	28.8	9.0	15.5
Green Ext Time (p_c), s	0.1	2.0	0.0	4.2	0.0	1.8	0.2	3.4

Intersection Summary	
HCM 6th Ctrl Delay	262.3
HCM 6th LOS	F

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)	267	726	256	189	455	322	120	807	334	387	847	335
Future Volume (veh/h)	267	726	256	189	455	322	120	807	334	387	847	335
Initial Q (Qb), veh	0	0	0	0	0	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	322	875	186	228	548	251	145	972	394	466	1020	285
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	642	544	167	642	544	165	433	176	167	642	544
Arrive On Green	0.09	0.34	0.34	0.09	0.34	0.34	0.09	0.34	0.34	0.09	0.34	0.34
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1265	513	1781	1870	1585
Grp Volume(v), veh/h	322	875	186	228	548	251	145	0	1366	466	1020	285
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1778	1781	1870	1585
Q Serve(g_s), s	15.0	55.0	14.0	15.0	43.6	19.8	12.9	0.0	54.9	15.0	55.0	23.1
Cycle Q Clear(g_c), s	15.0	55.0	14.0	15.0	43.6	19.8	12.9	0.0	54.9	15.0	55.0	23.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	167	642	544	167	642	544	165	0	609	167	642	544
V/C Ratio(X)	1.93	1.36	0.34	1.37	0.85	0.46	0.88	0.00	2.24	2.79	1.59	0.52
Avail Cap(c_a), veh/h	167	642	544	167	642	544	167	0	609	167	642	544
HCM Platoon Ratio	1.00	1.00	1.00	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	72.6	52.6	39.1	72.6	48.8	41.0	71.8	0.0	52.7	72.6	52.6	42.1
Incr Delay (d2), s/veh	439.8	173.0	1.7	198.4	13.5	2.8	37.1	0.0	564.6	823.4	272.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.2	56.2	5.7	15.9	22.1	8.1	7.5	0.0	119.3	44.9	73.6	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	512.4	225.5	40.8	271.0	62.3	43.8	108.8	0.0	617.3	896.0	324.6	43.3
LnGrp LOS	F	F	D	F	E	D	F	A	F	F	F	D
Approach Vol, veh/h		1383			1027			1511			1771	
Approach Delay, s/veh		267.5			104.1			568.5			429.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	61.5	19.0	60.7	19.0	61.5	18.9	60.8
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	15.0	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	17.0	57.0	17.0	56.9	17.0	45.6	14.9	57.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	368.4
HCM 6th LOS	F

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)	370	1852	525	0	1473	853	0	0	0	1165	204	777
Future Volume (veh/h)	370	1852	525	0	1473	853	0	0	0	1165	204	777
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	374	1871	434	0	1488	0				1324	0	455
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	485	2023	896	0	1935					1137	0	501
Arrive On Green	0.14	0.57	0.57	0.00	0.38	0.00				0.32	0.00	0.32
Sat Flow, veh/h	3456	3554	1574	0	5274	1585				3563	0	1572
Grp Volume(v), veh/h	374	1871	434	0	1488	0				1324	0	455
Grp Sat Flow(s),veh/h/ln	1728	1777	1574	0	1702	1585				1781	0	1572
Q Serve(g_s), s	9.8	45.0	15.4	0.0	24.0	0.0				30.0	0.0	26.1
Cycle Q Clear(g_c), s	9.8	45.0	15.4	0.0	24.0	0.0				30.0	0.0	26.1
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	485	2023	896	0	1935					1137	0	501
V/C Ratio(X)	0.77	0.92	0.48	0.00	0.77					1.16	0.00	0.91
Avail Cap(c_a), veh/h	1103	2023	896	0	2172					1137	0	501
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	39.0	18.4	12.0	0.0	25.6	0.0				32.0	0.0	30.7
Incr Delay (d2), s/veh	3.0	7.9	0.5	0.0	1.7	0.0				84.1	0.0	20.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	17.9	4.9	0.0	9.3	0.0				25.5	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	26.3	12.6	0.0	27.3	0.0				116.1	0.0	51.1
LnGrp LOS	D	C	B	A	C					F	A	D
Approach Vol, veh/h		2679			1488	A					1779	
Approach Delay, s/veh		26.3			27.3						99.5	
Approach LOS		C			C						F	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	58.9		35.1	17.9	41.0
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	47.0		32.0	11.8	26.0
Green Ext Time (p_c), s	0.0		0.0	1.4	9.6

Intersection Summary	
HCM 6th Ctrl Delay	48.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	850	496	30	792	749	51
Future Volume (veh/h)	850	496	30	792	749	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	859	483	30	800	757	50
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	468	263	67	907	689	46
Arrive On Green	0.42	0.42	0.04	0.48	0.42	0.42
Sat Flow, veh/h	1124	632	1781	1870	1656	109
Grp Volume(v), veh/h	0	1342	30	800	808	0
Grp Sat Flow(s),veh/h/ln	0	1757	1781	1870	1768	0
Q Serve(g_s), s	0.0	40.0	1.6	37.0	40.0	0.0
Cycle Q Clear(g_c), s	0.0	40.0	1.6	37.0	40.0	0.0
Prop In Lane		0.36	1.00		0.94	0.06
Lane Grp Cap(c), veh/h	0	731	67	907	736	0
V/C Ratio(X)	0.00	1.84	0.45	0.88	1.10	0.00
Avail Cap(c_a), veh/h	0	731	315	907	736	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	28.0	45.3	22.3	28.0	0.0
Incr Delay (d2), s/veh	0.0	381.2	1.8	10.3	63.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	92.5	0.7	16.8	27.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	409.2	47.1	32.6	91.2	0.0
LnGrp LOS	A	F	D	C	F	A
Approach Vol, veh/h	1342			830	808	
Approach Delay, s/veh	409.2			33.1	91.2	
Approach LOS	F			C	F	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	51.1	45.0	6.6	44.5
Change Period (Y+Rc), s	4.5	5.0	3.0	4.5
Max Green Setting (Gmax), s	40.0	40.0	17.0	40.0
Max Q Clear Time (g_c+I1), s	39.0	42.0	3.6	42.0
Green Ext Time (p_c), s	0.6	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	218.2
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	1310	451	400	850	100	721	460	846	70	300	150
Future Volume (veh/h)	340	1310	451	400	850	100	721	460	846	70	300	150
Initial Q (Qb), veh	0	0	0	0	0	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	415	1598	0	488	1037	0	879	561	0	85	366	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	480	1813		432	1698		640	909		223	480	
Arrive On Green	0.14	0.36	0.00	0.12	0.33	0.00	0.19	0.26	0.00	0.06	0.14	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	415	1598	0	488	1037	0	879	561	0	85	366	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	13.6	34.1	0.0	14.5	19.8	0.0	21.5	16.2	0.0	2.7	11.5	0.0
Cycle Q Clear(g_c), s	13.6	34.1	0.0	14.5	19.8	0.0	21.5	16.2	0.0	2.7	11.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	480	1813		432	1698		640	909		223	480	
V/C Ratio(X)	0.87	0.88		1.13	0.61		1.37	0.62		0.38	0.76	
Avail Cap(c_a), veh/h	670	1865		432	1698		640	1741		238	1328	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.9	35.1	0.0	50.8	32.5	0.0	47.3	38.2	0.0	52.1	48.4	0.0
Incr Delay (d2), s/veh	6.5	5.4	0.0	84.1	0.8	0.0	177.9	0.7	0.0	1.1	2.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	13.9	0.0	11.1	7.9	0.0	24.6	6.8	0.0	1.2	5.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	40.5	0.0	134.9	33.2	0.0	225.2	38.9	0.0	53.2	51.0	0.0
LnGrp LOS	E	D		F	C		F	D		D	D	
Approach Vol, veh/h		2013	A		1525	A		1440	A		451	A
Approach Delay, s/veh		43.6			65.8			152.6			51.4	
Approach LOS		D			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	44.7	27.0	21.8	20.0	47.3	13.0	35.8
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	22.5	33.4	21.5	43.4	14.5	42.4	8.0	56.9
Max Q Clear Time (g_c+I1), s	15.6	21.8	23.5	13.5	16.5	36.1	4.7	18.2
Green Ext Time (p_c), s	0.5	6.4	0.0	2.1	0.0	5.1	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	79.4
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	714	20	755	140	50	270	500	1057	50	110	561	480
Future Volume (veh/h)	714	20	755	140	50	270	500	1057	50	110	561	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	776	22	711	187	54	232	543	1409	16	147	748	190
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	889	805	682	214	65	277	594	1285	379	249	785	626
Arrive On Green	0.25	0.42	0.42	0.06	0.22	0.22	0.12	0.25	0.25	0.07	0.22	0.22
Sat Flow, veh/h	3510	1900	1610	3456	295	1270	5103	5106	1506	3456	3554	2834
Grp Volume(v), veh/h	776	22	711	187	0	286	543	1409	16	147	748	190
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1565	1701	1702	1506	1728	1777	1417
Q Serve(g_s), s	23.3	0.7	46.6	5.9	0.0	19.2	11.6	27.7	0.9	4.5	22.8	6.2
Cycle Q Clear(g_c), s	23.3	0.7	46.6	5.9	0.0	19.2	11.6	27.7	0.9	4.5	22.8	6.2
Prop In Lane	1.00		1.00	1.00		0.81	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	889	805	682	214	0	342	594	1285	379	249	785	626
V/C Ratio(X)	0.87	0.03	1.04	0.88	0.00	0.84	0.91	1.10	0.04	0.59	0.95	0.30
Avail Cap(c_a), veh/h	1021	805	682	214	0	342	594	1285	379	251	785	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	18.5	31.7	51.2	0.0	41.1	48.1	41.2	31.1	49.5	42.3	35.8
Incr Delay (d2), s/veh	8.1	0.0	46.0	30.8	0.0	16.4	18.8	55.7	0.0	2.4	21.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	0.3	26.4	3.5	0.0	9.0	5.7	17.6	0.3	2.0	11.8	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	18.5	77.7	81.9	0.0	57.5	66.9	96.9	31.1	51.9	63.5	35.9
LnGrp LOS	D	B	F	F	A	E	E	F	C	D	E	D
Approach Vol, veh/h		1509			473			1968			1085	
Approach Delay, s/veh		61.3			67.1			88.1			57.1	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	30.3	11.3	51.1	13.9	33.7	33.9	28.5
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	12.8	24.3	6.8	46.6	8.0	27.6	32.0	19.9
Max Q Clear Time (g_c+I1), s	13.6	24.8	7.9	48.6	6.5	29.7	25.3	21.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	71.4
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



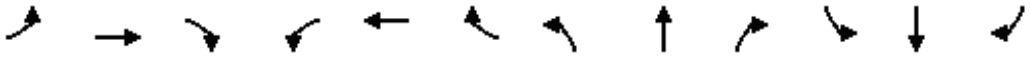
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	735	420	86	1412	1240	252
Future Volume (veh/h)	735	420	86	1412	1240	252
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	799	361	93	1535	1348	270
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	640	570	119	1044	680	136
Arrive On Green	0.35	0.35	0.07	0.55	0.44	0.44
Sat Flow, veh/h	1810	1610	1810	1900	1537	308
Grp Volume(v), veh/h	799	361	93	1535	0	1618
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1845
Q Serve(g_s), s	40.0	21.1	5.7	62.1	0.0	50.0
Cycle Q Clear(g_c), s	40.0	21.1	5.7	62.1	0.0	50.0
Prop In Lane	1.00	1.00	1.00			0.17
Lane Grp Cap(c), veh/h	640	570	119	1044	0	816
V/C Ratio(X)	1.25	0.63	0.78	1.47	0.00	1.98
Avail Cap(c_a), veh/h	640	570	480	1044	0	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.5	30.4	52.0	25.5	0.0	31.5
Incr Delay (d2), s/veh	124.2	2.3	8.0	216.6	0.0	446.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	39.3	0.4	2.8	86.9	0.0	121.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	160.7	32.7	60.0	242.1	0.0	478.3
LnGrp LOS	F	C	E	F	A	F
Approach Vol, veh/h	1160			1628	1618	
Approach Delay, s/veh	120.9			231.7	478.3	
Approach LOS	F			F	F	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	68.3		44.7	12.1	56.2
Change Period (Y+Rc), s	6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	50.0		* 40	* 30	50.0
Max Q Clear Time (g_c+I1), s	64.1		42.0	7.7	52.0
Green Ext Time (p_c), s	0.0		0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	293.1
HCM 6th LOS	F

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)	0	0	0	40	0	362	0	1288	42	358	1087	0
Future Volume (veh/h)	0	0	0	40	0	362	0	1288	42	358	1087	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	48	0	341	0	1533	49	426	1294	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	114	0	501	130	984	31	451	1339	0
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.55	0.55	0.25	0.72	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1802	58	1781	1870	0
Grp Volume(v), veh/h	0	0	0	48	0	341	0	0	1582	426	1294	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1860	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	3.2	0.0	7.8	0.0	0.0	67.8	29.1	79.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.2	0.0	7.8	0.0	0.0	67.8	29.1	79.2	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	114	0	501	130	0	1016	451	1339	0
V/C Ratio(X)	0.00	0.00	0.00	0.42	0.00	0.68	0.00	0.00	1.56	0.94	0.97	0.00
Avail Cap(c_a), veh/h	0	119	0	114	0	501	130	0	1016	478	1398	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	56.0	0.0	37.0	0.0	0.0	28.2	45.5	16.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.5	0.0	3.7	0.0	0.0	255.8	26.9	16.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.5	0.0	9.4	0.0	0.0	98.7	15.7	31.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	58.5	0.0	40.7	0.0	0.0	284.0	72.4	32.7	0.0
LnGrp LOS	A	A	A	E	A	D	A	A	F	E	C	A
Approach Vol, veh/h		0			389			1582			1720	
Approach Delay, s/veh		0.0			42.9			284.0			42.5	
Approach LOS					D			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	36.2	74.0		0.0	15.1	95.1		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 33	67.8		7.8	8.3	* 93		7.8				
Max Q Clear Time (g_c+I1), s	31.1	69.8		0.0	0.0	81.2		9.8				
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	7.6		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		146.0
HCM 6th LOS		F

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)	695	1027	552	353	868	444	243	657	192	567	1234	162
Future Volume (veh/h)	695	1027	552	353	868	444	243	657	192	567	1234	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	716	1059	0	364	895	230	251	677	88	585	1272	107
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	631	1511		429	1212	369	313	1212	369	629	1168	513
Arrive On Green	0.18	0.30	0.00	0.12	0.24	0.24	0.09	0.24	0.24	0.18	0.33	0.33
Sat Flow, veh/h	3456	5106	1585	3456	5106	1555	3456	5106	1555	3456	3554	1561
Grp Volume(v), veh/h	716	1059	0	364	895	230	251	677	88	585	1272	107
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1555	1728	1702	1555	1728	1777	1561
Q Serve(g_s), s	25.0	25.2	0.0	14.1	22.2	18.1	9.8	16.0	6.3	22.8	45.0	6.8
Cycle Q Clear(g_c), s	25.0	25.2	0.0	14.1	22.2	18.1	9.8	16.0	6.3	22.8	45.0	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	631	1511		429	1212	369	313	1212	369	629	1168	513
V/C Ratio(X)	1.13	0.70		0.85	0.74	0.62	0.80	0.56	0.24	0.93	1.09	0.21
Avail Cap(c_a), veh/h	631	1678		631	1678	511	631	1678	511	631	1168	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	42.8	0.0	58.7	48.3	46.7	61.1	45.9	42.2	55.2	46.0	33.1
Incr Delay (d2), s/veh	79.0	1.2	0.0	7.2	1.1	1.7	4.8	0.4	0.3	21.1	54.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.5	10.5	0.0	6.6	9.5	7.1	4.4	6.7	2.4	11.6	28.1	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	135.0	44.0	0.0	65.9	49.4	48.4	65.8	46.3	42.5	76.3	100.0	33.3
LnGrp LOS	F	D		E	D	D	E	D	D	E	F	C
Approach Vol, veh/h		1775	A		1489			1016			1964	
Approach Delay, s/veh		80.7			53.3			50.8			89.3	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	46.5	29.9	38.5	30.0	38.5	17.4	51.0
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	16.1	27.2	24.8	18.0	27.0	24.2	11.8	47.0
Green Ext Time (p_c), s	0.9	6.5	0.1	4.8	0.0	7.1	0.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	72.0
HCM 6th LOS	E

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	1165	61	102	443	102	42	110	68	612	530	100
Future Volume (veh/h)	101	1165	61	102	443	102	42	110	68	612	530	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	110	1266	63	111	482	104	46	120	56	665	576	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	142	1623	81	151	709	153	70	154	72	198	306	56
Arrive On Green	0.08	0.46	0.46	0.08	0.47	0.47	0.04	0.13	0.13	0.11	0.20	0.20
Sat Flow, veh/h	1810	3500	174	1810	1514	327	1810	1225	572	1810	1561	287
Grp Volume(v), veh/h	110	652	677	111	0	586	46	0	176	665	0	682
Grp Sat Flow(s),veh/h/ln	1810	1805	1869	1810	0	1841	1810	0	1797	1810	0	1848
Q Serve(g_s), s	5.2	26.4	26.5	5.2	0.0	21.6	2.2	0.0	8.3	9.5	0.0	17.1
Cycle Q Clear(g_c), s	5.2	26.4	26.5	5.2	0.0	21.6	2.2	0.0	8.3	9.5	0.0	17.1
Prop In Lane	1.00		0.09	1.00		0.18	1.00		0.32	1.00		0.16
Lane Grp Cap(c), veh/h	142	837	867	151	0	863	70	0	225	198	0	362
V/C Ratio(X)	0.77	0.78	0.78	0.74	0.00	0.68	0.66	0.00	0.78	3.37	0.00	1.88
Avail Cap(c_a), veh/h	353	1271	1316	187	0	1128	320	0	438	198	0	362
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.3	19.6	19.6	39.0	0.0	18.0	41.3	0.0	36.9	38.8	0.0	35.0
Incr Delay (d2), s/veh	8.6	1.8	1.7	11.0	0.0	1.1	10.1	0.0	5.8	1077.9	0.0	407.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	10.7	11.1	2.7	0.0	8.8	1.2	0.0	3.9	63.3	0.0	48.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	21.4	21.4	50.0	0.0	19.1	51.4	0.0	42.7	1116.7	0.0	442.2
LnGrp LOS	D	C	C	D	A	B	D	A	D	F	A	F
Approach Vol, veh/h		1439			697			222			1347	
Approach Delay, s/veh		23.4			24.0			44.5			775.2	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	45.1	14.0	16.7	10.8	45.5	7.9	22.9
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	9.3	* 61	9.5	21.2	17.0	* 53	15.4	15.3
Max Q Clear Time (g_c+I1), s	7.2	28.5	11.5	10.3	7.2	23.6	4.2	19.1
Green Ext Time (p_c), s	0.0	11.9	0.0	0.7	0.2	4.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	298.1
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	510	931	360	50	505	340	460	679	310	290	946	165
Future Volume (veh/h)	510	931	360	50	505	340	460	679	310	290	946	165
Initial Q (Qb), veh	0	0	0	0	0	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	1900	1870	1900	1900	1900	1870	1870	1900	1900	1870	1870
Adj Flow Rate, veh/h	554	1012	150	54	549	130	500	738	189	315	1028	59
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	0	2	0	0	0	2	2	0	0	2	2
Cap, veh/h	550	1370	602	70	492	417	487	824	373	337	985	439
Arrive On Green	0.16	0.38	0.38	0.04	0.26	0.26	0.14	0.23	0.23	0.19	0.28	0.28
Sat Flow, veh/h	3456	3610	1585	1810	1900	1610	3456	3554	1610	1810	3554	1585
Grp Volume(v), veh/h	554	1012	150	54	549	130	500	738	189	315	1028	59
Grp Sat Flow(s),veh/h/ln	1728	1805	1585	1810	1900	1610	1728	1777	1610	1810	1777	1585
Q Serve(g_s), s	17.5	26.6	7.1	3.3	28.5	7.2	15.5	22.1	11.2	18.9	30.5	3.1
Cycle Q Clear(g_c), s	17.5	26.6	7.1	3.3	28.5	7.2	15.5	22.1	11.2	18.9	30.5	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	550	1370	602	70	492	417	487	824	373	337	985	439
V/C Ratio(X)	1.01	0.74	0.25	0.77	1.12	0.31	1.03	0.90	0.51	0.93	1.04	0.13
Avail Cap(c_a), veh/h	550	1370	602	90	492	417	487	824	373	337	985	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	29.4	23.4	52.4	40.7	32.8	47.3	41.0	36.8	44.1	39.8	29.8
Incr Delay (d2), s/veh	40.3	2.1	0.2	25.8	76.0	0.4	47.8	12.4	1.1	32.4	40.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	11.7	2.7	2.0	23.5	2.8	9.6	10.6	4.5	11.1	18.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	31.6	23.6	78.2	116.8	33.3	95.1	53.4	37.9	76.5	80.4	30.0
LnGrp LOS	F	C	C	E	F	C	F	D	D	E	F	C
Approach Vol, veh/h		1716			733			1427			1402	
Approach Delay, s/veh		48.6			99.1			65.9			77.4	
Approach LOS		D			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	35.0	8.7	46.3	25.0	30.0	22.0	33.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	15.5	30.5	5.5	40.5	20.5	25.5	17.5	28.5
Max Q Clear Time (g_c+I1), s	17.5	32.5	5.3	28.6	20.9	24.1	19.5	30.5
Green Ext Time (p_c), s	0.0	0.0	0.0	5.9	0.0	0.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	67.9
HCM 6th LOS	E

Intersection	
Intersection Delay, s/veh	2218.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	266	1289	882	617	948	372	269	396	679	410	556	180
Future Vol, veh/h	266	1289	882	617	948	372	269	396	679	410	556	180
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	289	1401	959	671	1030	404	292	430	738	446	604	196
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	2873.7	2320.6	1574.7	1407.5
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	11%	32%	36%
Vol Thru, %	29%	53%	49%	49%
Vol Right, %	51%	36%	19%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1344	2437	1937	1146
LT Vol	269	266	617	410
Through Vol	396	1289	948	556
RT Vol	679	882	372	180
Lane Flow Rate	1461	2649	2105	1246
Geometry Grp	1	1	1	1
Degree of Util (X)	3.788	6.918	5.583	3.313
Departure Headway (Hd)	144.516	97.784	119.131	165.072
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	44	79	63	37
Service Time	142.516	95.784	117.131	163.072
HCM Lane V/C Ratio	33.205	33.532	33.413	33.676
HCM Control Delay	1574.7	2873.7	2320.6	1407.5
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	11.7	30.4	20.4	9.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1355	0	1256	0	850	266	0	1090	270
Future Volume (veh/h)	0	0	0	1355	0	1256	0	850	266	0	1090	270
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	0	1900	1900	0	1900	1900
Adj Flow Rate, veh/h				1473	0	1187	0	924	169	0	1185	171
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				1237	0	1100	0	2106	1653	0	3026	939
Arrive On Green				0.34	0.00	0.34	0.00	1.00	1.00	0.00	0.58	0.58
Sat Flow, veh/h				3619	0	3220	0	3705	2834	0	5358	1610
Grp Volume(v), veh/h				1473	0	1187	0	924	169	0	1185	171
Grp Sat Flow(s),veh/h/ln				1810	0	1610	0	1805	1417	0	1729	1610
Q Serve(g_s), s				41.0	0.0	41.0	0.0	0.0	0.0	0.0	14.8	5.9
Cycle Q Clear(g_c), s				41.0	0.0	41.0	0.0	0.0	0.0	0.0	14.8	5.9
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1237	0	1100	0	2106	1653	0	3026	939
V/C Ratio(X)				1.19	0.00	1.08	0.00	0.44	0.10	0.00	0.39	0.18
Avail Cap(c_a), veh/h				1237	0	1100	0	2106	1653	0	3026	939
HCM Platoon Ratio				1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.86	0.86	0.00	1.00	1.00
Uniform Delay (d), s/veh				39.5	0.0	39.5	0.0	0.0	0.0	0.0	13.5	11.7
Incr Delay (d2), s/veh				94.3	0.0	51.0	0.0	0.6	0.1	0.0	0.4	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				34.1	0.0	23.7	0.0	0.2	0.0	0.0	5.7	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				133.8	0.0	90.5	0.0	0.6	0.1	0.0	13.9	12.1
LnGrp LOS				F	A	F	A	A	A	A	B	B
Approach Vol, veh/h					2660			1093			1356	
Approach Delay, s/veh					114.5			0.5			13.7	
Approach LOS					F			A			B	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	75.0		75.0		45.0			
Change Period (Y+Rc), s	5.0		5.0		4.0			
Max Green Setting (Gmax), s	70.0		70.0		41.0			
Max Q Clear Time (g_c+I1), s	2.0		16.8		43.0			
Green Ext Time (p_c), s	9.6		12.8		0.0			

Intersection Summary		
HCM 6th Ctrl Delay	63.4	
HCM 6th LOS	E	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	532	0	656	0	0	0	0	626	1947	0	1714	750
Future Volume (veh/h)	532	0	656	0	0	0	0	626	1947	0	1714	750
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	578	0	0				0	680	1716	0	1863	645
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	483	0					0	4106	2244	0	4106	1275
Arrive On Green	0.13	0.00	0.00				0.00	0.79	0.79	0.00	1.00	1.00
Sat Flow, veh/h	3619	0	3220				0	5358	2834	0	5358	1610
Grp Volume(v), veh/h	578	0	0				0	680	1716	0	1863	645
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1729	1417	0	1729	1610
Q Serve(g_s), s	16.0	0.0	0.0				0.0	3.8	38.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	16.0	0.0	0.0				0.0	3.8	38.4	0.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	483	0					0	4106	2244	0	4106	1275
V/C Ratio(X)	1.20	0.00					0.00	0.17	0.76	0.00	0.45	0.51
Avail Cap(c_a), veh/h	483	0					0	4106	2244	0	4106	1275
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.00	0.40	0.40
Uniform Delay (d), s/veh	52.0	0.0	0.0				0.0	3.0	6.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	107.7	0.0	0.0				0.0	0.1	2.5	0.0	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.5	0.0	0.0				0.0	1.1	9.6	0.0	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	159.7	0.0	0.0				0.0	3.1	9.2	0.0	0.1	0.6
LnGrp LOS	F	A					A	A	A	A	A	A
Approach Vol, veh/h		578	A					2396			2508	
Approach Delay, s/veh		159.7						7.4			0.3	
Approach LOS		F						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	100.0	20.0	100.0
Change Period (Y+Rc), s	5.0	4.0	5.0
Max Green Setting (Gmax), s	95.0	16.0	95.0
Max Q Clear Time (g_c+I1), s	40.4	18.0	2.0
Green Ext Time (p_c), s	24.4	0.0	41.0

Intersection Summary	
HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	15	29	147	53	698	46	950	91	397	1132	58
Future Volume (veh/h)	15	15	29	147	53	698	46	950	91	397	1132	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	16	4	158	57	424	49	1022	30	427	1217	30
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	32	457	388	230	549	464	66	1303	580	490	1676	748
Arrive On Green	0.02	0.24	0.24	0.07	0.29	0.29	0.04	0.37	0.37	0.14	0.47	0.47
Sat Flow, veh/h	1781	1870	1585	3456	1870	1582	1781	3554	1582	3456	3554	1585
Grp Volume(v), veh/h	16	16	4	158	57	424	49	1022	30	427	1217	30
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1582	1781	1777	1582	1728	1777	1585
Q Serve(g_s), s	0.9	0.7	0.2	4.6	2.3	26.4	2.8	26.1	1.2	12.3	28.1	1.0
Cycle Q Clear(g_c), s	0.9	0.7	0.2	4.6	2.3	26.4	2.8	26.1	1.2	12.3	28.1	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	32	457	388	230	549	464	66	1303	580	490	1676	748
V/C Ratio(X)	0.50	0.03	0.01	0.69	0.10	0.91	0.75	0.78	0.05	0.87	0.73	0.04
Avail Cap(c_a), veh/h	87	561	475	576	781	661	87	1303	580	508	1676	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	29.4	29.2	46.6	26.3	34.8	48.7	28.7	20.9	42.9	21.7	14.5
Incr Delay (d2), s/veh	11.7	0.0	0.0	3.6	0.1	13.4	21.4	4.8	0.2	14.9	2.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.3	0.1	2.0	1.0	11.3	1.6	11.2	0.5	6.1	11.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	29.4	29.2	50.2	26.4	48.2	70.1	33.5	21.0	57.7	24.4	14.6
LnGrp LOS	E	C	C	D	C	D	E	C	C	E	C	B
Approach Vol, veh/h		36			639			1101			1674	
Approach Delay, s/veh		43.6			46.7			34.8			32.8	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	53.9	10.8	29.6	18.5	43.2	5.8	34.5
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	5.0	47.4	17.0	30.6	15.0	37.4	5.0	42.6
Max Q Clear Time (g_c+I1), s	4.8	30.1	6.6	2.7	14.3	28.1	2.9	28.4
Green Ext Time (p_c), s	0.0	7.8	0.3	0.0	0.1	4.4	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	176	94	843	98	288	92	798	975	192	1066	48
Future Volume (veh/h)	47	176	94	843	98	288	92	798	975	192	1066	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	181	0	869	101	122	95	823	974	198	1099	18
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	279		944	551	572	116	1351	1035	246	1373	597
Arrive On Green	0.06	0.08	0.00	0.27	0.29	0.29	0.07	0.38	0.38	0.07	0.39	0.39
Sat Flow, veh/h	1781	3647	0	3456	1870	1557	1781	3554	1583	3456	3554	1544
Grp Volume(v), veh/h	48	181	0	869	101	122	95	823	974	198	1099	18
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1557	1781	1777	1583	1728	1777	1544
Q Serve(g_s), s	4.0	7.5	0.0	37.2	6.1	8.2	8.0	28.5	58.0	8.6	41.9	1.1
Cycle Q Clear(g_c), s	4.0	7.5	0.0	37.2	6.1	8.2	8.0	28.5	58.0	8.6	41.9	1.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	279		944	551	572	116	1351	1035	246	1373	597
V/C Ratio(X)	0.47	0.65		0.92	0.18	0.21	0.82	0.61	0.94	0.80	0.80	0.03
Avail Cap(c_a), veh/h	117	342		985	591	605	146	1351	1035	313	1382	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.7	68.2	0.0	53.8	40.1	33.3	70.4	38.1	23.8	69.8	41.6	29.0
Incr Delay (d2), s/veh	4.8	4.0	0.0	13.9	0.2	0.3	27.4	0.8	15.8	12.9	3.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.6	0.0	17.8	2.9	3.2	4.5	12.3	33.3	4.2	18.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	72.2	0.0	67.7	40.3	33.5	97.8	38.9	39.6	82.7	45.2	29.1
LnGrp LOS	E	E		E	D	C	F	D	D	F	D	C
Approach Vol, veh/h		229			1092			1892			1315	
Approach Delay, s/veh		72.7			61.4			42.2			50.6	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	65.5	49.2	19.5	17.4	66.5	16.2	52.5
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	13.8	58.0	43.5	14.7	12.5	59.3	10.0	48.2
Max Q Clear Time (g_c+I1), s	10.6	60.0	39.2	9.5	10.0	43.9	6.0	10.2
Green Ext Time (p_c), s	0.3	0.0	2.4	0.6	0.1	8.4	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	50.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	147	86	53	338	13	219	389	51	22	636	180
Future Volume (veh/h)	37	147	86	53	338	13	219	389	51	22	636	180
Initial Q (Qb), veh	0	0	0	0	0	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	162	16	58	371	3	241	427	29	24	699	62
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	920	259	93	620	276	302	1548	690	96	1044	465
Arrive On Green	0.04	0.16	0.16	0.05	0.17	0.17	0.17	0.44	0.44	0.03	0.29	0.29
Sat Flow, veh/h	3563	5611	1582	1781	3554	1582	1781	3554	1583	3456	3554	1583
Grp Volume(v), veh/h	41	162	16	58	371	3	241	427	29	24	699	62
Grp Sat Flow(s),veh/h/ln	1781	1870	1582	1781	1777	1582	1781	1777	1583	1728	1777	1583
Q Serve(g_s), s	0.6	1.4	0.5	1.8	5.6	0.1	7.5	4.5	0.6	0.4	10.0	1.7
Cycle Q Clear(g_c), s	0.6	1.4	0.5	1.8	5.6	0.1	7.5	4.5	0.6	0.4	10.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	920	259	93	620	276	302	1548	690	96	1044	465
V/C Ratio(X)	0.28	0.18	0.06	0.62	0.60	0.01	0.80	0.28	0.04	0.25	0.67	0.13
Avail Cap(c_a), veh/h	1234	3888	1096	617	2462	1096	617	2462	1097	1197	2462	1097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	20.8	20.4	26.8	22.0	19.7	23.0	10.5	9.4	27.5	17.9	15.0
Incr Delay (d2), s/veh	1.0	0.1	0.1	6.6	0.9	0.0	4.9	0.1	0.0	1.4	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.6	0.2	0.9	2.1	0.0	3.2	1.4	0.2	0.2	3.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	20.9	20.5	33.4	22.9	19.7	27.9	10.5	9.4	28.8	18.7	15.1
LnGrp LOS	C	C	C	C	C	B	C	B	A	C	B	B
Approach Vol, veh/h		219			432			697			785	
Approach Delay, s/veh		22.1			24.3			16.5			18.7	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	14.2	5.6	30.9	6.4	14.8	13.8	22.8
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	3.8	3.4	2.4	6.5	2.6	7.6	9.5	12.0
Green Ext Time (p_c), s	0.1	1.0	0.0	2.9	0.1	2.3	0.5	4.9

Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	735	121	86	619	373	261	460	467	12	523	309
Future Volume (veh/h)	318	735	121	86	619	373	261	460	467	12	523	309
Initial Q (Qb), veh	0	0	0	0	0	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	342	790	46	92	666	207	281	495	251	13	562	104
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	412	1316	587	254	1154	514	314	1260	562	92	729	325
Arrive On Green	0.12	0.37	0.37	0.07	0.32	0.32	0.18	0.35	0.35	0.03	0.21	0.21
Sat Flow, veh/h	3456	3554	1585	3456	3554	1584	1781	3554	1584	3456	3554	1585
Grp Volume(v), veh/h	342	790	46	92	666	207	281	495	251	13	562	104
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1584	1781	1777	1584	1728	1777	1585
Q Serve(g_s), s	11.2	20.9	2.2	2.9	18.1	11.8	17.9	12.1	14.1	0.4	17.3	6.5
Cycle Q Clear(g_c), s	11.2	20.9	2.2	2.9	18.1	11.8	17.9	12.1	14.1	0.4	17.3	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	412	1316	587	254	1154	514	314	1260	562	92	729	325
V/C Ratio(X)	0.83	0.60	0.08	0.36	0.58	0.40	0.90	0.39	0.45	0.14	0.77	0.32
Avail Cap(c_a), veh/h	566	1316	587	476	1154	514	445	1653	737	268	1041	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	29.6	23.7	51.2	32.6	30.4	46.8	28.1	28.7	55.2	43.6	39.3
Incr Delay (d2), s/veh	7.4	2.0	0.3	0.9	2.1	2.3	15.6	0.3	0.8	0.7	2.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	9.0	0.8	1.3	7.7	4.7	9.0	5.0	5.3	0.2	7.7	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	31.6	24.0	52.1	34.7	32.8	62.4	28.4	29.5	55.9	46.5	40.1
LnGrp LOS	E	C	C	D	C	C	E	C	C	E	D	D
Approach Vol, veh/h		1178			965			1027			679	
Approach Delay, s/veh		38.8			35.9			38.0			45.7	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	49.5	7.1	47.0	17.8	44.2	24.4	29.6
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	16.0	* 41	9.0	54.0	19.0	37.7	29.0	34.0
Max Q Clear Time (g_c+I1), s	14.9	22.9	2.4	16.1	13.2	20.1	19.9	19.3
Green Ext Time (p_c), s	0.2	6.9	0.0	6.4	0.6	6.2	0.5	4.5

Intersection Summary	
HCM 6th Ctrl Delay	39.1
HCM 6th LOS	D

Notes

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	269	145	40	445	258	103
Future Volume (veh/h)	269	145	40	445	258	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	309	149	46	511	297	104
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	527	447	161	865	447	398
Arrive On Green	0.28	0.28	0.09	0.46	0.25	0.25
Sat Flow, veh/h	1870	1585	1781	1870	1781	1585
Grp Volume(v), veh/h	309	149	46	511	297	104
Grp Sat Flow(s),veh/h/ln	1870	1585	1781	1870	1781	1585
Q Serve(g_s), s	4.7	2.5	0.8	6.7	5.0	1.7
Cycle Q Clear(g_c), s	4.7	2.5	0.8	6.7	5.0	1.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	527	447	161	865	447	398
V/C Ratio(X)	0.59	0.33	0.29	0.59	0.66	0.26
Avail Cap(c_a), veh/h	2254	1910	912	2254	2147	1910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.3	9.4	14.1	6.6	11.2	10.0
Incr Delay (d2), s/veh	1.3	0.5	0.4	0.8	2.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.6	0.2	1.2	1.4	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.5	10.0	14.5	7.4	13.2	10.4
LnGrp LOS	B	A	B	A	B	B
Approach Vol, veh/h	458			557	401	
Approach Delay, s/veh	11.0			8.0	12.5	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		19.9		13.3	6.0	13.9
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		40.0		40.0	17.0	40.0
Max Q Clear Time (g_c+I1), s		8.7		7.0	2.8	6.7
Green Ext Time (p_c), s		3.9		1.6	0.0	2.8

Intersection Summary			
HCM 6th Ctrl Delay		10.2	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	412	452	687	717	61	462	310	415	40	210	160
Future Volume (veh/h)	103	412	452	687	717	61	462	310	415	40	210	160
Initial Q (Qb), veh	0	0	0	0	0	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	515	0	859	896	0	578	388	0	50	262	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	864		986	1907		764	706		228	401	
Arrive On Green	0.07	0.17	0.00	0.29	0.37	0.00	0.15	0.20	0.00	0.07	0.11	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	5023	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	129	515	0	859	896	0	578	388	0	50	262	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1674	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.0	7.7	0.0	19.5	11.0	0.0	9.1	8.1	0.0	1.1	5.8	0.0
Cycle Q Clear(g_c), s	3.0	7.7	0.0	19.5	11.0	0.0	9.1	8.1	0.0	1.1	5.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	864		986	1907		764	706		228	401	
V/C Ratio(X)	0.54	0.60		0.87	0.47		0.76	0.55		0.22	0.65	
Avail Cap(c_a), veh/h	782	2089		1192	2633		1186	2215		335	1721	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.2	31.7	0.0	28.1	19.7	0.0	33.6	29.8	0.0	36.6	35.1	0.0
Incr Delay (d2), s/veh	0.7	0.9	0.0	6.3	0.3	0.0	1.6	0.7	0.0	0.5	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.9	0.0	8.2	4.0	0.0	3.5	3.2	0.0	0.5	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	32.7	0.0	34.4	19.9	0.0	35.1	30.4	0.0	37.0	36.9	0.0
LnGrp LOS	D	C		C	B		D	C		D	D	
Approach Vol, veh/h		644			1755			966			312	
Approach Delay, s/veh		33.7			27.0			33.2			36.9	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	37.0	18.1	15.4	29.1	20.1	11.0	22.5
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	18.7	42.6	19.5	40.0	28.5	33.8	8.0	51.5
Max Q Clear Time (g_c+I1), s	5.0	13.0	11.1	7.8	21.5	9.7	3.1	10.1
Green Ext Time (p_c), s	0.1	9.1	1.5	1.5	2.0	4.3	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	20	210	110	20	270	360	837	190	450	612	270
Future Volume (veh/h)	80	20	210	110	20	270	360	837	190	450	612	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	87	22	73	147	22	55	391	1116	74	600	816	135
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	413	314	266	236	44	111	564	1468	443	602	1325	1057
Arrive On Green	0.12	0.17	0.17	0.07	0.09	0.09	0.11	0.29	0.29	0.17	0.37	0.37
Sat Flow, veh/h	3510	1900	1610	3456	469	1174	5103	5106	1539	3456	3554	2834
Grp Volume(v), veh/h	87	22	73	147	0	77	391	1116	74	600	816	135
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1643	1701	1702	1539	1728	1777	1417
Q Serve(g_s), s	1.5	0.7	2.7	2.9	0.0	3.1	5.1	13.7	2.5	12.0	12.9	2.2
Cycle Q Clear(g_c), s	1.5	0.7	2.7	2.9	0.0	3.1	5.1	13.7	2.5	12.0	12.9	2.2
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	413	314	266	236	0	155	564	1468	443	602	1325	1057
V/C Ratio(X)	0.21	0.07	0.27	0.62	0.00	0.50	0.69	0.76	0.17	1.00	0.62	0.13
Avail Cap(c_a), veh/h	1630	1169	990	456	0	429	807	1889	569	602	1449	1155
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	24.3	25.1	31.2	0.0	29.7	29.5	22.4	18.4	28.4	17.6	14.2
Incr Delay (d2), s/veh	0.4	0.1	0.6	2.7	0.0	2.5	1.5	1.0	0.1	36.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.3	1.1	1.3	0.0	1.3	1.9	4.8	0.9	7.4	4.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	24.4	25.7	33.9	0.0	32.1	31.1	23.3	18.4	64.4	18.0	14.3
LnGrp LOS	C	C	C	C	A	C	C	C	B	E	B	B
Approach Vol, veh/h		182			224			1581			1551	
Approach Delay, s/veh		26.6			33.3			25.0			35.6	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	31.7	9.2	15.9	18.0	25.8	14.1	11.0
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	10.3	28.1	9.1	42.4	12.0	25.5	32.0	18.0
Max Q Clear Time (g_c+I1), s	7.1	14.9	4.9	4.7	14.0	15.7	3.5	5.1
Green Ext Time (p_c), s	0.5	1.7	0.2	0.3	0.0	3.6	0.4	0.3

Intersection Summary	
HCM 6th Ctrl Delay	30.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	224	352	493	1204	548	567
Future Volume (veh/h)	224	352	493	1204	548	567
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	243	94	536	1309	596	279
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	305	271	593	2444	1021	455
Arrive On Green	0.17	0.17	0.33	0.68	0.28	0.28
Sat Flow, veh/h	1810	1610	1810	3705	3705	1610
Grp Volume(v), veh/h	243	94	536	1309	596	279
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1805	1805	1610
Q Serve(g_s), s	9.1	3.6	20.0	13.0	10.0	10.6
Cycle Q Clear(g_c), s	9.1	3.6	20.0	13.0	10.0	10.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	305	271	593	2444	1021	455
V/C Ratio(X)	0.80	0.35	0.90	0.54	0.58	0.61
Avail Cap(c_a), veh/h	649	577	1315	5084	2220	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	25.9	22.7	5.8	21.7	22.0
Incr Delay (d2), s/veh	4.7	0.8	4.2	0.3	0.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	3.4	7.8	2.7	3.8	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.9	26.7	26.9	6.0	22.5	23.9
LnGrp LOS	C	C	C	A	C	C
Approach Vol, veh/h	337			1845	875	
Approach Delay, s/veh	31.2			12.1	22.9	
Approach LOS	C			B	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		54.0		16.6	27.8	26.2
Change Period (Y+Rc), s		6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s		99.4		* 25	* 51	43.4
Max Q Clear Time (g_c+I1), s		15.0		11.1	22.0	12.6
Green Ext Time (p_c), s		20.1		0.8	1.2	7.3

Intersection Summary		
HCM 6th Ctrl Delay		17.3
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)	0	0	0	42	0	530	0	903	55	272	680	0
Future Volume (veh/h)	0	0	0	42	0	530	0	903	55	272	680	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	52	0	501	0	1129	64	340	850	0
Peak Hour Factor	0.92	0.92	0.92	0.80	0.92	0.80	0.92	0.80	0.80	0.80	0.80	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	3	0	196	0	524	495	1384	78	397	1176	0
Arrive On Green	0.00	0.00	0.00	0.11	0.00	0.11	0.00	0.40	0.40	0.22	0.33	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	3419	194	1781	3647	0
Grp Volume(v), veh/h	0	0	0	52	0	501	0	587	606	340	850	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	1777	1835	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	1.7	0.0	7.0	0.0	19.0	19.0	11.9	13.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.7	0.0	7.0	0.0	19.0	19.0	11.9	13.6	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	196	0	524	495	719	743	397	1176	0
V/C Ratio(X)	0.00	0.00	0.00	0.27	0.00	0.96	0.00	0.82	0.82	0.86	0.72	0.00
Avail Cap(c_a), veh/h	0	206	0	196	0	524	495	879	908	570	2511	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	26.5	0.0	21.2	0.0	17.1	17.1	24.2	19.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	28.3	0.0	5.0	4.9	8.8	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.7	0.0	10.7	0.0	7.1	7.3	5.2	4.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	27.2	0.0	49.5	0.0	22.1	22.0	33.0	19.9	0.0
LnGrp LOS	A	A	A	C	A	D	A	C	C	C	B	A
Approach Vol, veh/h		0			553			1193			1190	
Approach Delay, s/veh		0.0			47.4			22.0			23.6	
Approach LOS					D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.1	32.4		0.0	23.9	27.6		13.2				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 21	32.0		7.0	7.0	* 46		7.0				
Max Q Clear Time (g_c+I1), s	13.9	21.0		0.0	0.0	15.6		9.0				
Green Ext Time (p_c), s	0.6	5.2		0.0	0.0	5.8		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	27.5
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)	259	585	218	226	902	195	316	958	143	261	553	125
Future Volume (veh/h)	259	585	218	226	902	195	316	958	143	261	553	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	285	643	0	248	991	107	347	1053	97	287	608	71
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	456	1397		336	1429	436	440	1475	450	408	1428	437
Arrive On Green	0.09	0.27	0.00	0.10	0.28	0.28	0.13	0.29	0.29	0.12	0.28	0.28
Sat Flow, veh/h	5023	5106	1585	3456	5106	1558	3456	5106	1558	3456	5106	1563
Grp Volume(v), veh/h	285	643	0	248	991	107	347	1053	97	287	608	71
Grp Sat Flow(s),veh/h/ln	1674	1702	1585	1728	1702	1558	1728	1702	1558	1728	1702	1563
Q Serve(g_s), s	5.4	10.4	0.0	6.9	17.2	5.3	9.6	18.3	4.7	7.9	9.6	3.4
Cycle Q Clear(g_c), s	5.4	10.4	0.0	6.9	17.2	5.3	9.6	18.3	4.7	7.9	9.6	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	456	1397		336	1429	436	440	1475	450	408	1428	437
V/C Ratio(X)	0.62	0.46		0.74	0.69	0.25	0.79	0.71	0.22	0.70	0.43	0.16
Avail Cap(c_a), veh/h	1269	2321		873	2321	708	873	2321	708	873	2321	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	29.9	0.0	43.5	31.8	27.6	41.9	31.5	26.7	42.0	29.2	26.9
Incr Delay (d2), s/veh	1.4	0.2	0.0	3.2	0.6	0.3	3.2	0.7	0.2	4.7	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	4.1	0.0	3.0	6.9	1.9	4.1	7.2	1.7	3.5	3.8	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	30.1	0.0	46.6	32.5	27.9	45.1	32.2	26.9	46.6	29.4	27.1
LnGrp LOS	D	C		D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		928			1346			1497			966	
Approach Delay, s/veh		34.6			34.7			34.8			34.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	33.1	16.7	34.6	14.0	33.7	17.6	33.7
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	9.9	12.4	9.9	20.3	7.4	19.2	11.6	11.6
Green Ext Time (p_c), s	0.7	4.4	1.8	7.8	0.9	8.0	1.0	4.5

Intersection Summary	
HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	397	890	87	63	805	216	141	270	347	349	168	228
Future Volume (veh/h)	397	890	87	63	805	216	141	270	347	349	168	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	432	967	88	68	875	215	153	293	214	379	183	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	434	1705	155	98	931	229	181	557	249	418	329	279
Arrive On Green	0.24	0.51	0.51	0.05	0.32	0.32	0.10	0.15	0.15	0.12	0.17	0.17
Sat Flow, veh/h	1810	3346	304	1810	2873	705	1810	3610	1610	3510	1900	1610
Grp Volume(v), veh/h	432	522	533	68	550	540	153	293	214	379	183	40
Grp Sat Flow(s),veh/h/ln	1810	1805	1845	1810	1805	1773	1810	1805	1610	1755	1900	1610
Q Serve(g_s), s	27.8	23.3	23.3	4.3	34.6	34.6	9.7	8.7	15.1	12.5	10.3	2.5
Cycle Q Clear(g_c), s	27.8	23.3	23.3	4.3	34.6	34.6	9.7	8.7	15.1	12.5	10.3	2.5
Prop In Lane	1.00		0.16	1.00		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	434	920	940	98	585	575	181	557	249	418	329	279
V/C Ratio(X)	1.00	0.57	0.57	0.69	0.94	0.94	0.84	0.53	0.86	0.91	0.56	0.14
Avail Cap(c_a), veh/h	434	920	940	155	595	585	218	637	284	418	332	281
HCM Platoon Ratio	1.00	1.00	1.00	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	44.3	19.8	19.8	54.3	38.4	38.4	51.6	45.4	48.2	50.8	44.2	40.9
Incr Delay (d2), s/veh	42.0	0.8	0.8	8.4	22.8	23.3	21.7	0.8	20.7	23.1	2.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.4	9.8	10.0	2.2	18.8	18.5	5.5	4.0	7.5	6.8	5.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.4	20.6	20.6	62.6	61.2	61.7	73.3	46.2	68.8	73.9	46.2	41.2
LnGrp LOS	F	C	C	E	E	E	E	D	E	E	D	D
Approach Vol, veh/h		1487			1158			660			602	
Approach Delay, s/veh		39.7			61.5			59.8			63.3	
Approach LOS		D			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	64.2	18.4	23.8	32.0	42.6	16.2	26.0
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	10.0	* 57	13.9	20.6	28.0	* 39	14.1	20.4
Max Q Clear Time (g_c+I1), s	6.3	25.3	14.5	17.1	29.8	36.6	11.7	12.3
Green Ext Time (p_c), s	0.0	8.3	0.0	0.9	0.0	1.2	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay	53.2
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)	80	20	210	50	200	280	90	620	120	100	290	140
Future Volume (veh/h)	80	20	210	50	200	280	90	620	120	100	290	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	87	22	37	54	217	83	98	674	123	109	315	135
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	112	440	196	86	388	173	128	770	140	230	615	263
Arrive On Green	0.06	0.12	0.12	0.05	0.11	0.11	0.07	0.49	0.49	0.07	0.49	0.49
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	1563	285	3510	1262	541
Grp Volume(v), veh/h	87	22	37	54	217	83	98	0	797	109	0	450
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	0	1849	1755	0	1803
Q Serve(g_s), s	3.1	0.4	1.4	1.9	3.8	3.2	3.5	0.0	25.4	2.0	0.0	11.3
Cycle Q Clear(g_c), s	3.1	0.4	1.4	1.9	3.8	3.2	3.5	0.0	25.4	2.0	0.0	11.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.30
Lane Grp Cap(c), veh/h	112	440	196	86	388	173	128	0	910	230	0	878
V/C Ratio(X)	0.78	0.05	0.19	0.63	0.56	0.48	0.77	0.00	0.88	0.47	0.00	0.51
Avail Cap(c_a), veh/h	154	1110	495	140	1083	483	288	0	1162	271	0	986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.5	25.6	26.0	30.9	28.0	27.7	30.1	0.0	15.0	29.7	0.0	11.6
Incr Delay (d2), s/veh	15.4	0.0	0.5	7.3	1.3	2.1	9.2	0.0	6.4	1.5	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.1	0.5	1.0	1.6	1.3	1.8	0.0	10.6	0.8	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	25.6	26.5	38.1	29.2	29.8	39.3	0.0	21.3	31.3	0.0	12.0
LnGrp LOS	D	C	C	D	C	C	D	A	C	C	A	B
Approach Vol, veh/h		146			354			895			559	
Approach Delay, s/veh		37.9			30.7			23.3			15.8	
Approach LOS		D			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	12.5	8.8	37.0	8.6	11.6	9.2	36.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	20.3	5.1	41.5	5.6	19.8	10.5	36.1
Max Q Clear Time (g_c+I1), s	3.9	3.4	4.0	27.4	5.1	5.8	5.5	13.3
Green Ext Time (p_c), s	0.0	0.1	0.0	5.1	0.0	1.3	0.1	3.0

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	614	121	485	1640	556	453	677	293	210	388	150
Future Volume (veh/h)	74	614	121	485	1640	556	453	677	293	210	388	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	80	667	85	527	1783	461	492	736	279	228	422	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	92	1987	1500	606	1821	812	513	796	633	258	534	238
Arrive On Green	0.05	0.38	0.38	0.17	0.50	0.50	0.15	0.22	0.22	0.07	0.15	0.15
Sat Flow, veh/h	1810	5187	2834	3510	3610	1610	3510	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	80	667	85	527	1783	461	492	736	279	228	422	24
Grp Sat Flow(s),veh/h/ln	1810	1729	1417	1755	1805	1610	1755	1805	1610	1755	1805	1610
Q Serve(g_s), s	5.3	10.9	1.7	17.5	57.9	23.8	16.7	23.9	15.2	7.7	13.5	1.5
Cycle Q Clear(g_c), s	5.3	10.9	1.7	17.5	57.9	23.8	16.7	23.9	15.2	7.7	13.5	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	1987	1500	606	1821	812	513	796	633	258	534	238
V/C Ratio(X)	0.87	0.34	0.06	0.87	0.98	0.57	0.96	0.92	0.44	0.88	0.79	0.10
Avail Cap(c_a), veh/h	92	1987	1500	763	1822	813	513	806	637	258	543	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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.4	26.1	13.7	48.2	29.0	20.6	50.7	45.7	26.7	54.9	49.2	44.1
Incr Delay (d2), s/veh	53.3	0.1	0.0	8.9	16.3	0.9	29.4	16.2	0.5	28.1	7.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.5	0.6	8.4	28.0	9.0	9.4	12.4	5.9	4.4	6.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	109.7	26.2	13.7	57.1	45.3	21.5	80.1	61.9	27.1	83.0	56.9	44.3
LnGrp LOS	F	C	B	E	D	C	F	E	C	F	E	D
Approach Vol, veh/h		832			2771			1507			674	
Approach Delay, s/veh		33.0			43.6			61.4			65.3	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	64.9	22.0	22.2	25.1	50.3	13.3	30.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.1	60.4	17.5	18.0	26.0	40.5	8.8	26.7
Max Q Clear Time (g_c+I1), s	7.3	59.9	18.7	15.5	19.5	12.9	9.7	25.9
Green Ext Time (p_c), s	0.0	0.5	0.0	0.7	1.2	5.4	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	49.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1705	0	514	0	323	648	0	319	474
Future Volume (veh/h)	0	0	0	1705	0	514	0	323	648	0	319	474
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	0	1900	1900	0	1900	1900
Adj Flow Rate, veh/h				1853	0	298	0	351	276	0	347	202
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				1915	0	1704	0	1429	1122	0	2053	637
Arrive On Green				0.53	0.00	0.53	0.00	0.13	0.13	0.00	0.40	0.40
Sat Flow, veh/h				3619	0	3220	0	3705	2834	0	5358	1610
Grp Volume(v), veh/h				1853	0	298	0	351	276	0	347	202
Grp Sat Flow(s),veh/h/ln				1810	0	1610	0	1805	1417	0	1729	1610
Q Serve(g_s), s				59.3	0.0	5.8	0.0	10.5	10.5	0.0	5.2	10.4
Cycle Q Clear(g_c), s				59.3	0.0	5.8	0.0	10.5	10.5	0.0	5.2	10.4
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1915	0	1704	0	1429	1122	0	2053	637
V/C Ratio(X)				0.97	0.00	0.17	0.00	0.25	0.25	0.00	0.17	0.32
Avail Cap(c_a), veh/h				1930	0	1718	0	1429	1122	0	2053	637
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.98	0.98	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.3	0.0	14.7	0.0	36.1	36.1	0.0	23.5	25.0
Incr Delay (d2), s/veh				13.6	0.0	0.0	0.0	0.4	0.5	0.0	0.2	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				28.0	0.0	2.1	0.0	5.1	4.1	0.0	2.2	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.9	0.0	14.7	0.0	36.5	36.6	0.0	23.6	26.3
LnGrp LOS				D	A	B	A	D	D	A	C	C
Approach Vol, veh/h					2151			627			549	
Approach Delay, s/veh					37.3			36.5			24.6	
Approach LOS					D			D			C	

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	52.5		52.5		67.5	
Change Period (Y+Rc), s	5.0		5.0		4.0	
Max Green Setting (Gmax), s	47.0		47.0		64.0	
Max Q Clear Time (g_c+I1), s	12.5		12.4		61.3	
Green Ext Time (p_c), s	3.7		3.2		2.2	

Intersection Summary		
HCM 6th Ctrl Delay	35.0	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	238	103	332	64	284	166	1389	132	275	1254	24
Future Volume (veh/h)	52	238	103	332	64	284	166	1389	132	275	1254	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	60	274	21	382	74	129	191	1597	80	316	1441	12
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	317	268	381	442	535	196	1645	733	351	1615	720
Arrive On Green	0.04	0.17	0.17	0.11	0.24	0.24	0.11	0.46	0.46	0.10	0.45	0.45
Sat Flow, veh/h	1781	1870	1585	3456	1870	1583	1781	3554	1584	3456	3554	1585
Grp Volume(v), veh/h	60	274	21	382	74	129	191	1597	80	316	1441	12
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1583	1781	1777	1584	1728	1777	1585
Q Serve(g_s), s	3.9	16.8	1.3	13.0	3.7	6.9	12.6	51.7	3.4	10.7	43.9	0.5
Cycle Q Clear(g_c), s	3.9	16.8	1.3	13.0	3.7	6.9	12.6	51.7	3.4	10.7	43.9	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	317	268	381	442	535	196	1645	733	351	1615	720
V/C Ratio(X)	0.78	0.87	0.08	1.00	0.17	0.24	0.97	0.97	0.11	0.90	0.89	0.02
Avail Cap(c_a), veh/h	136	428	363	381	491	577	196	1645	733	351	1615	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	47.7	41.2	52.5	35.8	28.2	52.3	30.9	17.9	52.4	29.5	17.7
Incr Delay (d2), s/veh	15.1	13.1	0.1	46.9	0.2	0.2	56.3	16.3	0.3	24.8	8.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	9.0	0.5	8.0	1.7	2.6	8.5	24.1	1.2	5.7	19.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	60.8	41.4	99.4	36.0	28.4	108.6	47.2	18.2	77.2	37.5	17.7
LnGrp LOS	E	E	D	F	D	C	F	D	B	E	D	B
Approach Vol, veh/h		355			585			1868			1769	
Approach Delay, s/veh		61.3			75.7			52.3			44.5	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	59.4	17.0	24.6	16.0	60.4	9.1	32.5
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	13.0	53.6	13.0	27.0	12.0	54.6	9.0	31.0
Max Q Clear Time (g_c+I1), s	14.6	45.9	15.0	18.8	12.7	53.7	5.9	8.9
Green Ext Time (p_c), s	0.0	5.2	0.0	1.0	0.0	0.7	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	52.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	65	65	508	93	387	76	1229	724	150	1341	38
Future Volume (veh/h)	54	65	65	508	93	387	76	1229	724	150	1341	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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	70	0	546	100	358	82	1322	515	161	1442	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	399		641	443	479	115	1546	688	231	1553	690
Arrive On Green	0.06	0.11	0.00	0.19	0.24	0.24	0.06	0.43	0.43	0.07	0.44	0.44
Sat Flow, veh/h	1781	3647	0	3456	1870	1575	1781	3554	1581	3456	3554	1578
Grp Volume(v), veh/h	58	70	0	546	100	358	82	1322	515	161	1442	11
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1575	1781	1777	1581	1728	1777	1578
Q Serve(g_s), s	4.7	2.7	0.0	22.9	6.4	30.6	6.8	50.1	40.8	6.8	57.5	0.6
Cycle Q Clear(g_c), s	4.7	2.7	0.0	22.9	6.4	30.6	6.8	50.1	40.8	6.8	57.5	0.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	399		641	443	479	115	1546	688	231	1553	690
V/C Ratio(X)	0.54	0.18		0.85	0.23	0.75	0.71	0.86	0.75	0.70	0.93	0.02
Avail Cap(c_a), veh/h	119	437		799	537	558	119	1560	694	261	1591	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.2	60.2	0.0	58.9	46.0	46.9	68.6	38.0	35.4	68.3	39.9	23.9
Incr Delay (d2), s/veh	5.7	0.3	0.0	9.3	0.4	5.3	19.2	4.9	4.5	8.0	10.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.2	0.0	10.7	3.0	12.6	3.6	22.0	16.2	3.2	26.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.9	60.5	0.0	68.2	46.4	52.3	87.8	42.9	39.9	76.4	49.9	23.9
LnGrp LOS	E	E		E	D	D	F	D	D	E	D	C
Approach Vol, veh/h		128			1004			1919			1614	
Approach Delay, s/veh		66.6			60.4			44.0			52.3	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	72.6	35.3	24.3	17.2	72.9	16.6	43.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	11.3	65.7	34.6	18.4	10.0	67.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	8.8	52.1	24.9	4.7	8.8	59.5	6.7	32.6
Green Ext Time (p_c), s	0.2	8.7	2.9	0.3	0.0	5.9	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	51.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	545	251	53	48	136	456	84	562	42	535	410	120
Future Volume (veh/h)	545	251	53	48	136	456	84	562	42	535	410	120
Initial Q (Qb), veh	0	0	0	0	0	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	699	322	15	62	174	554	108	721	14	686	526	66
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	889	622	264	451	900	748	131	818	365	756	1334	595
Arrive On Green	0.17	0.17	0.17	0.25	0.25	0.25	0.07	0.23	0.23	0.22	0.38	0.38
Sat Flow, veh/h	5344	3741	1585	1781	3554	1585	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	699	322	15	62	174	554	108	721	14	686	526	66
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1585	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	18.3	11.5	1.2	3.9	5.6	37.0	8.7	28.6	1.0	28.3	15.8	4.0
Cycle Q Clear(g_c), s	18.3	11.5	1.2	3.9	5.6	37.0	8.7	28.6	1.0	28.3	15.8	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	889	622	264	451	900	748	131	818	365	756	1334	595
V/C Ratio(X)	0.79	0.52	0.06	0.14	0.19	0.74	0.83	0.88	0.04	0.91	0.39	0.11
Avail Cap(c_a), veh/h	1237	866	367	451	900	748	220	954	425	899	1440	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.4	55.5	51.2	42.2	42.8	31.3	66.7	54.3	43.7	55.6	33.4	29.7
Incr Delay (d2), s/veh	2.3	0.7	0.1	0.1	0.1	3.9	12.2	8.7	0.0	11.5	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	5.4	0.5	1.7	2.5	16.0	4.4	13.6	0.4	13.3	6.8	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	56.2	51.3	42.3	42.9	35.2	78.9	63.0	43.7	67.2	33.6	29.8
LnGrp LOS	E	E	D	D	D	D	E	E	D	E	C	C
Approach Vol, veh/h		1036			790			843			1278	
Approach Delay, s/veh		59.2			37.5			64.7			51.4	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	29.0	35.9	39.4	41.7	14.7	60.6
Change Period (Y+Rc), s	* 4.7	4.0	5.8	4.7	4.0	5.8
Max Green Setting (Gmax), s	* 34	38.0	39.2	37.0	18.0	59.2
Max Q Clear Time (g_c+I1), s	20.3	30.3	30.6	39.0	10.7	17.8
Green Ext Time (p_c), s	4.0	1.7	3.0	0.0	0.1	3.7

Intersection Summary	
HCM 6th Ctrl Delay	53.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	726	256	189	455	322	120	807	334	387	847	335
Future Volume (veh/h)	267	726	256	189	455	322	120	807	334	387	847	335
Initial Q (Qb), veh	0	0	0	0	0	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	322	875	154	228	548	221	145	972	227	466	1020	181
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	1130	504	281	1098	490	161	1002	447	468	1162	518
Arrive On Green	0.09	0.32	0.32	0.08	0.31	0.31	0.09	0.28	0.28	0.14	0.33	0.33
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	322	875	154	228	548	221	145	972	227	466	1020	181
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	10.0	24.7	8.1	7.2	13.9	12.4	8.9	29.9	13.3	14.9	30.0	9.6
Cycle Q Clear(g_c), s	10.0	24.7	8.1	7.2	13.9	12.4	8.9	29.9	13.3	14.9	30.0	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	312	1130	504	281	1098	490	161	1002	447	468	1162	518
V/C Ratio(X)	1.03	0.77	0.31	0.81	0.50	0.45	0.90	0.97	0.51	1.00	0.88	0.35
Avail Cap(c_a), veh/h	312	1130	504	281	1098	490	161	1002	447	468	1162	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	34.2	28.5	50.0	31.3	30.7	49.9	39.3	33.3	47.8	35.2	28.3
Incr Delay (d2), s/veh	59.3	5.2	1.6	16.3	1.6	3.0	43.5	21.6	1.3	40.3	8.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	11.0	3.2	3.6	5.9	4.9	5.8	15.4	5.1	8.8	13.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	109.7	39.4	30.1	66.3	32.9	33.7	93.4	60.9	34.6	88.1	43.2	28.9
LnGrp LOS	F	D	C	E	C	C	F	E	C	F	D	C
Approach Vol, veh/h		1351			997			1344			1667	
Approach Delay, s/veh		55.1			40.7			60.0			54.2	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	41.7	19.0	37.0	14.0	40.7	14.0	42.0
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	9.0	* 35	15.0	31.2	10.0	33.5	10.0	36.2
Max Q Clear Time (g_c+I1), s	12.0	26.7	16.9	31.9	12.0	15.9	10.9	32.0
Green Ext Time (p_c), s	0.0	4.9	0.0	0.0	0.0	5.3	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	53.3
HCM 6th LOS	D

Notes

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	850	496	30	792	749	51
Future Volume (veh/h)	850	496	30	792	749	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	859	483	30	800	757	50
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	865	733	45	959	727	647
Arrive On Green	0.46	0.46	0.03	0.51	0.41	0.41
Sat Flow, veh/h	1870	1585	1781	1870	1781	1585
Grp Volume(v), veh/h	859	483	30	800	757	50
Grp Sat Flow(s),veh/h/ln	1870	1585	1781	1870	1781	1585
Q Serve(g_s), s	54.8	28.3	2.0	43.7	49.0	2.3
Cycle Q Clear(g_c), s	54.8	28.3	2.0	43.7	49.0	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	865	733	45	959	727	647
V/C Ratio(X)	0.99	0.66	0.67	0.83	1.04	0.08
Avail Cap(c_a), veh/h	865	733	45	959	727	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	24.9	58.0	24.9	35.5	21.7
Incr Delay (d2), s/veh	28.8	2.3	28.0	6.6	44.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.7	10.4	1.2	19.5	28.6	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	60.9	27.2	86.0	31.5	79.9	21.7
LnGrp LOS	E	C	F	C	F	C
Approach Vol, veh/h	1342			830	807	
Approach Delay, s/veh	48.8			33.5	76.3	
Approach LOS	D			C	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		66.0		54.0	6.0	60.0
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		61.5		49.0	3.0	55.5
Max Q Clear Time (g_c+I1), s		45.7		51.0	4.0	56.8
Green Ext Time (p_c), s		5.6		0.0	0.0	0.0

Intersection Summary			
HCM 6th Ctrl Delay		52.0	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	1310	451	400	850	100	721	460	846	70	300	150
Future Volume (veh/h)	340	1310	451	400	850	100	721	460	846	70	300	150
Initial Q (Qb), veh	0	0	0	0	0	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	415	1598	0	488	1037	0	879	561	0	85	366	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	473	1748		430	1641		1002	959		222	479	
Arrive On Green	0.14	0.34	0.00	0.12	0.32	0.00	0.20	0.27	0.00	0.06	0.13	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	5023	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	415	1598	0	488	1037	0	879	561	0	85	366	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1674	1777	1585	1728	1777	1585
Q Serve(g_s), s	13.7	34.9	0.0	14.5	20.1	0.0	19.8	15.9	0.0	2.7	11.6	0.0
Cycle Q Clear(g_c), s	13.7	34.9	0.0	14.5	20.1	0.0	19.8	15.9	0.0	2.7	11.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	473	1748		430	1641		1002	959		222	479	
V/C Ratio(X)	0.88	0.91		1.13	0.63		0.88	0.59		0.38	0.76	
Avail Cap(c_a), veh/h	537	1771		430	1641		1117	1797		237	1251	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.3	36.7	0.0	51.0	33.7	0.0	45.3	36.9	0.0	52.3	48.6	0.0
Incr Delay (d2), s/veh	12.8	7.9	0.0	85.5	0.9	0.0	7.6	0.6	0.0	1.1	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	14.7	0.0	11.2	8.1	0.0	8.6	6.7	0.0	1.2	5.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.2	44.6	0.0	136.5	34.6	0.0	52.8	37.5	0.0	53.4	51.2	0.0
LnGrp LOS	E	D		F	C		D	D		D	D	
Approach Vol, veh/h		2013			1525			1440			451	
Approach Delay, s/veh		48.2			67.2			46.8			51.6	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.4	43.5	28.7	21.8	20.0	46.0	13.0	37.5
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	18.1	35.8	25.9	41.0	14.5	40.4	8.0	58.9
Max Q Clear Time (g_c+I1), s	15.7	22.1	21.8	13.6	16.5	36.9	4.7	17.9
Green Ext Time (p_c), s	0.2	7.1	1.4	2.1	0.0	3.0	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	53.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	714	20	755	140	50	270	500	1057	50	110	561	480
Future Volume (veh/h)	714	20	755	140	50	270	500	1057	50	110	561	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	776	22	779	187	54	223	543	1409	8	147	748	112
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	874	727	824	248	60	248	657	1511	457	236	883	704
Arrive On Green	0.25	0.38	0.38	0.07	0.19	0.19	0.13	0.30	0.30	0.07	0.25	0.25
Sat Flow, veh/h	3510	1900	1610	3456	311	1286	5103	5106	1545	3456	3554	2834
Grp Volume(v), veh/h	776	22	779	187	0	277	543	1409	8	147	748	112
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1597	1701	1702	1545	1728	1777	1417
Q Serve(g_s), s	24.7	0.8	44.4	6.2	0.0	19.6	12.0	31.1	0.4	4.8	23.2	3.6
Cycle Q Clear(g_c), s	24.7	0.8	44.4	6.2	0.0	19.6	12.0	31.1	0.4	4.8	23.2	3.6
Prop In Lane	1.00		1.00	1.00		0.81	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	874	727	824	248	0	308	657	1511	457	236	883	704
V/C Ratio(X)	0.89	0.03	0.95	0.75	0.00	0.90	0.83	0.93	0.02	0.62	0.85	0.16
Avail Cap(c_a), veh/h	969	727	824	346	0	310	814	1541	466	238	883	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	22.3	26.8	52.8	0.0	45.7	49.3	39.7	28.9	52.6	41.5	34.1
Incr Delay (d2), s/veh	9.9	0.0	19.4	5.9	0.0	27.2	5.8	10.3	0.0	3.6	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	0.4	24.1	2.9	0.0	10.2	5.3	13.7	0.2	2.1	10.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	22.4	46.2	58.7	0.0	72.9	55.1	50.1	28.9	56.2	48.8	34.1
LnGrp LOS	D	C	D	E	A	E	E	D	C	E	D	C
Approach Vol, veh/h		1577			464			1960			1007	
Approach Delay, s/veh		48.7			67.2			51.4			48.3	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.4	34.8	12.8	48.9	13.9	40.3	34.9	26.9
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	18.5	26.0	11.6	44.4	8.0	35.0	32.0	22.5
Max Q Clear Time (g_c+I1), s	14.0	25.2	8.2	46.4	6.8	33.1	26.7	21.6
Green Ext Time (p_c), s	0.9	0.2	0.2	0.0	0.0	1.2	2.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	51.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	735	420	86	1412	1240	252
Future Volume (veh/h)	735	420	86	1412	1240	252
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	799	375	93	1535	1348	140
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	805	716	101	1714	1386	618
Arrive On Green	0.44	0.44	0.06	0.47	0.38	0.38
Sat Flow, veh/h	1810	1610	1810	3705	3705	1610
Grp Volume(v), veh/h	799	375	93	1535	1348	140
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1805	1805	1610
Q Serve(g_s), s	59.5	22.8	6.9	52.7	49.8	8.0
Cycle Q Clear(g_c), s	59.5	22.8	6.9	52.7	49.8	8.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	805	716	101	1714	1386	618
V/C Ratio(X)	0.99	0.52	0.92	0.90	0.97	0.23
Avail Cap(c_a), veh/h	805	716	101	1715	1387	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	27.2	63.7	32.5	41.0	28.2
Incr Delay (d2), s/veh	29.8	0.7	62.8	6.7	18.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.5	22.1	4.9	22.9	24.3	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	67.2	27.9	126.4	39.3	59.0	28.4
LnGrp LOS	E	C	F	D	E	C
Approach Vol, veh/h	1174			1628	1488	
Approach Delay, s/veh	54.7			44.2	56.1	
Approach LOS	D			D	E	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	70.6	65.0	12.3	58.3
Change Period (Y+Rc), s	6.2	* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	64.4	* 60	* 7.6	52.1
Max Q Clear Time (g_c+I1), s	54.7	61.5	8.9	51.8
Green Ext Time (p_c), s	7.6	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	51.2
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)	0	0	0	40	0	362	0	1288	42	358	1087	0
Future Volume (veh/h)	0	0	0	40	0	362	0	1288	42	358	1087	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	48	0	350	0	1533	49	426	1294	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	124	0	522	555	1784	57	465	1590	0
Arrive On Green	0.00	0.00	0.00	0.07	0.00	0.07	0.00	0.51	0.51	0.26	0.45	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	3515	112	1781	3647	0
Grp Volume(v), veh/h	0	0	0	48	0	350	0	773	809	426	1294	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	1777	1850	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	2.7	0.0	7.2	0.0	39.8	40.1	24.4	33.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.7	0.0	7.2	0.0	39.8	40.1	24.4	33.2	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	124	0	522	555	902	939	465	1590	0
V/C Ratio(X)	0.00	0.00	0.00	0.39	0.00	0.67	0.00	0.86	0.86	0.92	0.81	0.00
Avail Cap(c_a), veh/h	0	127	0	124	0	522	555	1104	1149	633	3233	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	46.8	0.0	30.3	0.0	22.5	22.6	37.7	25.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.0	0.0	3.3	0.0	5.8	5.8	14.9	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.3	0.0	7.9	0.0	15.9	16.7	11.9	12.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	48.7	0.0	33.6	0.0	28.4	28.4	52.6	26.3	0.0
LnGrp LOS	A	A	A	D	A	C	A	C	C	D	C	A
Approach Vol, veh/h		0			398			1582			1720	
Approach Delay, s/veh		0.0			35.4			28.4			32.8	
Approach LOS					D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.1	59.5		0.0	38.4	53.2		13.4				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 37	65.2		7.0	7.0	* 96		7.2				
Max Q Clear Time (g_c+I1), s	26.4	42.1		0.0	0.0	35.2		9.2				
Green Ext Time (p_c), s	1.0	11.2		0.0	0.0	11.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		31.2	
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)	695	1027	552	353	868	444	243	657	192	567	1234	162
Future Volume (veh/h)	695	1027	552	353	868	444	243	657	192	567	1234	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	716	1059	0	364	895	411	251	677	44	585	1272	83
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	829	1591		418	1367	725	310	1056	321	672	1590	486
Arrive On Green	0.16	0.31	0.00	0.12	0.27	0.27	0.09	0.21	0.21	0.19	0.31	0.31
Sat Flow, veh/h	5023	5106	1585	3456	5106	1556	3456	5106	1554	3456	5106	1560
Grp Volume(v), veh/h	716	1059	0	364	895	411	251	677	44	585	1272	83
Grp Sat Flow(s),veh/h/ln	1674	1702	1585	1728	1702	1556	1728	1702	1554	1728	1702	1560
Q Serve(g_s), s	18.4	23.8	0.0	13.7	20.6	25.5	9.4	16.0	3.1	21.7	30.2	5.1
Cycle Q Clear(g_c), s	18.4	23.8	0.0	13.7	20.6	25.5	9.4	16.0	3.1	21.7	30.2	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	829	1591		418	1367	725	310	1056	321	672	1590	486
V/C Ratio(X)	0.86	0.67		0.87	0.65	0.57	0.81	0.64	0.14	0.87	0.80	0.17
Avail Cap(c_a), veh/h	987	2006		470	1697	826	470	1582	481	757	2006	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	39.6	0.0	57.1	43.0	26.0	59.1	48.0	42.9	51.7	41.8	33.1
Incr Delay (d2), s/veh	7.0	0.6	0.0	14.9	0.6	0.7	6.2	0.7	0.2	11.4	1.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	9.8	0.0	6.8	8.7	9.3	4.3	6.7	1.2	10.3	12.7	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.9	40.1	0.0	72.0	43.7	26.7	65.4	48.7	43.0	63.1	43.7	33.3
LnGrp LOS	E	D		E	D	C	E	D	D	E	D	C
Approach Vol, veh/h		1775			1670			972			1940	
Approach Delay, s/veh		48.5			45.7			52.7			49.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	47.2	30.7	33.4	26.8	41.4	16.9	47.2
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	18.0	52.0	29.0	41.0	26.0	44.0	18.0	52.0
Max Q Clear Time (g_c+I1), s	15.7	25.8	23.7	18.0	20.4	27.5	11.4	32.2
Green Ext Time (p_c), s	0.3	7.6	2.0	4.5	1.5	7.1	0.4	9.0

Intersection Summary	
HCM 6th Ctrl Delay	48.6
HCM 6th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	1165	61	102	443	102	42	110	68	612	530	100
Future Volume (veh/h)	101	1165	61	102	443	102	42	110	68	612	530	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	110	1266	63	111	482	95	46	120	11	665	576	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	137	1402	70	128	1190	233	61	536	239	744	620	526
Arrive On Green	0.08	0.40	0.40	0.07	0.40	0.40	0.03	0.15	0.15	0.21	0.33	0.33
Sat Flow, veh/h	1810	3500	174	1810	3009	590	1810	3610	1610	3510	1900	1610
Grp Volume(v), veh/h	110	652	677	111	288	289	46	120	11	665	576	37
Grp Sat Flow(s),veh/h/ln	1810	1805	1869	1810	1805	1794	1810	1805	1610	1755	1900	1610
Q Serve(g_s), s	6.8	38.3	38.4	6.9	13.0	13.1	2.8	3.3	0.7	20.8	33.1	1.8
Cycle Q Clear(g_c), s	6.8	38.3	38.4	6.9	13.0	13.1	2.8	3.3	0.7	20.8	33.1	1.8
Prop In Lane	1.00		0.09	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	137	723	749	128	714	709	61	536	239	744	620	526
V/C Ratio(X)	0.80	0.90	0.90	0.87	0.40	0.41	0.75	0.22	0.05	0.89	0.93	0.07
Avail Cap(c_a), veh/h	224	764	791	128	714	709	80	582	260	840	677	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	31.8	31.8	51.9	24.5	24.6	54.1	42.3	41.2	43.3	36.7	26.2
Incr Delay (d2), s/veh	10.2	13.5	13.4	42.0	0.4	0.4	24.2	0.2	0.1	11.2	18.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	19.0	19.7	4.6	5.6	5.6	1.7	1.5	0.3	10.1	18.2	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.5	45.3	45.2	93.9	24.9	25.0	78.3	42.5	41.3	54.4	55.2	26.3
LnGrp LOS	E	D	D	F	C	C	E	D	D	D	E	C
Approach Vol, veh/h		1439			688			177			1278	
Approach Delay, s/veh		46.5			36.1			51.8			54.0	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	49.9	28.4	22.5	12.6	49.3	8.3	42.6
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	8.0	* 48	27.0	18.2	14.0	* 42	5.0	40.2
Max Q Clear Time (g_c+I1), s	10.9	40.4	22.8	5.3	8.8	15.1	4.8	35.1
Green Ext Time (p_c), s	0.0	4.8	1.1	0.5	0.1	3.8	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	47.4
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)	510	931	360	50	505	340	460	679	310	165	946	165
Future Volume (veh/h)	510	931	360	50	505	340	460	679	310	165	946	165
Initial Q (Qb), veh	0	0	0	0	0	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	1900	1870	1900	1900	1900	1870	1870	1900	1900	1870	1870
Adj Flow Rate, veh/h	554	1012	124	54	549	109	500	738	205	179	1028	55
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	0	2	0	0	0	2	2	0	0	2	2
Cap, veh/h	583	1216	534	70	746	333	526	1224	555	210	1095	488
Arrive On Green	0.17	0.34	0.34	0.04	0.21	0.21	0.15	0.34	0.34	0.12	0.31	0.31
Sat Flow, veh/h	3456	3610	1585	1810	3610	1610	3456	3554	1610	1810	3554	1585
Grp Volume(v), veh/h	554	1012	124	54	549	109	500	738	205	179	1028	55
Grp Sat Flow(s),veh/h/ln	1728	1805	1585	1810	1805	1610	1728	1777	1610	1810	1777	1585
Q Serve(g_s), s	17.4	28.3	6.2	3.2	15.6	6.3	15.7	18.8	10.5	10.6	30.9	2.7
Cycle Q Clear(g_c), s	17.4	28.3	6.2	3.2	15.6	6.3	15.7	18.8	10.5	10.6	30.9	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	583	1216	534	70	746	333	526	1224	555	210	1095	488
V/C Ratio(X)	0.95	0.83	0.23	0.77	0.74	0.33	0.95	0.60	0.37	0.85	0.94	0.11
Avail Cap(c_a), veh/h	583	1472	646	104	1070	477	526	1224	555	261	1112	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	33.5	26.2	52.2	40.7	37.0	46.0	29.7	27.0	47.5	36.9	27.2
Incr Delay (d2), s/veh	25.4	3.6	0.2	18.3	1.6	0.6	27.1	0.8	0.4	19.5	14.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	12.8	0.0	1.8	7.0	2.5	8.4	7.7	4.1	5.7	14.7	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.5	37.1	26.4	70.5	42.3	37.6	73.1	30.6	27.4	67.1	51.5	27.3
LnGrp LOS	E	D	C	E	D	D	E	C	C	E	D	C
Approach Vol, veh/h		1690			712			1443			1262	
Approach Delay, s/veh		47.3			43.7			44.9			52.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.2	38.3	8.7	41.4	17.2	42.3	23.0	27.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	16.7	34.3	6.3	44.7	15.8	35.2	18.5	32.5
Max Q Clear Time (g_c+I1), s	17.7	32.9	5.2	30.3	12.6	20.8	19.4	17.6
Green Ext Time (p_c), s	0.0	0.9	0.0	6.6	0.1	4.5	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	47.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	400	380	250	350	350	10	310	40	860	480	30
Future Volume (veh/h)	280	400	380	250	350	350	10	310	40	860	480	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	304	435	192	272	380	53	11	337	38	935	522	31
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	328	559	249	287	477	213	24	335	38	952	812	48
Arrive On Green	0.18	0.15	0.15	0.16	0.13	0.13	0.01	0.20	0.20	0.27	0.46	0.46
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	1677	189	3510	1776	105
Grp Volume(v), veh/h	304	435	192	272	380	53	11	0	375	935	0	553
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	0	1866	1755	0	1881
Q Serve(g_s), s	14.6	10.2	10.1	13.1	9.0	2.6	0.5	0.0	17.6	23.3	0.0	19.9
Cycle Q Clear(g_c), s	14.6	10.2	10.1	13.1	9.0	2.6	0.5	0.0	17.6	23.3	0.0	19.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.06
Lane Grp Cap(c), veh/h	328	559	249	287	477	213	24	0	373	952	0	860
V/C Ratio(X)	0.93	0.78	0.77	0.95	0.80	0.25	0.45	0.00	1.01	0.98	0.00	0.64
Avail Cap(c_a), veh/h	328	635	283	287	553	247	103	0	373	952	0	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.5	35.8	35.7	36.7	37.1	34.3	43.2	0.0	35.3	31.9	0.0	18.4
Incr Delay (d2), s/veh	31.2	5.4	10.9	38.8	7.0	0.6	12.7	0.0	48.3	24.8	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	4.8	4.6	8.8	4.4	1.0	0.3	0.0	12.8	12.8	0.0	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	41.2	46.6	75.5	44.1	34.9	55.8	0.0	83.5	56.7	0.0	20.0
LnGrp LOS	E	D	D	E	D	C	E	A	F	E	A	C
Approach Vol, veh/h		931			705			386			1488	
Approach Delay, s/veh		50.6			55.5			82.7			43.1	
Approach LOS		D			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	18.3	28.4	23.4	20.0	16.3	5.7	46.1
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	4.0	* 16	23.9	17.6	16.0	* 14	5.0	36.5
Max Q Clear Time (g_c+I1), s	15.1	12.2	25.3	19.6	16.6	11.0	2.5	21.9
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	0.0	0.6	0.0	3.2

Intersection Summary	
HCM 6th Ctrl Delay	51.9
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)	266	1289	882	617	948	372	269	396	679	410	556	180
Future Volume (veh/h)	266	1289	882	617	948	372	269	396	679	410	556	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	289	1401	916	671	1030	175	292	430	693	446	604	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	296	1412	1069	683	1095	488	369	726	637	464	824	368
Arrive On Green	0.16	0.27	0.27	0.19	0.30	0.30	0.11	0.20	0.20	0.13	0.23	0.23
Sat Flow, veh/h	1810	5187	2834	3510	3610	1610	3510	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	289	1401	916	671	1030	175	292	430	693	446	604	41
Grp Sat Flow(s),veh/h/ln	1810	1729	1417	1755	1805	1610	1755	1805	1610	1755	1805	1610
Q Serve(g_s), s	14.3	24.2	24.5	17.1	25.0	7.6	7.3	9.7	18.1	11.4	14.0	1.8
Cycle Q Clear(g_c), s	14.3	24.2	24.5	17.1	25.0	7.6	7.3	9.7	18.1	11.4	14.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	296	1412	1069	683	1095	488	369	726	637	464	824	368
V/C Ratio(X)	0.98	0.99	0.86	0.98	0.94	0.36	0.79	0.59	1.09	0.96	0.73	0.11
Avail Cap(c_a), veh/h	296	1412	1069	683	1095	488	417	726	637	464	824	368
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	32.7	25.8	36.1	30.6	24.5	39.3	32.6	27.2	38.8	32.2	27.5
Incr Delay (d2), s/veh	46.1	22.0	7.0	30.1	15.1	0.4	9.0	1.3	62.0	31.8	3.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	12.7	9.6	10.0	12.8	2.9	3.6	4.3	23.8	6.9	6.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.6	54.7	32.8	66.2	45.6	24.9	48.3	33.9	89.2	70.7	35.6	27.6
LnGrp LOS	F	D	C	E	D	C	D	C	F	E	D	C
Approach Vol, veh/h		2606			1876			1415			1091	
Approach Delay, s/veh		50.2			51.1			63.9			49.6	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	31.8	14.0	25.0	22.0	29.0	16.4	22.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	14.7	27.3	10.7	19.3	17.5	24.5	11.9	18.1
Max Q Clear Time (g_c+I1), s	16.3	27.0	9.3	16.0	19.1	26.5	13.4	20.1
Green Ext Time (p_c), s	0.0	0.2	0.2	1.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1355	0	1256	0	850	266	0	1090	270
Future Volume (veh/h)	0	0	0	1355	0	1256	0	850	266	0	1090	270
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1900	1900	1900	0	1900	1900	0	1900	1900
Adj Flow Rate, veh/h				1473	0	1341	0	924	99	0	1185	100
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				1831	0	1629	0	1513	1187	0	2174	675
Arrive On Green				0.51	0.00	0.51	0.00	0.14	0.14	0.00	0.42	0.42
Sat Flow, veh/h				3619	0	3220	0	3705	2834	0	5358	1610
Grp Volume(v), veh/h				1473	0	1341	0	924	99	0	1185	100
Grp Sat Flow(s),veh/h/ln				1810	0	1610	0	1805	1417	0	1729	1610
Q Serve(g_s), s				40.7	0.0	42.3	0.0	28.9	3.7	0.0	20.6	4.6
Cycle Q Clear(g_c), s				40.7	0.0	42.3	0.0	28.9	3.7	0.0	20.6	4.6
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1831	0	1629	0	1513	1187	0	2174	675
V/C Ratio(X)				0.80	0.00	0.82	0.00	0.61	0.08	0.00	0.55	0.15
Avail Cap(c_a), veh/h				2111	0	1879	0	1513	1187	0	2174	675
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.86	0.86	0.00	1.00	1.00
Uniform Delay (d), s/veh				24.7	0.0	25.1	0.0	42.5	31.6	0.0	26.2	21.6
Incr Delay (d2), s/veh				2.1	0.0	2.7	0.0	1.6	0.1	0.0	1.0	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				17.4	0.0	16.2	0.0	14.4	1.3	0.0	8.6	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				26.8	0.0	27.8	0.0	44.1	31.7	0.0	27.2	22.1
LnGrp LOS				C	A	C	A	D	C	A	C	C
Approach Vol, veh/h					2814			1023			1285	
Approach Delay, s/veh					27.3			42.9			26.8	
Approach LOS					C			D			C	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	55.3		55.3		64.7			
Change Period (Y+Rc), s	5.0		5.0		4.0			
Max Green Setting (Gmax), s	41.0		41.0		70.0			
Max Q Clear Time (g_c+I1), s	30.9		22.6		44.3			
Green Ext Time (p_c), s	4.8		8.6		16.4			

Intersection Summary		
HCM 6th Ctrl Delay	30.3	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1242	319	836	0	1699	0	0	1201	524
Future Volume (veh/h)	0	0	0	1242	319	836	0	1699	0	0	1201	524
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	0	0	1870	1870
Adj Flow Rate, veh/h				1176	474	846	0	1752	0	0	1238	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	0	2	0	0	2	2
Cap, veh/h				1291	678	1149	0	1904	0	0	2735	
Arrive On Green				0.36	0.36	0.36	0.00	0.54	0.00	0.00	0.54	0.00
Sat Flow, veh/h				3563	1870	3170	0	3741	0	0	5274	1585
Grp Volume(v), veh/h				1176	474	846	0	1752	0	0	1238	0
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	0	1777	0	0	1702	1585
Q Serve(g_s), s				35.5	24.4	26.2	0.0	51.0	0.0	0.0	16.8	0.0
Cycle Q Clear(g_c), s				35.5	24.4	26.2	0.0	51.0	0.0	0.0	16.8	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1291	678	1149	0	1904	0	0	2735	
V/C Ratio(X)				0.91	0.70	0.74	0.00	0.92	0.00	0.00	0.45	
Avail Cap(c_a), veh/h				1331	699	1184	0	2117	0	0	3042	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				34.3	30.8	31.3	0.0	24.0	0.0	0.0	16.1	0.0
Incr Delay (d2), s/veh				9.2	2.7	2.2	0.0	6.3	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	0.0
%ile BackOfQ(50%),veh/ln				16.7	11.4	10.2	0.0	20.7	0.0	0.0	6.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				43.5	33.4	33.5	0.0	30.4	0.0	0.0	16.1	0.0
LnGrp LOS				D	C	C	A	C	A	A	B	
Approach Vol, veh/h					2496			1752			1238	
Approach Delay, s/veh					38.2			30.4			16.1	
Approach LOS					D			C			B	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	66.2		66.2		46.8			
Change Period (Y+Rc), s	5.7		5.7		5.8			
Max Green Setting (Gmax), s	67.3		67.3		42.2			
Max Q Clear Time (g_c+I1), s	53.0		18.8		37.5			
Green Ext Time (p_c), s	7.5		6.3		3.5			

Intersection Summary		
HCM 6th Ctrl Delay	30.7	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	0	392	0	0	0	0	1931	1253	0	1965	0
Future Volume (veh/h)	95	0	392	0	0	0	0	1931	1253	0	1965	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	65	0	379				0	1991	882	0	2026	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	277	0	493				0	2264	1778	0	3254	0
Arrive On Green	0.16	0.00	0.16				0.00	0.64	0.64	0.00	0.64	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	65	0	379				0	1991	882	0	2026	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	1.7	0.0	6.0				0.0	24.1	8.7	0.0	12.4	0.0
Cycle Q Clear(g_c), s	1.7	0.0	6.0				0.0	24.1	8.7	0.0	12.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	277	0	493				0	2264	1778	0	3254	0
V/C Ratio(X)	0.23	0.00	0.77				0.00	0.88	0.50	0.00	0.62	0.00
Avail Cap(c_a), veh/h	1163	0	2070				0	2388	1875	0	3432	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	19.3	0.0	21.1				0.0	7.8	5.0	0.0	5.7	0.0
Incr Delay (d2), s/veh	0.2	0.0	1.0				0.0	3.8	0.1	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.1				0.0	5.0	1.1	0.0	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	0.0	22.1				0.0	11.5	5.1	0.0	5.9	0.0
LnGrp LOS	B	A	C				A	B	A	A	A	A
Approach Vol, veh/h		444						2873			2026	
Approach Delay, s/veh		21.7						9.6			5.9	
Approach LOS		C						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	38.9	13.2	38.9
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	26.1	8.0	14.4
Green Ext Time (p_c), s	7.1	0.1	10.5

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	15	29	147	53	733	46	989	122	502	1225	58
Future Volume (veh/h)	15	15	29	147	53	733	46	989	122	502	1225	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	16	2	158	57	149	49	1063	55	540	1317	33
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	119	101	184	280	416	63	1282	571	570	2293	1023
Arrive On Green	0.02	0.06	0.06	0.10	0.15	0.15	0.04	0.36	0.36	0.32	0.65	0.65
Sat Flow, veh/h	1781	1870	1585	1781	1870	2779	1781	3554	1582	1781	3554	1585
Grp Volume(v), veh/h	16	16	2	158	57	149	49	1063	55	540	1317	33
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1389	1781	1777	1582	1781	1777	1585
Q Serve(g_s), s	1.1	1.0	0.1	10.5	3.2	5.8	3.3	33.0	2.8	35.7	25.2	0.9
Cycle Q Clear(g_c), s	1.1	1.0	0.1	10.5	3.2	5.8	3.3	33.0	2.8	35.7	25.2	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	119	101	184	280	416	63	1282	571	570	2293	1023
V/C Ratio(X)	0.52	0.13	0.02	0.86	0.20	0.36	0.77	0.83	0.10	0.95	0.57	0.03
Avail Cap(c_a), veh/h	74	418	354	192	542	805	133	1282	571	634	2293	1023
HCM Platoon Ratio	1.00	1.00	1.00	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	58.9	53.4	53.0	53.3	45.0	46.1	57.8	35.2	25.6	40.1	12.1	7.8
Incr Delay (d2), s/veh	13.1	0.5	0.1	29.2	0.4	0.5	18.0	6.3	0.3	22.5	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.1	6.1	1.5	2.0	1.8	14.7	1.1	18.5	9.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.0	53.9	53.1	82.5	45.4	46.7	75.8	41.5	25.9	62.6	13.1	7.8
LnGrp LOS	E	D	D	F	D	D	E	D	C	E	B	A
Approach Vol, veh/h		34			364			1167			1890	
Approach Delay, s/veh		62.4			62.0			42.2			27.2	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	83.8	16.5	12.3	42.7	49.4	6.1	22.7
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	9.0	77.6	13.0	27.0	43.0	43.6	5.0	35.0
Max Q Clear Time (g_c+I1), s	5.3	27.2	12.5	3.0	37.7	35.0	3.1	7.8
Green Ext Time (p_c), s	0.0	12.6	0.0	0.0	0.9	4.4	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	36.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	176	94	784	98	306	92	798	552	288	1066	48
Future Volume (veh/h)	47	176	94	784	98	306	92	798	552	288	1066	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	181	0	808	101	110	95	823	241	297	1099	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	324		909	545	454	131	1127	502	345	1219	529
Arrive On Green	0.06	0.09	0.00	0.26	0.29	0.29	0.07	0.32	0.32	0.10	0.34	0.34
Sat Flow, veh/h	1781	3647	0	3456	1870	1557	1781	3554	1583	3456	3554	1543
Grp Volume(v), veh/h	48	181	0	808	101	110	95	823	241	297	1099	13
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1557	1781	1777	1583	1728	1777	1543
Q Serve(g_s), s	3.4	6.4	0.0	29.5	5.3	7.1	6.8	27.0	16.1	11.1	38.6	0.7
Cycle Q Clear(g_c), s	3.4	6.4	0.0	29.5	5.3	7.1	6.8	27.0	16.1	11.1	38.6	0.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	112	324		909	545	454	131	1127	502	345	1219	529
V/C Ratio(X)	0.43	0.56		0.89	0.19	0.24	0.72	0.73	0.48	0.86	0.90	0.02
Avail Cap(c_a), veh/h	136	420		987	613	510	136	1189	529	345	1273	552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.2	57.1	0.0	46.5	34.8	35.4	59.5	39.8	36.1	58.2	41.0	28.6
Incr Delay (d2), s/veh	3.6	2.1	0.0	10.5	0.2	0.4	18.2	2.2	0.7	19.8	9.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.0	0.0	13.7	2.4	2.7	3.7	11.8	6.2	5.7	17.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.9	59.2	0.0	57.0	35.0	35.8	77.7	42.0	36.8	78.0	50.1	28.6
LnGrp LOS	E	E		E	D	D	E	D	D	E	D	C
Approach Vol, veh/h		229			1019			1159			1409	
Approach Delay, s/veh		60.0			52.5			43.9			55.8	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.6	49.1	42.0	19.5	17.2	52.5	15.8	45.8
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	13.1	43.9	37.5	15.5	10.0	47.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	13.1	29.0	31.5	8.4	8.8	40.6	5.4	9.1
Green Ext Time (p_c), s	0.0	5.3	3.0	0.7	0.0	4.3	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	51.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	123	86	40	173	13	219	309	51	12	432	252
Future Volume (veh/h)	37	123	86	40	173	13	219	309	51	12	432	252
Initial Q (Qb), veh	0	0	0	0	0	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	135	13	44	190	2	241	340	30	13	475	81
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	541	241	83	549	244	311	1391	620	30	829	369
Arrive On Green	0.04	0.15	0.15	0.05	0.15	0.15	0.17	0.39	0.39	0.02	0.23	0.23
Sat Flow, veh/h	1781	3554	1582	1781	3554	1580	1781	3554	1583	1781	3554	1582
Grp Volume(v), veh/h	41	135	13	44	190	2	241	340	30	13	475	81
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1781	1777	1580	1781	1777	1583	1781	1777	1582
Q Serve(g_s), s	1.1	1.6	0.3	1.1	2.2	0.1	6.1	3.0	0.6	0.3	5.6	1.9
Cycle Q Clear(g_c), s	1.1	1.6	0.3	1.1	2.2	0.1	6.1	3.0	0.6	0.3	5.6	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	79	541	241	83	549	244	311	1391	620	30	829	369
V/C Ratio(X)	0.52	0.25	0.05	0.53	0.35	0.01	0.77	0.24	0.05	0.44	0.57	0.22
Avail Cap(c_a), veh/h	757	3021	1345	757	3021	1343	757	3021	1346	757	3021	1345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	17.6	17.0	21.9	17.8	16.8	18.5	9.6	8.9	22.9	16.0	14.6
Incr Delay (d2), s/veh	5.3	0.2	0.1	5.2	0.4	0.0	4.1	0.1	0.0	9.9	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.5	0.1	0.5	0.8	0.0	2.4	0.9	0.1	0.2	1.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	17.8	17.1	27.1	18.1	16.8	22.6	9.7	8.9	32.8	16.6	14.9
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	B	B
Approach Vol, veh/h		189			236			611			569	
Approach Delay, s/veh		19.8			19.8			14.8			16.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	11.9	4.8	24.2	6.1	12.0	12.2	16.8
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	3.1	3.6	2.3	5.0	3.1	4.2	8.1	7.6
Green Ext Time (p_c), s	0.1	0.8	0.0	2.3	0.1	1.1	0.5	3.3

Intersection Summary	
HCM 6th Ctrl Delay	16.8
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)	318	394	121	62	586	411	261	460	61	12	523	333
Future Volume (veh/h)	318	394	121	62	586	411	261	460	61	12	523	333
Initial Q (Qb), veh	0	0	0	0	0	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	342	424	50	67	630	248	281	495	63	13	562	187
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	273	761	645	100	580	491	238	612	78	45	501	425
Arrive On Green	0.15	0.41	0.41	0.06	0.31	0.31	0.13	0.38	0.38	0.03	0.27	0.27
Sat Flow, veh/h	1781	1870	1585	1781	1870	1582	1781	1626	207	1781	1870	1585
Grp Volume(v), veh/h	342	424	50	67	630	248	281	0	558	13	562	187
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1582	1781	0	1833	1781	1870	1585
Q Serve(g_s), s	23.0	26.1	2.9	5.5	46.5	19.2	20.0	0.0	41.0	1.1	40.2	14.7
Cycle Q Clear(g_c), s	23.0	26.1	2.9	5.5	46.5	19.2	20.0	0.0	41.0	1.1	40.2	14.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	273	761	645	100	580	491	238	0	690	45	501	425
V/C Ratio(X)	1.25	0.56	0.08	0.67	1.09	0.51	1.18	0.00	0.81	0.29	1.12	0.44
Avail Cap(c_a), veh/h	273	761	645	143	580	491	238	0	690	107	501	425
HCM Platoon Ratio	1.00	1.00	1.00	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	63.5	34.1	27.2	69.4	51.7	42.3	65.0	0.0	42.0	71.8	54.9	45.6
Incr Delay (d2), s/veh	140.0	2.9	0.2	7.4	63.0	3.7	116.9	0.0	7.5	3.5	77.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.9	12.3	1.1	2.7	31.1	7.9	16.6	0.0	19.4	0.5	29.3	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	203.5	37.0	27.5	76.8	114.8	46.0	181.9	0.0	49.4	75.3	132.7	46.6
LnGrp LOS	F	D	C	E	F	D	F	A	D	E	F	D
Approach Vol, veh/h		816			945			839			762	
Approach Delay, s/veh		106.2			94.0			93.8			110.6	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	67.6	7.8	62.2	27.0	53.0	24.0	46.0
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	12.0	* 58	9.0	51.2	23.0	46.5	20.0	40.2
Max Q Clear Time (g_c+I1), s	7.5	28.1	3.1	43.0	25.0	48.5	22.0	42.2
Green Ext Time (p_c), s	0.0	4.1	0.0	2.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	100.7
HCM 6th LOS	F

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)	204	1254	204	0	879	362	0	0	0	639	33	485
Future Volume (veh/h)	204	1254	204	0	879	362	0	0	0	639	33	485
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	229	1409	165	0	988	0				744	0	225
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	371	1917	837	0	1816					1034	0	454
Arrive On Green	0.11	0.54	0.54	0.00	0.36	0.00				0.29	0.00	0.29
Sat Flow, veh/h	3456	3554	1551	0	5274	1585				3563	0	1565
Grp Volume(v), veh/h	229	1409	165	0	988	0				744	0	225
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	0	1702	1585				1781	0	1565
Q Serve(g_s), s	3.9	18.6	3.4	0.0	9.5	0.0				11.5	0.0	7.3
Cycle Q Clear(g_c), s	3.9	18.6	3.4	0.0	9.5	0.0				11.5	0.0	7.3
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	371	1917	837	0	1816					1034	0	454
V/C Ratio(X)	0.62	0.74	0.20	0.00	0.54					0.72	0.00	0.50
Avail Cap(c_a), veh/h	1682	2307	1007	0	3314					1734	0	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	26.3	10.8	7.3	0.0	15.9	0.0				19.6	0.0	18.1
Incr Delay (d2), s/veh	1.9	1.1	0.1	0.0	0.3	0.0				1.2	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	0.0
%ile BackOfQ(50%),veh/ln	1.6	5.6	0.9	0.0	3.2	0.0				4.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	12.0	7.5	0.0	16.2	0.0				20.8	0.0	19.1
LnGrp LOS	C	B	A	A	B					C	A	B
Approach Vol, veh/h		1803			988						969	
Approach Delay, s/veh		13.6			16.2						20.4	
Approach LOS		B			B						C	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	38.6		23.0	11.3	27.3
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	20.6		13.5	5.9	11.5
Green Ext Time (p_c), s	12.6		4.3	0.9	9.4

Intersection Summary	
HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	248	599	40	445	422	103
Future Volume (veh/h)	248	599	40	445	422	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	285	602	46	511	485	110
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	265	560	53	1038	496	112
Arrive On Green	0.50	0.50	0.03	0.56	0.35	0.35
Sat Flow, veh/h	536	1131	1781	1870	1416	321
Grp Volume(v), veh/h	0	887	46	511	596	0
Grp Sat Flow(s),veh/h/ln	0	1667	1781	1870	1741	0
Q Serve(g_s), s	0.0	49.5	2.6	16.7	33.8	0.0
Cycle Q Clear(g_c), s	0.0	49.5	2.6	16.7	33.8	0.0
Prop In Lane		0.68	1.00		0.81	0.18
Lane Grp Cap(c), veh/h	0	825	53	1038	609	0
V/C Ratio(X)	0.00	1.08	0.86	0.49	0.98	0.00
Avail Cap(c_a), veh/h	0	825	53	1038	609	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	25.3	48.3	13.6	32.1	0.0
Incr Delay (d2), s/veh	0.0	53.5	72.1	0.4	30.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	29.3	2.2	6.3	18.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	78.8	120.3	14.1	63.1	0.0
LnGrp LOS	A	F	F	B	E	A
Approach Vol, veh/h	887			557	596	
Approach Delay, s/veh	78.8			22.8	63.1	
Approach LOS	E			C	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.0		40.0	6.0	54.0
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		55.5		35.0	3.0	49.5
Max Q Clear Time (g_c+I1), s		18.7		35.8	4.6	51.5
Green Ext Time (p_c), s		4.0		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.9
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	288	130	840	919	80	340	480	580	30	620	140
Future Volume (veh/h)	60	288	130	840	919	80	340	480	580	30	620	140
Initial Q (Qb), veh	0	0	0	0	0	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	75	360	0	1050	1149	0	425	600	0	38	775	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	565		1023	1756		443	1205		170	925	
Arrive On Green	0.05	0.11	0.00	0.30	0.34	0.00	0.13	0.34	0.00	0.05	0.26	0.00
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	75	360	0	1050	1149	0	425	600	0	38	775	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.7	7.6	0.0	33.5	21.6	0.0	13.8	15.2	0.0	1.2	23.3	0.0
Cycle Q Clear(g_c), s	4.7	7.6	0.0	33.5	21.6	0.0	13.8	15.2	0.0	1.2	23.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	565		1023	1756		443	1205		170	925	
V/C Ratio(X)	0.78	0.64		1.03	0.65		0.96	0.50		0.22	0.84	
Avail Cap(c_a), veh/h	231	1525		1023	2328		443	1460		244	1256	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.9	48.2	0.0	39.8	31.4	0.0	49.0	29.7	0.0	51.7	39.6	0.0
Incr Delay (d2), s/veh	5.1	1.7	0.0	35.1	0.6	0.0	32.5	0.3	0.0	0.7	3.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.2	0.0	18.5	8.5	0.0	7.7	6.2	0.0	0.5	10.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	49.9	0.0	74.9	32.0	0.0	81.6	30.1	0.0	52.4	43.4	0.0
LnGrp LOS	E	D		F	C		F	C		D	D	
Approach Vol, veh/h		435			2199			1025			813	
Approach Delay, s/veh		51.3			52.5			51.4			43.8	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	45.0	20.0	35.6	39.0	18.6	11.1	44.5
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	14.7	51.6	14.5	40.0	33.5	33.8	8.0	46.5
Max Q Clear Time (g_c+I1), s	6.7	23.6	15.8	25.3	35.5	9.6	3.2	17.2
Green Ext Time (p_c), s	0.0	11.9	0.0	4.1	0.0	2.9	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay	50.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	20	210	110	20	270	330	860	190	450	670	470
Future Volume (veh/h)	270	20	210	110	20	270	330	860	190	450	670	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	293	22	130	147	22	157	359	1147	74	600	893	239
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	428	420	356	224	29	204	493	1396	412	671	1381	1101
Arrive On Green	0.12	0.22	0.22	0.06	0.15	0.15	0.10	0.27	0.27	0.19	0.39	0.39
Sat Flow, veh/h	3510	1900	1610	3456	196	1395	5103	5106	1506	3456	3554	2834
Grp Volume(v), veh/h	293	22	130	147	0	179	359	1147	74	600	893	239
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1591	1701	1702	1506	1728	1777	1417
Q Serve(g_s), s	6.8	0.8	5.8	3.5	0.0	9.2	5.8	17.9	3.2	14.4	17.5	4.8
Cycle Q Clear(g_c), s	6.8	0.8	5.8	3.5	0.0	9.2	5.8	17.9	3.2	14.4	17.5	4.8
Prop In Lane	1.00		1.00	1.00		0.88	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	428	420	356	224	0	233	493	1396	412	671	1381	1101
V/C Ratio(X)	0.69	0.05	0.37	0.66	0.00	0.77	0.73	0.82	0.18	0.89	0.65	0.22
Avail Cap(c_a), veh/h	1319	930	788	398	0	336	653	1649	486	812	1590	1268
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	26.1	28.1	38.9	0.0	35.0	37.4	29.0	23.6	33.5	21.3	17.4
Incr Delay (d2), s/veh	2.8	0.1	0.6	3.2	0.0	6.4	2.8	2.5	0.1	9.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.4	2.3	1.6	0.0	4.0	2.4	6.9	1.1	6.5	6.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.6	26.2	28.7	42.1	0.0	41.4	40.2	31.5	23.7	43.3	21.7	17.4
LnGrp LOS	D	C	C	D	A	D	D	C	C	D	C	B
Approach Vol, veh/h		445			326			1580			1732	
Approach Delay, s/veh		35.1			41.7			33.1			28.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	39.1	10.0	23.3	22.5	29.3	16.4	17.0
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	10.3	38.1	9.8	41.7	20.0	27.5	32.0	18.0
Max Q Clear Time (g_c+I1), s	7.8	19.5	5.5	7.8	16.4	19.9	8.8	11.2
Green Ext Time (p_c), s	0.4	2.0	0.2	0.5	0.1	3.1	1.6	0.5

Intersection Summary	
HCM 6th Ctrl Delay	32.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	174	310	411	1204	548	527
Future Volume (veh/h)	174	310	411	1204	548	527
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	189	58	447	1309	596	551
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	212	189	394	1538	509	470
Arrive On Green	0.12	0.12	0.22	0.81	0.56	0.56
Sat Flow, veh/h	1810	1610	1810	1900	909	840
Grp Volume(v), veh/h	189	58	447	1309	0	1147
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1749
Q Serve(g_s), s	15.3	4.9	32.3	62.7	0.0	83.1
Cycle Q Clear(g_c), s	15.3	4.9	32.3	62.7	0.0	83.1
Prop In Lane	1.00	1.00	1.00			0.48
Lane Grp Cap(c), veh/h	212	189	394	1538	0	979
V/C Ratio(X)	0.89	0.31	1.13	0.85	0.00	1.17
Avail Cap(c_a), veh/h	232	206	394	1538	0	979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	64.6	60.0	58.1	8.7	0.0	32.7
Incr Delay (d2), s/veh	30.4	0.9	87.4	5.0	0.0	88.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	0.0	23.9	19.4	0.0	56.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	95.0	60.9	145.5	13.6	0.0	120.7
LnGrp LOS	F	E	F	B	A	F
Approach Vol, veh/h	247			1756	1147	
Approach Delay, s/veh	87.0			47.2	120.7	
Approach LOS	F			D	F	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	126.3		22.1	37.0	89.3
Change Period (Y+Rc), s	6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	120.1		* 19	* 32	83.1
Max Q Clear Time (g_c+I1), s	64.7		17.3	34.3	85.1
Green Ext Time (p_c), s	28.8		0.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	77.1
HCM 6th LOS	E

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)	0	0	0	42	0	510	0	852	55	267	668	0
Future Volume (veh/h)	0	0	0	42	0	510	0	852	55	267	668	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	52	0	456	0	1065	67	334	835	0
Peak Hour Factor	0.92	0.92	0.92	0.80	0.92	0.80	0.92	0.80	0.80	0.80	0.80	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	186	0	482	295	820	52	359	916	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.47	0.47	0.20	0.49	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1741	110	1781	1870	0
Grp Volume(v), veh/h	0	0	0	52	0	456	0	0	1132	334	835	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1851	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	7.8	0.0	0.0	35.8	14.0	31.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.0	0.0	7.8	0.0	0.0	35.8	14.0	31.3	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	186	0	482	295	0	872	359	916	0
V/C Ratio(X)	0.00	0.00	0.00	0.28	0.00	0.95	0.00	0.00	1.30	0.93	0.91	0.00
Avail Cap(c_a), veh/h	0	195	0	186	0	482	295	0	872	359	1078	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	31.5	0.0	25.8	0.0	0.0	20.1	29.8	17.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	28.0	0.0	0.0	142.8	30.6	10.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.9	0.0	11.2	0.0	0.0	46.7	8.4	13.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.3	0.0	53.8	0.0	0.0	162.9	60.4	28.3	0.0
LnGrp LOS	A	A	A	C	A	D	A	A	F	E	C	A
Approach Vol, veh/h		0			508			1132			1169	
Approach Delay, s/veh		0.0			51.6			162.9			37.5	
Approach LOS					D			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	42.0		0.0	18.6	43.4		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 15	35.8		7.8	7.3	* 44		7.8				
Max Q Clear Time (g_c+I1), s	16.0	37.8		0.0	0.0	33.3		9.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		90.6
HCM 6th LOS		F

Notes

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



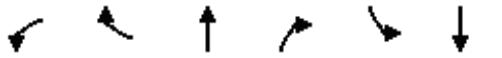
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	560	207	246	964	195	316	1029	143	261	573	480
Future Volume (veh/h)	311	560	207	246	964	195	316	1029	143	261	573	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	342	615	0	270	1059	114	347	1131	97	287	630	317
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	410	1469		337	1361	415	415	1201	527	375	1160	510
Arrive On Green	0.12	0.29	0.00	0.10	0.27	0.27	0.12	0.34	0.34	0.11	0.33	0.33
Sat Flow, veh/h	3456	5106	1585	3456	5106	1557	3456	3554	1559	3456	3554	1564
Grp Volume(v), veh/h	342	615	0	270	1059	114	347	1131	97	287	630	317
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1557	1728	1777	1559	1728	1777	1564
Q Serve(g_s), s	12.6	12.7	0.0	10.0	25.1	7.6	12.8	40.4	5.7	10.5	19.0	22.4
Cycle Q Clear(g_c), s	12.6	12.7	0.0	10.0	25.1	7.6	12.8	40.4	5.7	10.5	19.0	22.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	410	1469		337	1361	415	415	1201	527	375	1160	510
V/C Ratio(X)	0.83	0.42		0.80	0.78	0.27	0.84	0.94	0.18	0.77	0.54	0.62
Avail Cap(c_a), veh/h	662	1759		662	1759	537	662	1225	537	662	1225	539
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.3	37.7	0.0	57.7	44.3	37.9	56.2	42.0	30.5	56.6	36.0	37.2
Incr Delay (d2), s/veh	5.0	0.2	0.0	4.5	1.7	0.4	5.3	13.9	0.2	6.8	0.4	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	5.2	0.0	4.5	10.7	2.9	5.8	19.3	2.2	4.9	8.1	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.3	37.9	0.0	62.2	46.0	38.3	61.5	55.9	30.7	63.4	36.5	39.2
LnGrp LOS	E	D		E	D	D	E	E	C	E	D	D
Approach Vol, veh/h		957			1443			1575			1234	
Approach Delay, s/veh		46.2			48.4			55.6			43.4	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.7	43.6	19.2	50.1	20.5	40.8	20.7	48.6
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	12.0	14.7	12.5	42.4	14.6	27.1	14.8	24.4
Green Ext Time (p_c), s	0.7	4.1	1.6	1.8	0.8	7.4	0.9	5.2

Intersection Summary	
HCM 6th Ctrl Delay	49.0
HCM 6th LOS	D

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	765	816	683	734	969	622
Future Volume (veh/h)	765	816	683	734	969	622
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	797	359	711	368	1009	648
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	481	428	388	320	586	1113
Arrive On Green	0.27	0.27	0.21	0.21	0.33	0.60
Sat Flow, veh/h	1781	1585	1870	1543	1781	1870
Grp Volume(v), veh/h	797	359	711	368	1009	648
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1543	1781	1870
Q Serve(g_s), s	21.6	17.1	16.6	16.6	26.3	17.2
Cycle Q Clear(g_c), s	21.6	17.1	16.6	16.6	26.3	17.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	481	428	388	320	586	1113
V/C Ratio(X)	1.66	0.84	1.83	1.15	1.72	0.58
Avail Cap(c_a), veh/h	481	428	388	320	586	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	27.6	31.7	31.7	26.8	10.0
Incr Delay (d2), s/veh	304.9	14.0	384.3	97.1	332.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	49.2	7.6	48.3	14.3	64.0	5.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	334.1	41.5	416.0	128.8	359.4	10.9
LnGrp LOS	F	D	F	F	F	B
Approach Vol, veh/h	1156		1079			1657
Approach Delay, s/veh	243.2		318.1			223.1
Approach LOS	F		F			F

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	31.0	22.0			53.0	27.0
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 26	16.6			47.6	21.6
Max Q Clear Time (g_c+I1), s	28.3	18.6			19.2	23.6
Green Ext Time (p_c), s	0.0	0.0			5.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	255.4
HCM 6th LOS	F

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)	347	37	87	51	755	173	129	77	296	96	60	204
Future Volume (veh/h)	347	37	87	51	755	173	129	77	296	96	60	204
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	377	40	52	55	821	181	140	84	207	104	65	148
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	259	982	876	85	675	149	168	87	213	129	81	184
Arrive On Green	0.14	0.54	0.54	0.05	0.45	0.45	0.09	0.18	0.18	0.07	0.16	0.16
Sat Flow, veh/h	1810	1805	1610	1810	1508	332	1810	486	1198	1810	515	1173
Grp Volume(v), veh/h	377	40	52	55	0	1002	140	0	291	104	0	213
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	0	1840	1810	0	1684	1810	0	1689
Q Serve(g_s), s	17.0	1.2	1.8	3.6	0.0	53.3	9.0	0.0	20.4	6.7	0.0	14.5
Cycle Q Clear(g_c), s	17.0	1.2	1.8	3.6	0.0	53.3	9.0	0.0	20.4	6.7	0.0	14.5
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.71	1.00		0.69
Lane Grp Cap(c), veh/h	259	982	876	85	0	824	168	0	300	129	0	264
V/C Ratio(X)	1.46	0.04	0.06	0.65	0.00	1.22	0.83	0.00	0.97	0.81	0.00	0.81
Avail Cap(c_a), veh/h	259	982	876	137	0	824	234	0	300	144	0	264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.0	12.6	12.8	55.7	0.0	32.8	53.0	0.0	48.6	54.4	0.0	48.4
Incr Delay (d2), s/veh	226.3	0.0	0.0	8.0	0.0	108.0	16.1	0.0	43.5	25.4	0.0	16.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.9	0.5	0.7	1.8	0.0	47.7	4.9	0.0	12.2	4.0	0.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	277.3	12.7	12.8	63.8	0.0	140.8	69.2	0.0	92.1	79.8	0.0	65.0
LnGrp LOS	F	B	B	E	A	F	E	A	F	E	A	E
Approach Vol, veh/h		469			1057			431			317	
Approach Delay, s/veh		225.4			136.8			84.6			69.9	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	69.4	13.0	27.0	21.0	58.0	15.6	24.4
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	5.6	* 61	9.5	21.2	17.0	* 53	15.4	15.3
Max Q Clear Time (g_c+I1), s	5.6	3.8	8.7	22.4	19.0	55.3	11.0	16.5
Green Ext Time (p_c), s	0.0	0.6	0.0	0.0	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	135.9
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	70	90	100	400	350	350	810	130	50	620	220
Future Volume (veh/h)	90	70	90	100	400	350	350	810	130	50	620	220
Initial Q (Qb), veh	0	0	0	0	0	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	1900	1870	1900	1900	1900	1870	1870	1900	1900	1870	1870
Adj Flow Rate, veh/h	98	76	24	109	435	166	380	880	52	54	674	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	0	0	0	2	2	0	0	2	2
Cap, veh/h	344	1023	449	141	498	422	479	1157	524	85	831	371
Arrive On Green	0.10	0.28	0.28	0.08	0.26	0.26	0.14	0.33	0.33	0.05	0.23	0.23
Sat Flow, veh/h	3456	3610	1585	1810	1900	1610	3456	3554	1610	1810	3554	1585
Grp Volume(v), veh/h	98	76	24	109	435	166	380	880	52	54	674	64
Grp Sat Flow(s),veh/h/ln	1728	1805	1585	1810	1900	1610	1728	1777	1610	1810	1777	1585
Q Serve(g_s), s	1.8	1.0	0.7	4.0	14.8	5.7	7.2	15.0	1.5	2.0	12.1	2.2
Cycle Q Clear(g_c), s	1.8	1.0	0.7	4.0	14.8	5.7	7.2	15.0	1.5	2.0	12.1	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	1023	449	141	498	422	479	1157	524	85	831	371
V/C Ratio(X)	0.29	0.07	0.05	0.77	0.87	0.39	0.79	0.76	0.10	0.63	0.81	0.17
Avail Cap(c_a), veh/h	434	1023	449	254	547	464	536	1234	559	147	971	433
HCM Platoon Ratio	1.00	1.00	1.00	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	28.2	17.8	17.6	30.6	23.9	20.6	28.2	20.5	15.9	31.7	24.5	20.7
Incr Delay (d2), s/veh	0.5	0.0	0.0	8.5	13.7	0.6	7.2	2.7	0.1	7.5	4.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.4	0.3	2.0	8.1	2.1	3.1	5.6	0.5	1.0	4.9	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	17.8	17.7	39.2	37.6	21.1	35.4	23.1	16.0	39.2	29.1	20.9
LnGrp LOS	C	B	B	D	D	C	D	C	B	D	C	C
Approach Vol, veh/h		198			710			1312			792	
Approach Delay, s/veh		23.2			34.0			26.4			29.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	20.3	9.8	23.7	7.7	26.5	11.2	22.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	18.5	9.5	18.5	5.5	23.5	8.5	19.5
Max Q Clear Time (g_c+I1), s	9.2	14.1	6.0	3.0	4.0	17.0	3.8	16.8
Green Ext Time (p_c), s	0.2	1.7	0.1	0.4	0.0	2.9	0.1	0.9

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

Intersection	
Intersection Delay, s/veh	664.2
Intersection LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	700	184	80	1173	990	206
Future Vol, veh/h	700	184	80	1173	990	206
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	761	200	87	1275	1076	224
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	420.6	778.4	724.6
HCM LOS	F	F	F

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	83%	0%	6%
Vol Thru, %	0%	79%	94%
Vol Right, %	17%	21%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	1196	884	1253
LT Vol	990	0	80
Through Vol	0	700	1173
RT Vol	206	184	0
Lane Flow Rate	1300	961	1362
Geometry Grp	1	1	1
Degree of Util (X)	2.549	1.834	2.652
Departure Headway (Hd)	9.402	13.884	12.465
Convergence, Y/N	Yes	Yes	Yes
Cap	403	269	313
Service Time	7.402	11.884	10.465
HCM Lane V/C Ratio	3.226	3.572	4.351
HCM Control Delay	724.6	420.6	778.4
HCM Lane LOS	F	F	F
HCM 95th-tile Q	78.8	32.5	64.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	782	11	869	0	2056	0	0	2253	446
Future Volume (veh/h)	0	0	0	782	11	869	0	2056	0	0	2253	446
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	0	0	1870	1870
Adj Flow Rate, veh/h				878	0	950	0	2284	0	0	2503	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	0	2	0	0	2	2
Cap, veh/h				1771	0	1051	0	2029	0	0	2916	
Arrive On Green				0.33	0.00	0.33	0.00	0.57	0.00	0.00	0.57	0.00
Sat Flow, veh/h				5344	0	3170	0	3741	0	0	5274	1585
Grp Volume(v), veh/h				878	0	950	0	2284	0	0	2503	0
Grp Sat Flow(s),veh/h/ln				1781	0	1585	0	1777	0	0	1702	1585
Q Serve(g_s), s				15.5	0.0	33.7	0.0	67.3	0.0	0.0	48.6	0.0
Cycle Q Clear(g_c), s				15.5	0.0	33.7	0.0	67.3	0.0	0.0	48.6	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1771	0	1051	0	2029	0	0	2916	
V/C Ratio(X)				0.50	0.00	0.90	0.00	1.13	0.00	0.00	0.86	
Avail Cap(c_a), veh/h				1913	0	1135	0	2029	0	0	2916	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				31.5	0.0	37.6	0.0	25.3	0.0	0.0	21.3	0.0
Incr Delay (d2), s/veh				0.1	0.0	9.5	0.0	63.5	0.0	0.0	2.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.7	0.0	14.3	0.0	42.7	0.0	0.0	17.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				31.7	0.0	47.1	0.0	88.8	0.0	0.0	23.9	0.0
LnGrp LOS				C	A	D	A	F	A	A	C	
Approach Vol, veh/h					1828			2284			2503	
Approach Delay, s/veh					39.7			88.8			23.9	
Approach LOS					D			F			C	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	73.0		73.0		44.9			
Change Period (Y+Rc), s	5.7		5.7		5.8			
Max Green Setting (Gmax), s	67.3		67.3		42.2			
Max Q Clear Time (g_c+I1), s	69.3		50.6		35.7			
Green Ext Time (p_c), s	0.0		11.8		3.3			

Intersection Summary		
HCM 6th Ctrl Delay	50.7	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	333	11	344	0	0	0	0	1890	1073	0	2302	0
Future Volume (veh/h)	333	11	344	0	0	0	0	1890	1073	0	2302	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	490	0	242				0	2124	827	0	2587	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	659	0	293				0	2211	1736	0	3177	0
Arrive On Green	0.19	0.00	0.19				0.00	0.62	0.62	0.00	0.62	0.00
Sat Flow, veh/h	3563	0	1585				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	490	0	242				0	2124	827	0	2587	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	7.3	0.0	8.2				0.0	31.5	8.9	0.0	21.7	0.0
Cycle Q Clear(g_c), s	7.3	0.0	8.2				0.0	31.5	8.9	0.0	21.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	659	0	293				0	2211	1736	0	3177	0
V/C Ratio(X)	0.74	0.00	0.82				0.00	0.96	0.48	0.00	0.81	0.00
Avail Cap(c_a), veh/h	2161	0	962				0	2219	1742	0	3188	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	21.6	0.0	22.0				0.0	9.9	5.7	0.0	8.1	0.0
Incr Delay (d2), s/veh	0.6	0.0	2.2				0.0	11.2	0.1	0.0	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	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	3.0				0.0	9.5	1.4	0.0	4.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.2	0.0	24.2				0.0	21.1	5.8	0.0	9.7	0.0
LnGrp LOS	C	A	C				A	C	A	A	A	A
Approach Vol, veh/h		732						2951			2587	
Approach Delay, s/veh		22.9						16.8			9.7	
Approach LOS		C						B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	40.6	15.5	40.6
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	33.5	10.2	23.7
Green Ext Time (p_c), s	1.4	0.1	8.9

Intersection Summary	
HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	238	103	332	64	306	166	1369	132	275	1242	24
Future Volume (veh/h)	52	238	103	332	64	306	166	1369	132	275	1242	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	60	274	26	382	74	151	191	1574	66	316	1428	13
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	333	282	263	528	786	223	1226	546	263	1306	582
Arrive On Green	0.04	0.18	0.18	0.15	0.28	0.28	0.13	0.34	0.34	0.15	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	1870	2787	1781	3554	1584	1781	3554	1585
Grp Volume(v), veh/h	60	274	26	382	74	151	191	1574	66	316	1428	13
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1393	1781	1777	1584	1781	1777	1585
Q Serve(g_s), s	3.4	14.3	1.4	15.0	3.0	4.2	10.7	35.0	2.9	15.0	37.3	0.5
Cycle Q Clear(g_c), s	3.4	14.3	1.4	15.0	3.0	4.2	10.7	35.0	2.9	15.0	37.3	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	333	282	263	528	786	223	1226	546	263	1306	582
V/C Ratio(X)	0.77	0.82	0.09	1.45	0.14	0.19	0.86	1.28	0.12	1.20	1.09	0.02
Avail Cap(c_a), veh/h	263	645	547	263	645	961	263	1226	546	263	1306	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	40.2	34.8	43.2	27.2	27.6	43.5	33.2	22.7	43.2	32.1	20.5
Incr Delay (d2), s/veh	14.5	5.1	0.1	222.9	0.1	0.1	20.7	134.2	0.5	120.7	54.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	7.0	0.5	22.6	1.3	1.3	5.8	36.8	1.1	15.1	24.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.6	45.2	35.0	266.1	27.3	27.8	64.2	167.5	23.2	163.9	86.7	20.5
LnGrp LOS	E	D	C	F	C	C	E	F	C	F	F	C
Approach Vol, veh/h		360			607			1831			1757	
Approach Delay, s/veh		47.4			177.7			151.5			100.1	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	43.1	19.0	22.7	19.0	40.8	8.4	33.2
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	15.0	35.0	15.0	35.0	15.0	35.0	15.0	35.0
Max Q Clear Time (g_c+I1), s	12.7	39.3	17.0	16.3	17.0	37.0	5.4	6.2
Green Ext Time (p_c), s	0.1	0.0	0.0	1.6	0.0	0.0	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	126.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	65	65	304	93	251	76	1229	511	138	1341	38
Future Volume (veh/h)	54	65	65	304	93	251	76	1229	511	138	1341	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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	70	0	327	100	113	82	1322	372	148	1442	19
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	322		434	270	227	139	1600	712	287	1617	718
Arrive On Green	0.07	0.09	0.00	0.13	0.14	0.14	0.08	0.45	0.45	0.08	0.45	0.45
Sat Flow, veh/h	1781	3647	0	3456	1870	1569	1781	3554	1582	3456	3554	1578
Grp Volume(v), veh/h	58	70	0	327	100	113	82	1322	372	148	1442	19
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1569	1781	1777	1582	1728	1777	1578
Q Serve(g_s), s	3.7	2.2	0.0	10.9	5.8	7.9	5.3	39.0	20.2	4.9	44.5	0.8
Cycle Q Clear(g_c), s	3.7	2.2	0.0	10.9	5.8	7.9	5.3	39.0	20.2	4.9	44.5	0.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	322		434	270	227	139	1600	712	287	1617	718
V/C Ratio(X)	0.46	0.22		0.75	0.37	0.50	0.59	0.83	0.52	0.52	0.89	0.03
Avail Cap(c_a), veh/h	149	936		621	673	564	149	1694	754	289	1694	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	50.4	0.0	50.5	46.2	47.1	53.3	28.8	23.6	52.5	29.9	18.0
Incr Delay (d2), s/veh	3.6	0.5	0.0	5.9	1.2	2.4	6.8	3.4	0.6	2.1	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.0	0.0	5.0	2.7	3.2	2.6	16.2	7.4	2.2	19.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	50.9	0.0	56.4	47.4	49.6	60.0	32.2	24.2	54.7	36.3	18.0
LnGrp LOS	E	D		E	D	D	E	C	C	D	D	B
Approach Vol, veh/h		128			540			1776			1609	
Approach Delay, s/veh		53.6			53.3			31.8			37.8	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	61.3	22.5	18.3	16.8	61.9	16.0	24.8
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	10.0	57.0	21.5	31.5	10.0	57.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	6.9	41.0	12.9	4.2	7.3	46.5	5.7	9.9
Green Ext Time (p_c), s	0.2	9.3	1.5	0.5	0.1	7.9	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	37.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	465	239	53	48	120	456	84	711	42	530	470	120
Future Volume (veh/h)	465	239	53	48	120	456	84	711	42	530	470	120
Initial Q (Qb), veh	0	0	0	0	0	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	596	306	33	62	154	359	108	912	18	679	603	55
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	1375	613	79	857	382	130	802	358	387	1314	586
Arrive On Green	0.19	0.39	0.39	0.04	0.24	0.24	0.07	0.23	0.23	0.22	0.37	0.37
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	596	306	33	62	154	359	108	912	18	679	603	55
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	28.0	8.5	1.9	5.1	5.1	32.7	8.8	33.2	1.3	32.0	19.0	3.3
Cycle Q Clear(g_c), s	28.0	8.5	1.9	5.1	5.1	32.7	8.8	33.2	1.3	32.0	19.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	1375	613	79	857	382	130	802	358	387	1314	586
V/C Ratio(X)	1.76	0.22	0.05	0.78	0.18	0.94	0.83	1.14	0.05	1.75	0.46	0.09
Avail Cap(c_a), veh/h	339	1375	613	133	925	412	206	802	358	387	1314	586
HCM Platoon Ratio	1.00	1.00	1.00	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	59.6	30.3	28.3	69.6	44.3	54.8	67.3	57.0	44.6	57.6	35.2	30.3
Incr Delay (d2), s/veh	353.4	0.1	0.0	15.4	0.1	28.5	14.3	76.9	0.1	349.5	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.6	3.6	0.7	2.6	2.2	15.8	4.5	23.2	0.5	51.7	8.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	413.0	30.3	28.3	85.0	44.4	83.3	81.6	133.9	44.7	407.1	35.5	30.4
LnGrp LOS	F	C	C	F	D	F	F	F	D	F	D	C
Approach Vol, veh/h		935			575			1038			1337	
Approach Delay, s/veh		274.2			73.0			126.9			224.0	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	61.6	36.0	39.0	32.0	40.2	14.8	60.2
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	6.5	* 55	32.0	33.2	28.0	* 38	17.0	48.2
Max Q Clear Time (g_c+I1), s	7.1	10.5	34.0	35.2	30.0	34.7	10.8	21.0
Green Ext Time (p_c), s	0.0	2.0	0.0	0.0	0.0	0.8	0.1	4.1

Intersection Summary	
HCM 6th Ctrl Delay	187.8
HCM 6th LOS	F

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)	267	468	256	107	160	96	120	807	131	387	847	335
Future Volume (veh/h)	267	468	256	107	160	96	120	807	131	387	847	335
Initial Q (Qb), veh	0	0	0	0	0	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	322	564	151	129	193	45	145	972	154	466	1020	285
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	660	560	150	642	544	165	540	86	167	642	544
Arrive On Green	0.09	0.35	0.35	0.08	0.34	0.34	0.09	0.34	0.34	0.09	0.34	0.34
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1576	250	1781	1870	1585
Grp Volume(v), veh/h	322	564	151	129	193	45	145	0	1126	466	1020	285
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1825	1781	1870	1585
Q Serve(g_s), s	15.0	44.7	10.9	11.5	12.1	3.1	12.9	0.0	54.9	15.0	55.0	23.1
Cycle Q Clear(g_c), s	15.0	44.7	10.9	11.5	12.1	3.1	12.9	0.0	54.9	15.0	55.0	23.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	167	660	560	150	642	544	165	0	625	167	642	544
V/C Ratio(X)	1.93	0.85	0.27	0.86	0.30	0.08	0.88	0.00	1.80	2.79	1.59	0.52
Avail Cap(c_a), veh/h	167	660	560	167	642	544	167	0	625	167	642	544
HCM Platoon Ratio	1.00	1.00	1.00	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	72.6	48.0	37.0	72.4	38.5	35.5	71.8	0.0	52.7	72.6	52.6	42.1
Incr Delay (d2), s/veh	439.8	13.3	1.2	32.0	1.2	0.3	37.1	0.0	366.8	823.4	272.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.2	23.0	4.4	6.5	5.7	1.2	7.5	0.0	88.1	44.9	73.6	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	512.4	61.2	38.2	104.4	39.7	35.8	108.8	0.0	419.4	896.0	324.6	43.3
LnGrp LOS	F	E	D	F	D	D	F	A	F	F	F	D
Approach Vol, veh/h		1037			367			1271			1771	
Approach Delay, s/veh		198.0			62.0			384.0			429.7	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	63.0	19.0	60.7	19.0	61.5	18.9	60.8
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	15.0	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	13.5	46.7	17.0	56.9	17.0	14.1	14.9	57.0
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	1.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	332.2
HCM 6th LOS	F

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)	370	2007	525	0	1625	904	0	0	0	1257	225	808
Future Volume (veh/h)	370	2007	525	0	1625	904	0	0	0	1257	225	808
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	374	2027	442	0	1641	0				1432	0	486
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	482	2060	913	0	1999					1109	0	489
Arrive On Green	0.14	0.58	0.58	0.00	0.39	0.00				0.31	0.00	0.31
Sat Flow, veh/h	3456	3554	1574	0	5274	1585				3563	0	1571
Grp Volume(v), veh/h	374	2027	442	0	1641	0				1432	0	486
Grp Sat Flow(s),veh/h/ln	1728	1777	1574	0	1702	1585				1781	0	1571
Q Serve(g_s), s	10.1	53.8	15.8	0.0	27.8	0.0				30.0	0.0	29.7
Cycle Q Clear(g_c), s	10.1	53.8	15.8	0.0	27.8	0.0				30.0	0.0	29.7
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	482	2060	913	0	1999					1109	0	489
V/C Ratio(X)	0.78	0.98	0.48	0.00	0.82					1.29	0.00	0.99
Avail Cap(c_a), veh/h	1076	2060	913	0	2119					1109	0	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	19.8	11.8	0.0	26.3	0.0				33.2	0.0	33.1
Incr Delay (d2), s/veh	3.0	16.1	0.5	0.0	2.7	0.0				137.9	0.0	39.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	23.3	5.0	0.0	10.9	0.0				33.6	0.0	27.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	35.9	12.3	0.0	29.0	0.0				171.1	0.0	72.1
LnGrp LOS	D	D	B	A	C					F	A	E
Approach Vol, veh/h		2843			1641						1918	
Approach Delay, s/veh		33.2			29.0						146.0	
Approach LOS		C			C						F	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	61.3		35.1	18.1	43.1
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	55.8		32.0	12.1	29.8
Green Ext Time (p_c), s	0.0		0.0	1.4	8.0

Intersection Summary	
HCM 6th Ctrl Delay	65.9
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	789	738	30	712	978	51
Future Volume (veh/h)	789	738	30	712	978	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	797	722	30	719	988	51
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	503	456	36	1116	572	30
Arrive On Green	0.56	0.56	0.02	0.60	0.34	0.34
Sat Flow, veh/h	904	819	1781	1870	1682	87
Grp Volume(v), veh/h	0	1519	30	719	1040	0
Grp Sat Flow(s),veh/h/ln	0	1723	1781	1870	1771	0
Q Serve(g_s), s	0.0	83.5	2.5	37.8	51.0	0.0
Cycle Q Clear(g_c), s	0.0	83.5	2.5	37.8	51.0	0.0
Prop In Lane		0.48	1.00		0.95	0.05
Lane Grp Cap(c), veh/h	0	959	36	1116	602	0
V/C Ratio(X)	0.00	1.58	0.84	0.64	1.73	0.00
Avail Cap(c_a), veh/h	0	959	36	1116	602	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	33.3	73.3	19.8	49.5	0.0
Incr Delay (d2), s/veh	0.0	267.7	86.3	1.4	334.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	103.6	2.0	15.9	77.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	300.9	159.6	21.2	383.8	0.0
LnGrp LOS	A	F	F	C	F	A
Approach Vol, veh/h	1519			749	1040	
Approach Delay, s/veh	300.9			26.7	383.8	
Approach LOS	F			C	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		94.0		56.0	6.0	88.0
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		89.5		51.0	3.0	83.5
Max Q Clear Time (g_c+I1), s		39.8		53.0	4.5	85.5
Green Ext Time (p_c), s		6.7		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		264.9
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	1284	400	390	833	100	640	560	880	70	550	140
Future Volume (veh/h)	250	1284	400	390	833	100	640	560	880	70	550	140
Initial Q (Qb), veh	0	0	0	0	0	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	1459	0	443	947	0	727	636	0	80	625	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	1648		394	1307		584	1144		204	754	
Arrive On Green	0.17	0.32	0.00	0.11	0.26	0.00	0.17	0.32	0.00	0.06	0.21	0.00
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	284	1459	0	443	947	0	727	636	0	80	625	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	20.0	34.5	0.0	14.5	21.6	0.0	21.5	18.8	0.0	2.8	21.4	0.0
Cycle Q Clear(g_c), s	20.0	34.5	0.0	14.5	21.6	0.0	21.5	18.8	0.0	2.8	21.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	308	1648		394	1307		584	1144		204	754	
V/C Ratio(X)	0.92	0.89		1.13	0.72		1.25	0.56		0.39	0.83	
Avail Cap(c_a), veh/h	315	1701		394	1340		584	1588		217	1211	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.8	40.9	0.0	56.4	43.3	0.0	52.9	35.6	0.0	57.7	47.9	0.0
Incr Delay (d2), s/veh	30.5	6.1	0.0	84.1	2.1	0.0	124.5	0.4	0.0	1.2	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	14.5	0.0	10.8	9.1	0.0	19.1	7.9	0.0	1.2	9.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.3	46.9	0.0	140.5	45.4	0.0	177.4	36.1	0.0	58.9	50.6	0.0
LnGrp LOS	F	D		F	D		F	D		E	D	
Approach Vol, veh/h		1743			1390			1363			705	
Approach Delay, s/veh		52.7			75.7			111.4			51.6	
Approach LOS		D			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.5	38.7	27.0	33.1	20.0	47.2	13.0	47.1
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	22.5	33.4	21.5	43.4	14.5	42.4	8.0	56.9
Max Q Clear Time (g_c+I1), s	22.0	23.6	23.5	23.4	16.5	36.5	4.8	20.8
Green Ext Time (p_c), s	0.0	5.2	0.0	3.6	0.0	4.6	0.0	4.2

Intersection Summary	
HCM 6th Ctrl Delay	74.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	775	20	755	140	50	270	500	1050	50	110	630	600
Future Volume (veh/h)	775	20	755	140	50	270	500	1050	50	110	630	600
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	842	22	742	187	54	271	543	1400	16	147	840	273
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	908	790	670	210	53	266	574	1441	427	229	882	704
Arrive On Green	0.26	0.42	0.42	0.06	0.21	0.21	0.11	0.28	0.28	0.07	0.25	0.25
Sat Flow, veh/h	3510	1900	1610	3456	258	1294	5103	5106	1515	3456	3554	2834
Grp Volume(v), veh/h	842	22	742	187	0	325	543	1400	16	147	840	273
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1551	1701	1702	1515	1728	1777	1417
Q Serve(g_s), s	28.1	0.8	49.9	6.4	0.0	24.6	12.7	32.5	0.9	5.0	27.9	9.6
Cycle Q Clear(g_c), s	28.1	0.8	49.9	6.4	0.0	24.6	12.7	32.5	0.9	5.0	27.9	9.6
Prop In Lane	1.00		1.00	1.00		0.83	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	908	790	670	210	0	319	574	1441	427	229	882	704
V/C Ratio(X)	0.93	0.03	1.11	0.89	0.00	1.02	0.95	0.97	0.04	0.64	0.95	0.39
Avail Cap(c_a), veh/h	936	790	670	210	0	319	574	1441	427	230	882	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	20.7	35.1	55.9	0.0	47.7	52.9	42.6	31.2	54.6	44.4	37.5
Incr Delay (d2), s/veh	14.9	0.0	68.3	33.9	0.0	55.6	24.8	17.3	0.0	4.6	19.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	0.4	32.0	3.8	0.0	14.5	6.5	15.3	0.3	2.2	14.1	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.3	20.7	103.4	89.8	0.0	103.3	77.7	59.9	31.3	59.2	63.8	37.6
LnGrp LOS	E	C	F	F	A	F	E	E	C	E	E	D
Approach Vol, veh/h		1606			512			1959			1260	
Approach Delay, s/veh		78.6			98.4			64.6			57.6	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	35.8	11.8	54.4	13.9	39.9	37.1	29.1
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	13.5	29.8	7.3	49.9	8.0	33.8	32.0	23.7
Max Q Clear Time (g_c+I1), s	14.7	29.9	8.4	51.9	7.0	34.5	30.1	26.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	70.4
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	706	363	51	1412	1333	227
Future Volume (veh/h)	706	363	51	1412	1333	227
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	767	311	55	1535	1449	243
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	522	465	76	1213	897	150
Arrive On Green	0.29	0.29	0.04	0.64	0.57	0.57
Sat Flow, veh/h	1810	1610	1810	1900	1586	266
Grp Volume(v), veh/h	767	311	55	1535	0	1692
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1852
Q Serve(g_s), s	43.3	25.5	4.5	95.8	0.0	84.8
Cycle Q Clear(g_c), s	43.3	25.5	4.5	95.8	0.0	84.8
Prop In Lane	1.00	1.00	1.00			0.14
Lane Grp Cap(c), veh/h	522	465	76	1213	0	1047
V/C Ratio(X)	1.47	0.67	0.72	1.26	0.00	1.62
Avail Cap(c_a), veh/h	522	465	84	1213	0	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.3	47.0	71.0	27.1	0.0	32.6
Incr Delay (d2), s/veh	221.1	3.7	22.0	125.9	0.0	281.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	51.7	22.6	2.5	80.3	0.0	116.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	274.4	50.7	93.0	153.0	0.0	314.1
LnGrp LOS	F	D	F	F	A	F
Approach Vol, veh/h	1078			1590	1692	
Approach Delay, s/veh	209.9			151.0	314.1	
Approach LOS	F			F	F	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	102.0		48.0	11.0	91.0
Change Period (Y+Rc), s	6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	95.8		* 43	* 7	84.1
Max Q Clear Time (g_c+I1), s	97.8		45.3	6.5	86.8
Green Ext Time (p_c), s	0.0		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay	228.9	
HCM 6th LOS	F	

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)	0	0	0	40	0	352	0	1263	42	342	1137	0
Future Volume (veh/h)	0	0	0	40	0	352	0	1263	42	342	1137	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	48	0	325	0	1504	49	407	1354	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	115	0	488	79	996	32	435	1387	0
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.55	0.55	0.24	0.74	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1801	59	1781	1870	0
Grp Volume(v), veh/h	0	0	0	48	0	325	0	0	1553	407	1354	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1860	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	3.1	0.0	7.8	0.0	0.0	67.8	27.5	83.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.1	0.0	7.8	0.0	0.0	67.8	27.5	83.2	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	115	0	488	79	0	1028	435	1387	0
V/C Ratio(X)	0.00	0.00	0.00	0.42	0.00	0.67	0.00	0.00	1.51	0.94	0.98	0.00
Avail Cap(c_a), veh/h	0	121	0	115	0	488	122	0	1028	484	1415	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	55.2	0.0	37.0	0.0	0.0	27.4	45.4	14.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.4	0.0	3.4	0.0	0.0	234.8	24.5	18.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.5	0.0	8.8	0.0	0.0	93.4	14.5	31.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	57.6	0.0	40.4	0.0	0.0	262.2	70.0	33.2	0.0
LnGrp LOS	A	A	A	E	A	D	A	A	F	E	C	A
Approach Vol, veh/h		0			373			1553			1761	
Approach Delay, s/veh		0.0			42.6			262.2			41.7	
Approach LOS					D			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.6	74.0		0.0	11.5	97.1		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 33	67.8		7.8	8.3	* 93		7.8				
Max Q Clear Time (g_c+I1), s	29.5	69.8		0.0	0.0	85.2		9.8				
Green Ext Time (p_c), s	0.5	0.0		0.0	0.0	5.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		134.7
HCM 6th LOS		F

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)	746	1011	552	353	858	444	243	859	212	567	1426	142
Future Volume (veh/h)	746	1011	552	353	858	444	243	859	212	567	1426	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	769	1042	0	364	885	238	251	886	129	585	1470	87
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	590	1419		423	1173	357	309	990	434	590	1279	562
Arrive On Green	0.17	0.28	0.00	0.12	0.23	0.23	0.09	0.28	0.28	0.17	0.36	0.36
Sat Flow, veh/h	3456	5106	1585	3456	5106	1555	3456	3554	1557	3456	3554	1561
Grp Volume(v), veh/h	769	1042	0	364	885	238	251	886	129	585	1470	87
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1555	1728	1777	1557	1728	1777	1561
Q Serve(g_s), s	25.0	27.1	0.0	15.1	23.6	20.4	10.4	35.1	9.5	24.7	52.7	5.5
Cycle Q Clear(g_c), s	25.0	27.1	0.0	15.1	23.6	20.4	10.4	35.1	9.5	24.7	52.7	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	590	1419		423	1173	357	309	990	434	590	1279	562
V/C Ratio(X)	1.30	0.73		0.86	0.75	0.67	0.81	0.90	0.30	0.99	1.15	0.15
Avail Cap(c_a), veh/h	590	1569		590	1569	478	590	1092	479	590	1279	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.7	47.9	0.0	63.0	52.5	51.3	65.5	50.8	41.5	60.6	46.9	31.8
Incr Delay (d2), s/veh	148.5	1.6	0.0	9.1	1.5	2.1	5.2	9.2	0.4	34.8	76.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.9	11.5	0.0	7.2	10.2	8.1	4.7	16.5	3.7	13.6	36.3	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	209.2	49.6	0.0	72.1	54.0	53.4	70.6	59.9	41.9	95.4	123.5	31.9
LnGrp LOS	F	D		E	D	D	E	E	D	F	F	C
Approach Vol, veh/h		1811			1487			1266			2142	
Approach Delay, s/veh		117.4			58.3			60.2			112.1	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.9	46.7	30.0	46.8	30.0	39.6	18.1	58.7
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	17.1	29.1	26.7	37.1	27.0	25.6	12.4	54.7
Green Ext Time (p_c), s	0.8	6.1	0.0	3.7	0.0	6.8	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	91.8
HCM 6th LOS	F

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	765	816	683	734	969	622
Future Volume (veh/h)	765	816	683	734	969	622
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	797	359	711	368	1009	648
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	481	428	388	320	586	1113
Arrive On Green	0.27	0.27	0.21	0.21	0.33	0.60
Sat Flow, veh/h	1781	1585	1870	1543	1781	1870
Grp Volume(v), veh/h	797	359	711	368	1009	648
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1543	1781	1870
Q Serve(g_s), s	21.6	17.1	16.6	16.6	26.3	17.2
Cycle Q Clear(g_c), s	21.6	17.1	16.6	16.6	26.3	17.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	481	428	388	320	586	1113
V/C Ratio(X)	1.66	0.84	1.83	1.15	1.72	0.58
Avail Cap(c_a), veh/h	481	428	388	320	586	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	27.6	31.7	31.7	26.8	10.0
Incr Delay (d2), s/veh	304.9	14.0	384.3	97.1	332.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	49.2	7.6	48.3	14.3	64.0	5.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	334.1	41.5	416.0	128.8	359.4	10.9
LnGrp LOS	F	D	F	F	F	B
Approach Vol, veh/h	1156		1079			1657
Approach Delay, s/veh	243.2		318.1			223.1
Approach LOS	F		F			F

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	31.0	22.0			53.0	27.0
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 26	16.6			47.6	21.6
Max Q Clear Time (g_c+I1), s	28.3	18.6			19.2	23.6
Green Ext Time (p_c), s	0.0	0.0			5.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	255.4
HCM 6th LOS	F

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)	40	737	61	61	163	61	42	84	42	526	313	63
Future Volume (veh/h)	40	737	61	61	163	61	42	84	42	526	313	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	801	59	66	177	54	46	91	30	488	457	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	951	70	113	423	129	72	170	56	538	622	88
Arrive On Green	0.04	0.28	0.28	0.06	0.30	0.30	0.04	0.12	0.12	0.30	0.38	0.38
Sat Flow, veh/h	1810	3409	251	1810	1397	426	1810	1368	451	1810	1627	231
Grp Volume(v), veh/h	43	424	436	66	0	231	46	0	121	488	0	522
Grp Sat Flow(s),veh/h/ln	1810	1805	1855	1810	0	1823	1810	0	1819	1810	0	1858
Q Serve(g_s), s	1.9	17.8	17.8	2.8	0.0	8.1	2.0	0.0	5.0	20.8	0.0	19.4
Cycle Q Clear(g_c), s	1.9	17.8	17.8	2.8	0.0	8.1	2.0	0.0	5.0	20.8	0.0	19.4
Prop In Lane	1.00		0.14	1.00		0.23	1.00		0.25	1.00		0.12
Lane Grp Cap(c), veh/h	70	504	518	113	0	552	72	0	227	538	0	710
V/C Ratio(X)	0.62	0.84	0.84	0.59	0.00	0.42	0.64	0.00	0.53	0.91	0.00	0.74
Avail Cap(c_a), veh/h	135	573	589	113	0	556	147	0	227	687	0	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.0	27.3	27.3	36.6	0.0	22.3	38.0	0.0	33.0	27.1	0.0	21.3
Incr Delay (d2), s/veh	8.6	9.9	9.7	7.6	0.0	0.5	8.9	0.0	2.4	13.4	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.7	8.9	1.5	0.0	3.4	1.1	0.0	2.3	10.5	0.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	37.2	37.0	44.2	0.0	22.8	46.9	0.0	35.4	40.5	0.0	24.5
LnGrp LOS	D	D	D	D	A	C	D	A	D	D	A	C
Approach Vol, veh/h		903			297			167			1010	
Approach Delay, s/veh		37.5			27.6			38.6			32.3	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	27.1	28.4	15.8	7.1	29.0	7.7	36.5
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	5.0	* 26	30.5	10.0	6.0	* 25	6.5	34.0
Max Q Clear Time (g_c+I1), s	4.9	19.8	22.8	7.0	3.9	10.1	4.0	21.4
Green Ext Time (p_c), s	0.0	2.6	1.1	0.1	0.0	1.1	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	34.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	540	890	360	50	480	340	460	650	310	290	1010	170
Future Volume (veh/h)	540	890	360	50	480	340	460	650	310	290	1010	170
Initial Q (Qb), veh	0	0	0	0	0	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	1900	1870	1900	1900	1900	1870	1870	1900	1900	1870	1870
Adj Flow Rate, veh/h	587	967	163	54	522	127	500	707	190	315	1098	69
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	0	2	0	0	0	2	2	0	0	2	2
Cap, veh/h	550	1337	587	70	475	403	456	856	388	337	1050	468
Arrive On Green	0.16	0.37	0.37	0.04	0.25	0.25	0.13	0.24	0.24	0.19	0.30	0.30
Sat Flow, veh/h	3456	3610	1585	1810	1900	1610	3456	3554	1610	1810	3554	1585
Grp Volume(v), veh/h	587	967	163	54	522	127	500	707	190	315	1098	69
Grp Sat Flow(s),veh/h/ln	1728	1805	1585	1810	1900	1610	1728	1777	1610	1810	1777	1585
Q Serve(g_s), s	17.5	25.3	7.9	3.3	27.5	7.1	14.5	20.7	11.2	18.9	32.5	3.5
Cycle Q Clear(g_c), s	17.5	25.3	7.9	3.3	27.5	7.1	14.5	20.7	11.2	18.9	32.5	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	550	1337	587	70	475	403	456	856	388	337	1050	468
V/C Ratio(X)	1.07	0.72	0.28	0.77	1.10	0.32	1.10	0.83	0.49	0.93	1.05	0.15
Avail Cap(c_a), veh/h	550	1337	587	90	475	403	456	856	388	337	1050	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	29.8	24.3	52.4	41.3	33.6	47.8	39.6	35.9	44.1	38.8	28.5
Incr Delay (d2), s/veh	57.7	2.0	0.3	25.8	70.9	0.4	71.3	6.7	1.0	32.4	40.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	11.2	3.0	2.0	22.0	2.8	10.5	9.3	4.5	11.1	19.1	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.0	31.7	24.5	78.2	112.2	34.0	119.1	46.2	36.9	76.5	79.3	28.7
LnGrp LOS	F	C	C	E	F	C	F	D	D	E	F	C
Approach Vol, veh/h		1717			703			1397			1482	
Approach Delay, s/veh		55.7			95.5			71.0			76.3	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	37.0	8.7	45.3	25.0	31.0	22.0	32.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	14.5	32.5	5.5	39.5	20.5	26.5	17.5	27.5
Max Q Clear Time (g_c+I1), s	16.5	34.5	5.3	27.3	20.9	22.7	19.5	29.5
Green Ext Time (p_c), s	0.0	0.0	0.0	5.8	0.0	1.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	70.8
HCM 6th LOS	E

Intersection	
Intersection Delay, s/veh	1487.1
Intersection LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1421	1275	540	1092	638	293
Future Vol, veh/h	1421	1275	540	1092	638	293
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1545	1386	587	1187	693	318
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	2041.6	1159.2	456.1
HCM LOS	F	F	F

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	69%	0%	33%
Vol Thru, %	0%	53%	67%
Vol Right, %	31%	47%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	931	2696	1632
LT Vol	638	0	540
Through Vol	0	1421	1092
RT Vol	293	1275	0
Lane Flow Rate	1012	2930	1774
Geometry Grp	1	1	1
Degree of Util (X)	1.952	5.465	3.48
Departure Headway (Hd)	8.306	13.235	16.93
Convergence, Y/N	Yes	Yes	Yes
Cap	445	322	231
Service Time	6.306	11.235	14.93
HCM Lane V/C Ratio	2.274	9.099	7.68
HCM Control Delay	456.1	2041.6	1159.2
HCM Lane LOS	F	F	F
HCM 95th-tile Q	57.1	155.4	69.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1470	319	836	0	1708	0	0	1237	524
Future Volume (veh/h)	0	0	0	1470	319	836	0	1708	0	0	1237	524
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	0	0	1870	1870
Adj Flow Rate, veh/h				1372	529	846	0	1761	0	0	1275	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				2	2	2	0	2	0	0	2	2
Cap, veh/h				1303	684	1159	0	1900	0	0	2731	
Arrive On Green				0.37	0.37	0.37	0.00	0.53	0.00	0.00	0.53	0.00
Sat Flow, veh/h				3563	1870	3170	0	3741	0	0	5274	1585
Grp Volume(v), veh/h				1372	529	846	0	1761	0	0	1275	0
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	0	1777	0	0	1702	1585
Q Serve(g_s), s				42.2	28.9	26.7	0.0	52.8	0.0	0.0	17.9	0.0
Cycle Q Clear(g_c), s				42.2	28.9	26.7	0.0	52.8	0.0	0.0	17.9	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1303	684	1159	0	1900	0	0	2731	
V/C Ratio(X)				1.05	0.77	0.73	0.00	0.93	0.00	0.00	0.47	
Avail Cap(c_a), veh/h				1303	684	1159	0	2072	0	0	2977	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				36.6	32.4	31.7	0.0	24.8	0.0	0.0	16.6	0.0
Incr Delay (d2), s/veh				40.3	5.2	2.2	0.0	7.1	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	0.0
%ile BackOfQ(50%),veh/ln				25.2	13.9	10.4	0.0	21.7	0.0	0.0	6.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				76.9	37.6	33.9	0.0	31.9	0.0	0.0	16.7	0.0
LnGrp LOS				F	D	C	A	C	A	A	B	
Approach Vol, veh/h					2747			1761			1275	A
Approach Delay, s/veh					56.1			31.9			16.7	
Approach LOS					E			C			B	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	67.4		67.4		48.0			
Change Period (Y+Rc), s	5.7		5.7		5.8			
Max Green Setting (Gmax), s	67.3		67.3		42.2			
Max Q Clear Time (g_c+I1), s	54.8		19.9		44.2			
Green Ext Time (p_c), s	7.0		6.6		0.0			

Intersection Summary		
HCM 6th Ctrl Delay	40.0	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	0	420	0	0	0	0	1947	1305	0	2229	0
Future Volume (veh/h)	95	0	420	0	0	0	0	1947	1305	0	2229	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	65	0	408				0	2007	915	0	2298	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	292	0	519				0	2249	1766	0	3232	0
Arrive On Green	0.16	0.00	0.16				0.00	0.63	0.63	0.00	0.63	0.00
Sat Flow, veh/h	1781	0	3170				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	65	0	408				0	2007	915	0	2298	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	1.7	0.0	6.6				0.0	25.3	9.5	0.0	16.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	6.6				0.0	25.3	9.5	0.0	16.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	292	0	519				0	2249	1766	0	3232	0
V/C Ratio(X)	0.22	0.00	0.79				0.00	0.89	0.52	0.00	0.71	0.00
Avail Cap(c_a), veh/h	1140	0	2029				0	2342	1838	0	3365	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	19.3	0.0	21.3				0.0	8.2	5.3	0.0	6.5	0.0
Incr Delay (d2), s/veh	0.1	0.0	1.0				0.0	4.5	0.1	0.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.3				0.0	5.6	1.3	0.0	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	0.0	22.3				0.0	12.7	5.4	0.0	7.1	0.0
LnGrp LOS	B	A	C				A	B	A	A	A	A
Approach Vol, veh/h		473						2922			2298	
Approach Delay, s/veh		21.9						10.4			7.1	
Approach LOS		C						B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	39.3	13.8	39.3
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	27.3	8.6	18.0
Green Ext Time (p_c), s	6.3	0.1	10.9

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	15	29	147	53	794	46	996	122	766	1253	58
Future Volume (veh/h)	15	15	29	147	53	794	46	996	122	766	1253	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	16	2	158	57	130	49	1071	46	824	1347	39
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	115	97	183	275	409	63	1233	549	610	2324	1036
Arrive On Green	0.02	0.06	0.06	0.10	0.15	0.15	0.04	0.35	0.35	0.34	0.65	0.65
Sat Flow, veh/h	1781	1870	1585	1781	1870	2778	1781	3554	1582	1781	3554	1585
Grp Volume(v), veh/h	16	16	2	158	57	130	49	1071	46	824	1347	39
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1389	1781	1777	1582	1781	1777	1585
Q Serve(g_s), s	1.1	1.0	0.1	11.0	3.4	5.3	3.4	35.4	2.5	43.0	26.5	1.1
Cycle Q Clear(g_c), s	1.1	1.0	0.1	11.0	3.4	5.3	3.4	35.4	2.5	43.0	26.5	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	115	97	183	275	409	63	1233	549	610	2324	1036
V/C Ratio(X)	0.53	0.14	0.02	0.86	0.21	0.32	0.77	0.87	0.08	1.35	0.58	0.04
Avail Cap(c_a), veh/h	71	402	341	184	521	774	128	1233	549	610	2324	1036
HCM Platoon Ratio	1.00	1.00	1.00	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	61.2	55.8	55.4	55.5	47.1	47.9	60.1	38.3	27.6	41.3	12.1	7.7
Incr Delay (d2), s/veh	13.5	0.5	0.1	31.6	0.4	0.4	18.0	8.4	0.3	168.7	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.1	6.4	1.6	1.8	1.8	16.2	1.0	46.6	9.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.7	56.4	55.5	87.1	47.5	48.4	78.0	46.7	27.9	210.0	13.2	7.8
LnGrp LOS	E	E	E	F	D	D	E	D	C	F	B	A
Approach Vol, veh/h		34			345			1166			2210	
Approach Delay, s/veh		64.9			66.0			47.3			86.5	
Approach LOS		E			E			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	87.9	16.9	12.3	47.0	49.4	6.1	23.1
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	9.0	77.6	13.0	27.0	43.0	43.6	5.0	35.0
Max Q Clear Time (g_c+I1), s	5.4	28.5	13.0	3.0	45.0	37.4	3.1	7.3
Green Ext Time (p_c), s	0.0	13.1	0.0	0.0	0.0	3.5	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	72.2
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	176	94	891	98	313	92	798	1013	316	1066	48
Future Volume (veh/h)	47	176	94	891	98	313	92	798	1013	316	1066	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	181	0	919	101	144	95	823	614	326	1099	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	312		949	563	469	127	1143	509	332	1231	534
Arrive On Green	0.06	0.09	0.00	0.27	0.30	0.30	0.07	0.32	0.32	0.10	0.35	0.35
Sat Flow, veh/h	1781	3647	0	3456	1870	1557	1781	3554	1583	3456	3554	1543
Grp Volume(v), veh/h	48	181	0	919	101	144	95	823	614	326	1099	16
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1557	1781	1777	1583	1728	1777	1543
Q Serve(g_s), s	3.5	6.7	0.0	35.9	5.4	9.7	7.1	27.9	43.9	12.9	39.9	0.9
Cycle Q Clear(g_c), s	3.5	6.7	0.0	35.9	5.4	9.7	7.1	27.9	43.9	12.9	39.9	0.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	109	312		949	563	469	127	1143	509	332	1231	534
V/C Ratio(X)	0.44	0.58		0.97	0.18	0.31	0.75	0.72	1.21	0.98	0.89	0.03
Avail Cap(c_a), veh/h	131	404		949	589	491	131	1143	509	332	1231	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.8	59.8	0.0	48.9	35.2	36.7	62.2	40.9	46.3	61.6	42.2	29.5
Incr Delay (d2), s/veh	3.9	2.4	0.0	21.9	0.2	0.5	22.0	2.2	110.2	44.7	8.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.1	0.0	18.0	2.5	3.7	4.0	12.2	32.4	7.6	18.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.7	62.3	0.0	70.8	35.4	37.2	84.2	43.1	156.5	106.3	51.0	29.5
LnGrp LOS	E	E		E	D	D	F	D	F	F	D	C
Approach Vol, veh/h		229	A		1164			1532			1441	
Approach Delay, s/veh		63.0			63.6			91.1			63.3	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.6	51.4	45.0	19.5	17.2	54.8	15.9	48.6
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	13.1	43.9	37.5	15.5	10.0	47.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	11.9	45.9	37.9	8.7	9.1	41.9	5.5	11.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	3.5	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	73.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	273	86	40	180	13	219	315	51	38	432	252
Future Volume (veh/h)	37	273	86	40	180	13	219	315	51	38	432	252
Initial Q (Qb), veh	0	0	0	0	0	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	300	16	44	198	2	241	346	26	42	475	75
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	574	256	82	583	259	310	1283	571	80	822	366
Arrive On Green	0.04	0.16	0.16	0.05	0.16	0.16	0.17	0.36	0.36	0.04	0.23	0.23
Sat Flow, veh/h	1781	3554	1582	1781	3554	1580	1781	3554	1583	1781	3554	1582
Grp Volume(v), veh/h	41	300	16	44	198	2	241	346	26	42	475	75
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1781	1777	1580	1781	1777	1583	1781	1777	1582
Q Serve(g_s), s	1.1	3.7	0.4	1.2	2.4	0.1	6.2	3.3	0.5	1.1	5.7	1.8
Cycle Q Clear(g_c), s	1.1	3.7	0.4	1.2	2.4	0.1	6.2	3.3	0.5	1.1	5.7	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	574	256	82	583	259	310	1283	571	80	822	366
V/C Ratio(X)	0.52	0.52	0.06	0.53	0.34	0.01	0.78	0.27	0.05	0.53	0.58	0.20
Avail Cap(c_a), veh/h	744	2970	1322	744	2970	1321	744	2970	1323	744	2970	1322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	18.4	17.0	22.3	17.7	16.7	18.9	10.8	9.9	22.4	16.3	14.8
Incr Delay (d2), s/veh	5.3	0.7	0.1	5.3	0.3	0.0	4.2	0.1	0.0	5.3	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.3	0.1	0.5	0.8	0.0	2.5	1.0	0.1	0.5	1.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	19.1	17.1	27.6	18.1	16.8	23.0	10.9	10.0	27.7	17.0	15.1
LnGrp LOS	C	B	B	C	B	B	C	B	A	C	B	B
Approach Vol, veh/h		357			244			613			592	
Approach Delay, s/veh		20.0			19.8			15.7			17.5	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	12.4	6.1	23.1	6.1	12.5	12.3	16.9
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	3.2	5.7	3.1	5.3	3.1	4.4	8.2	7.7
Green Ext Time (p_c), s	0.1	1.9	0.1	2.3	0.1	1.2	0.5	3.3

Intersection Summary	
HCM 6th Ctrl Delay	17.7
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)	318	883	121	156	700	471	261	460	467	126	523	333
Future Volume (veh/h)	318	883	121	156	700	471	261	460	467	126	523	333
Initial Q (Qb), veh	0	0	0	0	0	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	342	949	64	168	753	337	281	495	478	135	562	153
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	272	722	612	142	586	496	236	297	287	106	499	423
Arrive On Green	0.15	0.39	0.39	0.08	0.31	0.31	0.13	0.34	0.34	0.06	0.27	0.27
Sat Flow, veh/h	1781	1870	1585	1781	1870	1583	1781	874	844	1781	1870	1585
Grp Volume(v), veh/h	342	949	64	168	753	337	281	0	973	135	562	153
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1583	1781	0	1718	1781	1870	1585
Q Serve(g_s), s	23.0	58.2	3.9	12.0	47.2	28.0	20.0	0.0	51.2	9.0	40.2	11.8
Cycle Q Clear(g_c), s	23.0	58.2	3.9	12.0	47.2	28.0	20.0	0.0	51.2	9.0	40.2	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	272	722	612	142	586	496	236	0	584	106	499	423
V/C Ratio(X)	1.26	1.31	0.10	1.18	1.29	0.68	1.19	0.00	1.67	1.27	1.13	0.36
Avail Cap(c_a), veh/h	272	722	612	142	586	496	236	0	584	106	499	423
HCM Platoon Ratio	1.00	1.00	1.00	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	63.8	46.2	29.6	69.3	51.7	45.2	65.4	0.0	49.8	70.8	55.3	44.8
Incr Delay (d2), s/veh	142.4	151.0	0.3	133.6	141.0	7.3	119.1	0.0	307.8	176.0	79.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.1	56.6	1.5	10.6	44.2	11.8	16.7	0.0	71.2	9.2	29.5	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	206.3	197.2	29.9	203.0	192.8	52.5	184.4	0.0	357.6	246.8	135.1	45.6
LnGrp LOS	F	F	C	F	F	D	F	A	F	F	F	D
Approach Vol, veh/h		1355			1258			1254			850	
Approach Delay, s/veh		191.6			156.6			318.8			136.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	64.7	13.0	57.0	27.0	53.7	24.0	46.0
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	12.0	* 58	9.0	51.2	23.0	46.5	20.0	40.2
Max Q Clear Time (g_c+I1), s	14.0	60.2	11.0	53.2	25.0	49.2	22.0	42.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	206.2
HCM 6th LOS	F

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)	204	1314	204	0	879	362	0	0	0	639	33	739
Future Volume (veh/h)	204	1314	204	0	879	362	0	0	0	639	33	739
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	229	1476	166	0	988	0				744	0	521
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	347	1749	763	0	1687					1320	0	580
Arrive On Green	0.10	0.49	0.49	0.00	0.33	0.00				0.37	0.00	0.37
Sat Flow, veh/h	3456	3554	1551	0	5274	1585				3563	0	1565
Grp Volume(v), veh/h	229	1476	166	0	988	0				744	0	521
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	0	1702	1585				1781	0	1565
Q Serve(g_s), s	4.9	27.6	4.7	0.0	12.3	0.0				12.7	0.0	24.0
Cycle Q Clear(g_c), s	4.9	27.6	4.7	0.0	12.3	0.0				12.7	0.0	24.0
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	347	1749	763	0	1687					1320	0	580
V/C Ratio(X)	0.66	0.84	0.22	0.00	0.59					0.56	0.00	0.90
Avail Cap(c_a), veh/h	1357	1860	812	0	2673					1399	0	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	33.1	16.9	11.0	0.0	21.2	0.0				19.1	0.0	22.7
Incr Delay (d2), s/veh	2.4	3.7	0.2	0.0	0.4	0.0				0.5	0.0	15.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	10.3	1.4	0.0	4.5	0.0				4.9	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	20.6	11.2	0.0	21.7	0.0				19.7	0.0	38.5
LnGrp LOS	D	C	B	A	C					B	A	D
Approach Vol, veh/h		1871			988	A					1265	
Approach Delay, s/veh		21.6			21.7						27.5	
Approach LOS		C			C						C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	43.0	33.4	12.4	30.6
Change Period (Y+Rc), s	5.4	5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0	30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	29.6	26.0	6.9	14.3
Green Ext Time (p_c), s	8.0	2.3	0.8	9.1

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	248	853	40	445	482	103
Future Volume (veh/h)	248	853	40	445	482	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	285	856	46	511	554	110
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	204	612	53	1038	509	101
Arrive On Green	0.50	0.50	0.03	0.56	0.35	0.35
Sat Flow, veh/h	412	1236	1781	1870	1454	289
Grp Volume(v), veh/h	0	1141	46	511	665	0
Grp Sat Flow(s),veh/h/ln	0	1648	1781	1870	1745	0
Q Serve(g_s), s	0.0	49.5	2.6	16.7	35.0	0.0
Cycle Q Clear(g_c), s	0.0	49.5	2.6	16.7	35.0	0.0
Prop In Lane		0.75	1.00		0.83	0.17
Lane Grp Cap(c), veh/h	0	816	53	1038	611	0
V/C Ratio(X)	0.00	1.40	0.86	0.49	1.09	0.00
Avail Cap(c_a), veh/h	0	816	53	1038	611	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	25.3	48.3	13.6	32.5	0.0
Incr Delay (d2), s/veh	0.0	186.9	72.1	0.4	63.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	59.2	2.2	6.3	24.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	212.2	120.3	14.1	95.5	0.0
LnGrp LOS	A	F	F	B	F	A
Approach Vol, veh/h	1141			557	665	
Approach Delay, s/veh	212.2			22.8	95.5	
Approach LOS	F			C	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.0		40.0	6.0	54.0
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		55.5		35.0	3.0	49.5
Max Q Clear Time (g_c+I1), s		18.7		37.0	4.6	51.5
Green Ext Time (p_c), s		4.0		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	134.7
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	288	130	880	919	80	340	540	586	30	874	140
Future Volume (veh/h)	60	288	130	880	919	80	340	540	586	30	874	140
Initial Q (Qb), veh	0	0	0	0	0	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	75	360	0	1100	1149	0	425	675	0	38	1092	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	545		931	1652		403	1386		163	1139	
Arrive On Green	0.04	0.11	0.00	0.27	0.32	0.00	0.12	0.39	0.00	0.05	0.32	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	75	360	0	1100	1149	0	425	675	0	38	1092	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.6	8.4	0.0	33.5	24.4	0.0	14.5	17.8	0.0	1.3	37.5	0.0
Cycle Q Clear(g_c), s	2.6	8.4	0.0	33.5	24.4	0.0	14.5	17.8	0.0	1.3	37.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	545		931	1652		403	1386		163	1139	
V/C Ratio(X)	0.49	0.66		1.18	0.70		1.05	0.49		0.23	0.96	
Avail Cap(c_a), veh/h	409	1388		931	2120		403	1386		222	1144	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.0	53.3	0.0	45.4	36.7	0.0	54.9	28.5	0.0	57.1	41.4	0.0
Incr Delay (d2), s/veh	0.9	2.0	0.0	92.6	0.9	0.0	59.8	0.3	0.0	0.7	17.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.6	0.0	25.8	9.9	0.0	9.4	7.3	0.0	0.6	18.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	55.3	0.0	138.0	37.6	0.0	114.7	28.8	0.0	57.8	59.0	0.0
LnGrp LOS	E	E		F	D		F	C		E	E	
Approach Vol, veh/h		435			2249			1100			1130	
Approach Delay, s/veh		55.9			86.7			62.0			59.0	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	46.3	20.0	45.9	39.0	19.4	11.3	54.6
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	14.7	51.6	14.5	40.0	33.5	33.8	8.0	46.5
Max Q Clear Time (g_c+I1), s	4.6	26.4	16.5	39.5	35.5	10.4	3.3	19.8
Green Ext Time (p_c), s	0.1	11.3	0.0	0.4	0.0	2.9	0.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay	72.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	20	210	110	20	270	330	926	190	450	964	470
Future Volume (veh/h)	270	20	210	110	20	270	330	926	190	450	964	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.94	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	293	22	76	147	22	53	359	1235	74	600	1285	328
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	450	324	275	229	42	102	508	1519	449	678	1468	1171
Arrive On Green	0.13	0.17	0.17	0.07	0.09	0.09	0.10	0.30	0.30	0.20	0.41	0.41
Sat Flow, veh/h	3510	1900	1610	3456	474	1141	5103	5106	1510	3456	3554	2834
Grp Volume(v), veh/h	293	22	76	147	0	75	359	1235	74	600	1285	328
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1615	1701	1702	1510	1728	1777	1417
Q Serve(g_s), s	6.2	0.8	3.2	3.2	0.0	3.5	5.3	17.5	2.8	13.2	25.9	6.0
Cycle Q Clear(g_c), s	6.2	0.8	3.2	3.2	0.0	3.5	5.3	17.5	2.8	13.2	25.9	6.0
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	450	324	275	229	0	145	508	1519	449	678	1468	1171
V/C Ratio(X)	0.65	0.07	0.28	0.64	0.00	0.52	0.71	0.81	0.16	0.89	0.88	0.28
Avail Cap(c_a), veh/h	1441	1017	862	435	0	373	714	1802	533	887	1737	1385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	27.1	28.1	35.5	0.0	33.9	34.0	25.4	20.2	30.5	21.0	15.2
Incr Delay (d2), s/veh	2.3	0.1	0.5	3.0	0.0	2.9	1.9	2.1	0.1	7.3	4.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.3	1.3	1.4	0.0	1.5	2.1	6.5	1.0	5.6	9.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	27.2	28.7	38.4	0.0	36.7	35.8	27.5	20.3	37.8	25.2	15.2
LnGrp LOS	C	C	C	D	A	D	D	C	C	D	C	B
Approach Vol, veh/h		391			222			1668			2213	
Approach Delay, s/veh		33.0			37.9			29.0			27.1	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	38.2	9.7	17.8	21.3	29.2	16.0	11.5
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	10.9	38.1	9.8	41.7	20.0	27.5	32.0	18.0
Max Q Clear Time (g_c+I1), s	7.3	27.9	5.2	5.2	15.2	19.5	8.2	5.5
Green Ext Time (p_c), s	0.5	2.8	0.2	0.3	0.1	3.5	1.6	0.2

Intersection Summary	
HCM 6th Ctrl Delay	28.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	237	327	482	1204	548	537
Future Volume (veh/h)	237	327	482	1204	548	537
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	258	129	524	1309	596	560
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	229	204	390	1521	499	469
Arrive On Green	0.13	0.13	0.22	0.80	0.55	0.55
Sat Flow, veh/h	1810	1610	1810	1900	901	847
Grp Volume(v), veh/h	258	129	524	1309	0	1156
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1748
Q Serve(g_s), s	19.0	11.4	32.3	66.2	0.0	83.1
Cycle Q Clear(g_c), s	19.0	11.4	32.3	66.2	0.0	83.1
Prop In Lane	1.00	1.00	1.00			0.48
Lane Grp Cap(c), veh/h	229	204	390	1521	0	968
V/C Ratio(X)	1.13	0.63	1.34	0.86	0.00	1.19
Avail Cap(c_a), veh/h	229	204	390	1521	0	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.5	62.2	58.8	9.6	0.0	33.5
Incr Delay (d2), s/veh	97.4	6.2	171.5	5.4	0.0	97.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.8	10.4	32.9	21.5	0.0	58.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	162.9	68.4	230.3	15.0	0.0	131.0
LnGrp LOS	F	E	F	B	A	F
Approach Vol, veh/h	387			1833	1156	
Approach Delay, s/veh	131.4			76.6	131.0	
Approach LOS	F			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		126.3		23.7	37.0	89.3
Change Period (Y+Rc), s		6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s		120.1		* 19	* 32	83.1
Max Q Clear Time (g_c+I1), s		68.2		21.0	34.3	85.1
Green Ext Time (p_c), s		27.8		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		101.5
HCM 6th LOS		F

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	42	0	530	0	903	55	272	680	0
Future Volume (veh/h)	0	0	0	42	0	530	0	903	55	272	680	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	52	0	483	0	1129	67	340	850	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	186	0	482	282	823	49	359	929	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.47	0.47	0.20	0.50	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1748	104	1781	1870	0
Grp Volume(v), veh/h	0	0	0	52	0	483	0	0	1196	340	850	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1852	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	7.8	0.0	0.0	35.8	14.3	31.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.0	0.0	7.8	0.0	0.0	35.8	14.3	31.9	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	186	0	482	282	0	872	359	929	0
V/C Ratio(X)	0.00	0.00	0.00	0.28	0.00	1.00	0.00	0.00	1.37	0.95	0.92	0.00
Avail Cap(c_a), veh/h	0	195	0	186	0	482	282	0	872	359	1078	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	31.5	0.0	26.4	0.0	0.0	20.1	30.0	17.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	41.6	0.0	0.0	174.3	34.2	10.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.9	0.0	13.6	0.0	0.0	54.4	8.9	13.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.3	0.0	68.1	0.0	0.0	194.4	64.2	28.5	0.0
LnGrp LOS	A	A	A	C	A	F	A	A	F	E	C	A
Approach Vol, veh/h		0			535			1196			1190	
Approach Delay, s/veh		0.0			64.6			194.4			38.7	
Approach LOS					E			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	42.0		0.0	18.1	43.9		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 15	35.8		7.8	7.3	* 44		7.8				
Max Q Clear Time (g_c+I1), s	16.3	37.8		0.0	0.0	33.9		9.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		107.2
HCM 6th LOS		F

Notes

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



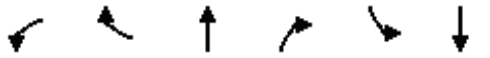
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	566	207	246	984	195	316	1029	143	261	574	500
Future Volume (veh/h)	311	566	207	246	984	195	316	1029	143	261	574	500
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	342	622	0	270	1081	118	347	1131	84	287	631	331
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1561		347	1451	443	426	1479	451	389	992	436
Arrive On Green	0.12	0.31	0.00	0.10	0.28	0.28	0.12	0.29	0.29	0.11	0.28	0.28
Sat Flow, veh/h	3456	5106	1585	3456	5106	1558	3456	5106	1558	3456	3554	1563
Grp Volume(v), veh/h	342	622	0	270	1081	118	347	1131	84	287	631	331
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1558	1728	1702	1558	1728	1777	1563
Q Serve(g_s), s	11.1	11.1	0.0	8.8	22.1	6.7	11.2	23.2	4.6	9.2	17.9	22.2
Cycle Q Clear(g_c), s	11.1	11.1	0.0	8.8	22.1	6.7	11.2	23.2	4.6	9.2	17.9	22.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1561		347	1451	443	426	1479	451	389	992	436
V/C Ratio(X)	0.81	0.40		0.78	0.74	0.27	0.81	0.76	0.19	0.74	0.64	0.76
Avail Cap(c_a), veh/h	753	2001		753	2001	611	753	2001	611	753	1393	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	31.5	0.0	50.4	37.3	31.8	49.0	37.2	30.6	49.3	36.3	37.8
Incr Delay (d2), s/veh	3.8	0.2	0.0	3.8	1.0	0.3	3.8	1.2	0.2	5.7	0.7	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	4.4	0.0	3.9	9.1	2.5	4.9	9.4	1.7	4.2	7.6	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	31.7	0.0	54.2	38.3	32.1	52.9	38.4	30.8	55.0	37.0	41.4
LnGrp LOS	D	C		D	D	C	D	D	C	E	D	D
Approach Vol, veh/h		964			1469			1562			1249	
Approach Delay, s/veh		39.2			40.7			41.2			42.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	41.1	17.9	39.3	19.0	38.6	19.2	38.0
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	10.8	13.1	11.2	25.2	13.1	24.1	13.2	24.2
Green Ext Time (p_c), s	0.8	4.2	1.7	7.7	0.9	8.1	0.9	5.2

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	693	867	530	315	653	449
Future Volume (veh/h)	693	867	530	315	653	449
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	745	509	570	76	702	483
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	510	454	420	348	447	1024
Arrive On Green	0.29	0.29	0.22	0.22	0.25	0.55
Sat Flow, veh/h	1781	1585	1870	1551	1781	1870
Grp Volume(v), veh/h	745	509	570	76	702	483
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1551	1781	1870
Q Serve(g_s), s	18.6	18.6	14.6	2.6	16.3	10.2
Cycle Q Clear(g_c), s	18.6	18.6	14.6	2.6	16.3	10.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	510	454	420	348	447	1024
V/C Ratio(X)	1.46	1.12	1.36	0.22	1.57	0.47
Avail Cap(c_a), veh/h	510	454	420	348	447	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	23.2	25.2	20.5	24.4	9.0
Incr Delay (d2), s/veh	218.3	80.0	175.5	0.4	267.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	37.7	16.1	26.1	0.9	39.2	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	241.5	103.2	200.7	20.9	292.2	9.4
LnGrp LOS	F	F	F	C	F	A
Approach Vol, veh/h	1254		646			1185
Approach Delay, s/veh	185.4		179.5			176.9
Approach LOS	F		F			F

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	21.0	20.0			41.0	24.0
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 16	14.6			35.6	18.6
Max Q Clear Time (g_c+I1), s	18.3	16.6			12.2	20.6
Green Ext Time (p_c), s	0.0	0.0			3.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	180.9
HCM 6th LOS	F

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)	347	1046	87	51	1023	173	129	77	296	96	60	204
Future Volume (veh/h)	347	1046	87	51	1023	173	129	77	296	96	60	204
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	377	1137	90	55	1112	183	140	84	206	104	65	147
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	259	1844	146	85	713	117	168	87	213	129	81	183
Arrive On Green	0.14	0.54	0.54	0.05	0.45	0.45	0.09	0.18	0.18	0.07	0.16	0.16
Sat Flow, veh/h	1810	3389	268	1810	1591	262	1810	488	1197	1810	518	1171
Grp Volume(v), veh/h	377	605	622	55	0	1295	140	0	290	104	0	212
Grp Sat Flow(s),veh/h/ln	1810	1805	1852	1810	0	1853	1810	0	1685	1810	0	1689
Q Serve(g_s), s	17.0	27.4	27.4	3.6	0.0	53.3	9.0	0.0	20.3	6.7	0.0	14.4
Cycle Q Clear(g_c), s	17.0	27.4	27.4	3.6	0.0	53.3	9.0	0.0	20.3	6.7	0.0	14.4
Prop In Lane	1.00		0.14	1.00		0.14	1.00		0.71	1.00		0.69
Lane Grp Cap(c), veh/h	259	982	1007	85	0	830	168	0	300	129	0	264
V/C Ratio(X)	1.46	0.62	0.62	0.65	0.00	1.56	0.83	0.00	0.97	0.81	0.00	0.80
Avail Cap(c_a), veh/h	259	982	1007	137	0	830	234	0	300	144	0	264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.0	18.6	18.6	55.7	0.0	32.8	53.0	0.0	48.5	54.4	0.0	48.4
Incr Delay (d2), s/veh	226.3	1.2	1.1	8.0	0.0	257.9	16.1	0.0	42.6	25.4	0.0	16.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.9	11.4	11.7	1.8	0.0	82.6	4.9	0.0	12.1	4.0	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	277.3	19.8	19.8	63.8	0.0	290.8	69.2	0.0	91.2	79.8	0.0	64.6
LnGrp LOS	F	B	B	E	A	F	E	A	F	E	A	E
Approach Vol, veh/h		1604			1350			430			316	
Approach Delay, s/veh		80.3			281.5			84.0			69.6	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	69.4	13.0	27.0	21.0	58.0	15.6	24.4
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	5.6	* 61	9.5	21.2	17.0	* 53	15.4	15.3
Max Q Clear Time (g_c+I1), s	5.6	29.4	8.7	22.3	19.0	55.3	11.0	16.4
Green Ext Time (p_c), s	0.0	10.4	0.0	0.0	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	153.2
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	94	90	100	502	350	350	873	130	50	630	504
Future Volume (veh/h)	93	94	90	100	502	350	350	873	130	50	630	504
Initial Q (Qb), veh	0	0	0	0	0	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	1900	1870	1900	1900	1900	1870	1870	1900	1900	1870	1870
Adj Flow Rate, veh/h	101	102	24	109	546	171	380	949	50	54	685	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	0	2	0	0	0	2	2	0	0	2	2
Cap, veh/h	337	1063	467	141	523	443	473	1164	527	84	842	375
Arrive On Green	0.10	0.29	0.29	0.08	0.28	0.28	0.14	0.33	0.33	0.05	0.24	0.24
Sat Flow, veh/h	3456	3610	1585	1810	1900	1610	3456	3554	1610	1810	3554	1585
Grp Volume(v), veh/h	101	102	24	109	546	171	380	949	50	54	685	309
Grp Sat Flow(s),veh/h/ln	1728	1805	1585	1810	1900	1610	1728	1777	1610	1810	1777	1585
Q Serve(g_s), s	1.9	1.5	0.8	4.2	19.5	6.1	7.6	17.4	1.5	2.1	12.9	13.1
Cycle Q Clear(g_c), s	1.9	1.5	0.8	4.2	19.5	6.1	7.6	17.4	1.5	2.1	12.9	13.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	337	1063	467	141	523	443	473	1164	527	84	842	375
V/C Ratio(X)	0.30	0.10	0.05	0.77	1.04	0.39	0.80	0.82	0.09	0.65	0.81	0.82
Avail Cap(c_a), veh/h	414	1063	467	242	523	443	512	1178	534	140	927	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	18.2	17.9	32.1	25.7	20.8	29.7	21.9	16.5	33.2	25.6	25.6
Incr Delay (d2), s/veh	0.5	0.0	0.0	8.6	51.6	0.6	8.5	4.5	0.1	8.1	5.2	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.6	0.3	2.1	15.7	2.2	3.4	6.9	0.5	1.0	5.4	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	18.2	18.0	40.7	77.3	21.4	38.2	26.4	16.6	41.3	30.8	37.4
LnGrp LOS	C	B	B	D	F	C	D	C	B	D	C	D
Approach Vol, veh/h		227			826			1379			1048	
Approach Delay, s/veh		23.5			60.9			29.3			33.3	
Approach LOS		C			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	21.3	10.0	25.4	7.8	27.7	11.4	24.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	18.5	9.5	18.5	5.5	23.5	8.5	19.5
Max Q Clear Time (g_c+I1), s	9.6	15.1	6.2	3.5	4.1	19.4	3.9	21.5
Green Ext Time (p_c), s	0.1	1.7	0.1	0.5	0.0	2.2	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.6
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	670.6
Intersection LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	700	210	80	1173	996	206
Future Vol, veh/h	700	210	80	1173	996	206
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	761	228	87	1275	1083	224
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	442.9	778.7	730.4
HCM LOS	F	F	F

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	83%	0%	6%
Vol Thru, %	0%	77%	94%
Vol Right, %	17%	23%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	1202	910	1253
LT Vol	996	0	80
Through Vol	0	700	1173
RT Vol	206	210	0
Lane Flow Rate	1307	989	1362
Geometry Grp	1	1	1
Degree of Util (X)	2.562	1.885	2.652
Departure Headway (Hd)	9.41	13.909	12.599
Convergence, Y/N	Yes	Yes	Yes
Cap	405	277	300
Service Time	7.41	11.909	10.599
HCM Lane V/C Ratio	3.227	3.57	4.54
HCM Control Delay	730.4	442.9	778.7
HCM Lane LOS	F	F	F
HCM 95th-tile Q	79.3	34	63.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	898	11	869	0	2082	0	0	2271	446
Future Volume (veh/h)	0	0	0	898	11	869	0	2082	0	0	2271	446
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	0	1870	0	0	1870	1870
Adj Flow Rate, veh/h				1007	0	948	0	2313	0	0	2523	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	0	2	0	0	2	2
Cap, veh/h				1775	0	1053	0	2027	0	0	2912	
Arrive On Green				0.33	0.00	0.33	0.00	0.57	0.00	0.00	0.57	0.00
Sat Flow, veh/h				5344	0	3170	0	3741	0	0	5274	1585
Grp Volume(v), veh/h				1007	0	948	0	2313	0	0	2523	0
Grp Sat Flow(s),veh/h/ln				1781	0	1585	0	1777	0	0	1702	1585
Q Serve(g_s), s				18.3	0.0	33.6	0.0	67.3	0.0	0.0	49.5	0.0
Cycle Q Clear(g_c), s				18.3	0.0	33.6	0.0	67.3	0.0	0.0	49.5	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1775	0	1053	0	2027	0	0	2912	
V/C Ratio(X)				0.57	0.00	0.90	0.00	1.14	0.00	0.00	0.87	
Avail Cap(c_a), veh/h				1911	0	1134	0	2027	0	0	2912	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				32.4	0.0	37.5	0.0	25.3	0.0	0.0	21.5	0.0
Incr Delay (d2), s/veh				0.2	0.0	9.2	0.0	70.0	0.0	0.0	2.9	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.9	0.0	14.2	0.0	44.5	0.0	0.0	18.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.7	0.0	46.7	0.0	95.3	0.0	0.0	24.4	0.0
LnGrp LOS				C	A	D	A	F	A	A	C	
Approach Vol, veh/h					1955			2313			2523	A
Approach Delay, s/veh					39.5			95.3			24.4	
Approach LOS					D			F			C	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	73.0		73.0		45.0			
Change Period (Y+Rc), s	5.7		5.7		5.8			
Max Green Setting (Gmax), s	67.3		67.3		42.2			
Max Q Clear Time (g_c+I1), s	69.3		51.5		35.6			
Green Ext Time (p_c), s	0.0		11.4		3.6			

Intersection Summary		
HCM 6th Ctrl Delay	52.9	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	333	11	358	0	0	0	0	1938	1237	0	2436	0
Future Volume (veh/h)	333	11	358	0	0	0	0	1938	1237	0	2436	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	495	0	253				0	2178	951	0	2737	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	682	0	303				0	2196	1724	0	3155	0
Arrive On Green	0.19	0.00	0.19				0.00	0.62	0.62	0.00	0.62	0.00
Sat Flow, veh/h	3563	0	1585				0	3647	2790	0	5443	0
Grp Volume(v), veh/h	495	0	253				0	2178	951	0	2737	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1395	0	1702	0
Q Serve(g_s), s	7.4	0.0	8.7				0.0	34.3	11.2	0.0	25.0	0.0
Cycle Q Clear(g_c), s	7.4	0.0	8.7				0.0	34.3	11.2	0.0	25.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	682	0	303				0	2196	1724	0	3155	0
V/C Ratio(X)	0.73	0.00	0.83				0.00	0.99	0.55	0.00	0.87	0.00
Avail Cap(c_a), veh/h	2138	0	951				0	2196	1724	0	3155	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	21.5	0.0	22.0				0.0	10.7	6.3	0.0	8.9	0.0
Incr Delay (d2), s/veh	0.6	0.0	2.3				0.0	17.3	0.2	0.0	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	3.2				0.0	12.2	1.8	0.0	5.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	0.0	24.3				0.0	27.9	6.5	0.0	11.6	0.0
LnGrp LOS	C	A	C				A	C	A	A	B	A
Approach Vol, veh/h		748						3129			2737	
Approach Delay, s/veh		22.8						21.4			11.6	
Approach LOS		C						C			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	40.7	15.9	40.7
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	35.0	34.0	35.0
Max Q Clear Time (g_c+I1), s	36.3	10.7	27.0
Green Ext Time (p_c), s	0.0	0.1	6.8

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	238	103	332	64	498	166	1391	132	409	1256	24
Future Volume (veh/h)	52	238	103	332	64	498	166	1391	132	409	1256	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	60	274	24	382	74	157	191	1599	68	470	1444	10
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	333	282	263	528	786	223	1226	546	263	1306	582
Arrive On Green	0.04	0.18	0.18	0.15	0.28	0.28	0.13	0.34	0.34	0.15	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	1870	2787	1781	3554	1584	1781	3554	1585
Grp Volume(v), veh/h	60	274	24	382	74	157	191	1599	68	470	1444	10
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1393	1781	1777	1584	1781	1777	1585
Q Serve(g_s), s	3.4	14.3	1.3	15.0	3.0	4.3	10.7	35.0	3.0	15.0	37.3	0.4
Cycle Q Clear(g_c), s	3.4	14.3	1.3	15.0	3.0	4.3	10.7	35.0	3.0	15.0	37.3	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	333	282	263	528	786	223	1226	546	263	1306	582
V/C Ratio(X)	0.77	0.82	0.09	1.45	0.14	0.20	0.86	1.30	0.12	1.78	1.11	0.02
Avail Cap(c_a), veh/h	263	645	547	263	645	961	263	1226	546	263	1306	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	40.2	34.8	43.2	27.2	27.7	43.5	33.2	22.7	43.2	32.1	20.4
Incr Delay (d2), s/veh	14.5	5.1	0.1	222.9	0.1	0.1	20.7	143.1	0.5	368.1	59.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	7.0	0.5	22.6	1.3	1.4	5.8	38.3	1.1	33.2	25.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.6	45.2	34.9	266.1	27.3	27.8	64.2	176.3	23.2	411.4	91.3	20.5
LnGrp LOS	E	D	C	F	C	C	E	F	C	F	F	C
Approach Vol, veh/h		358			613			1858			1924	
Approach Delay, s/veh		47.5			176.3			159.2			169.1	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	43.1	19.0	22.7	19.0	40.8	8.4	33.2
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6
Max Green Setting (Gmax), s	15.0	35.0	15.0	35.0	15.0	35.0	15.0	35.0
Max Q Clear Time (g_c+I1), s	12.7	39.3	17.0	16.3	17.0	37.0	5.4	6.3
Green Ext Time (p_c), s	0.1	0.0	0.0	1.6	0.0	0.0	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	157.0
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	65	65	656	93	273	76	1229	743	152	1341	38
Future Volume (veh/h)	54	65	65	656	93	273	76	1229	743	152	1341	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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	70	0	705	100	143	82	1322	496	163	1442	17
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	122	306		581	348	292	132	1539	685	270	1553	690
Arrive On Green	0.07	0.09	0.00	0.17	0.19	0.19	0.07	0.43	0.43	0.08	0.44	0.44
Sat Flow, veh/h	1781	3647	0	3456	1870	1572	1781	3554	1581	3456	3554	1578
Grp Volume(v), veh/h	58	70	0	705	100	143	82	1322	496	163	1442	17
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1572	1781	1777	1581	1728	1777	1578
Q Serve(g_s), s	4.0	2.3	0.0	21.5	5.9	10.4	5.7	42.9	33.1	5.8	49.1	0.8
Cycle Q Clear(g_c), s	4.0	2.3	0.0	21.5	5.9	10.4	5.7	42.9	33.1	5.8	49.1	0.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	122	306		581	348	292	132	1539	685	270	1553	690
V/C Ratio(X)	0.48	0.23		1.21	0.29	0.49	0.62	0.86	0.72	0.60	0.93	0.02
Avail Cap(c_a), veh/h	139	876		581	629	529	139	1585	705	270	1585	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	54.5	0.0	53.2	44.7	46.6	57.5	32.7	29.9	57.0	34.1	20.5
Incr Delay (d2), s/veh	4.1	0.5	0.0	111.1	0.6	1.8	9.2	4.9	3.6	4.5	10.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.1	0.0	18.1	2.8	4.2	2.9	18.5	12.8	2.7	22.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	55.0	0.0	164.2	45.4	48.4	66.6	37.6	33.5	61.5	44.1	20.5
LnGrp LOS	E	D		F	D	D	E	D	C	E	D	C
Approach Vol, veh/h		128	A		948			1900			1622	
Approach Delay, s/veh		57.9			134.2			37.8			45.6	
Approach LOS		E			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	62.9	29.0	18.5	17.0	63.4	16.2	31.3
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	10.0	57.0	21.5	31.5	10.0	57.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	7.8	44.9	23.5	4.3	7.7	51.1	6.0	12.4
Green Ext Time (p_c), s	0.1	7.9	0.0	0.5	0.0	4.7	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	61.0
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	465	315	53	48	142	456	84	732	42	543	470	120
Future Volume (veh/h)	465	315	53	48	142	456	84	732	42	543	470	120
Initial Q (Qb), veh	0	0	0	0	0	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	596	404	24	62	182	299	108	938	13	696	603	57
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	353	1289	575	79	742	331	131	836	373	404	1379	615
Arrive On Green	0.20	0.36	0.36	0.04	0.21	0.21	0.07	0.24	0.24	0.23	0.39	0.39
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	596	404	24	62	182	299	108	938	13	696	603	57
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	28.0	11.5	1.4	4.9	6.0	26.0	8.4	33.2	0.9	32.0	17.7	3.2
Cycle Q Clear(g_c), s	28.0	11.5	1.4	4.9	6.0	26.0	8.4	33.2	0.9	32.0	17.7	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	353	1289	575	79	742	331	131	836	373	404	1379	615
V/C Ratio(X)	1.69	0.31	0.04	0.78	0.25	0.90	0.82	1.12	0.03	1.72	0.44	0.09
Avail Cap(c_a), veh/h	353	1392	621	139	964	430	214	836	373	404	1379	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.6	32.4	29.1	66.8	46.6	54.5	64.5	54.0	41.6	54.6	31.8	27.4
Incr Delay (d2), s/veh	321.2	0.1	0.0	15.2	0.2	18.6	12.2	70.5	0.0	336.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	43.8	4.9	0.5	2.5	2.7	11.8	4.2	22.8	0.4	51.7	7.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	377.8	32.5	29.2	81.9	46.7	73.1	76.7	124.5	41.7	390.6	32.0	27.5
LnGrp LOS	F	C	C	F	D	E	E	F	D	F	C	C
Approach Vol, veh/h		1024			543			1059			1356	
Approach Delay, s/veh		233.4			65.2			118.6			215.9	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	55.9	36.0	39.0	32.0	34.2	14.4	60.6
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	11.3	* 55	32.0	33.2	28.0	* 38	17.0	48.2
Max Q Clear Time (g_c+I1), s	6.9	13.5	34.0	35.2	30.0	28.0	10.4	19.7
Green Ext Time (p_c), s	0.0	2.7	0.0	0.0	0.0	1.5	0.1	4.1

Intersection Summary	
HCM 6th Ctrl Delay	174.0
HCM 6th LOS	F

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)	267	714	256	407	534	287	120	807	334	445	847	335
Future Volume (veh/h)	267	714	256	407	534	287	120	807	334	445	847	335
Initial Q (Qb), veh	0	0	0	0	0	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	322	860	184	490	643	209	145	972	394	536	1020	285
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	642	544	167	642	544	165	433	176	167	642	544
Arrive On Green	0.09	0.34	0.34	0.09	0.34	0.34	0.09	0.34	0.34	0.09	0.34	0.34
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1265	513	1781	1870	1585
Grp Volume(v), veh/h	322	860	184	490	643	209	145	0	1366	536	1020	285
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1778	1781	1870	1585
Q Serve(g_s), s	15.0	55.0	13.8	15.0	55.0	16.0	12.9	0.0	54.9	15.0	55.0	23.1
Cycle Q Clear(g_c), s	15.0	55.0	13.8	15.0	55.0	16.0	12.9	0.0	54.9	15.0	55.0	23.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	167	642	544	167	642	544	165	0	609	167	642	544
V/C Ratio(X)	1.93	1.34	0.34	2.94	1.00	0.38	0.88	0.00	2.24	3.21	1.59	0.52
Avail Cap(c_a), veh/h	167	642	544	167	642	544	167	0	609	167	642	544
HCM Platoon Ratio	1.00	1.00	1.00	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	72.6	52.6	39.1	72.6	52.6	39.8	71.8	0.0	52.7	72.6	52.6	42.1
Incr Delay (d2), s/veh	439.8	162.9	1.7	887.7	35.8	2.0	37.1	0.0	564.6	1011.2	272.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.2	54.4	5.6	47.9	31.3	6.5	7.5	0.0	119.3	53.6	73.6	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	512.4	215.5	40.7	960.3	88.4	41.8	108.8	0.0	617.3	1083.8	324.6	43.3
LnGrp LOS	F	F	D	F	F	D	F	A	F	F	F	D
Approach Vol, veh/h		1366			1342			1511			1841	
Approach Delay, s/veh		261.9			399.5			568.5			502.1	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	61.5	19.0	60.7	19.0	61.5	18.9	60.8
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	15.0	* 55	15.0	40.0	15.0	55.0	15.0	55.0
Max Q Clear Time (g_c+I1), s	17.0	57.0	17.0	56.9	17.0	57.0	14.9	57.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	441.8
HCM 6th LOS	F

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)	370	2226	525	0	1625	904	0	0	0	1257	225	938
Future Volume (veh/h)	370	2226	525	0	1625	904	0	0	0	1257	225	938
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	374	2248	451	0	1641	0				1432	0	617
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	482	2060	913	0	1999					1109	0	489
Arrive On Green	0.14	0.58	0.58	0.00	0.39	0.00				0.31	0.00	0.31
Sat Flow, veh/h	3456	3554	1574	0	5274	1585				3563	0	1571
Grp Volume(v), veh/h	374	2248	451	0	1641	0				1432	0	617
Grp Sat Flow(s),veh/h/ln	1728	1777	1574	0	1702	1585				1781	0	1571
Q Serve(g_s), s	10.1	55.9	16.3	0.0	27.8	0.0				30.0	0.0	30.0
Cycle Q Clear(g_c), s	10.1	55.9	16.3	0.0	27.8	0.0				30.0	0.0	30.0
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	482	2060	913	0	1999					1109	0	489
V/C Ratio(X)	0.78	1.09	0.49	0.00	0.82					1.29	0.00	1.26
Avail Cap(c_a), veh/h	1076	2060	913	0	2119					1109	0	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	20.3	11.9	0.0	26.3	0.0				33.2	0.0	33.2
Incr Delay (d2), s/veh	3.0	49.6	0.5	0.0	2.7	0.0				137.9	0.0	133.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	33.6	5.1	0.0	10.9	0.0				33.6	0.0	40.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	69.9	12.5	0.0	29.0	0.0				171.1	0.0	166.5
LnGrp LOS	D	F	B	A	C					F	A	F
Approach Vol, veh/h		3073			1641	A					2049	
Approach Delay, s/veh		58.2			29.0						169.7	
Approach LOS		E			C						F	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	61.3		35.1	18.1	43.1
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	40.0		30.0	* 30	40.0
Max Q Clear Time (g_c+I1), s	57.9		32.0	12.1	29.8
Green Ext Time (p_c), s	0.0		0.0	1.4	8.0

Intersection Summary	
HCM 6th Ctrl Delay	84.9
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	789	868	30	712	978	51
Future Volume (veh/h)	789	868	30	712	978	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	797	850	30	719	988	51
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	461	492	36	1116	572	30
Arrive On Green	0.56	0.56	0.02	0.60	0.34	0.34
Sat Flow, veh/h	828	883	1781	1870	1682	87
Grp Volume(v), veh/h	0	1647	30	719	1040	0
Grp Sat Flow(s),veh/h/ln	0	1711	1781	1870	1771	0
Q Serve(g_s), s	0.0	83.5	2.5	37.8	51.0	0.0
Cycle Q Clear(g_c), s	0.0	83.5	2.5	37.8	51.0	0.0
Prop In Lane		0.52	1.00		0.95	0.05
Lane Grp Cap(c), veh/h	0	953	36	1116	602	0
V/C Ratio(X)	0.00	1.73	0.84	0.64	1.73	0.00
Avail Cap(c_a), veh/h	0	953	36	1116	602	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	33.3	73.3	19.8	49.5	0.0
Incr Delay (d2), s/veh	0.0	332.4	86.3	1.4	334.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	120.0	2.0	15.9	77.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	365.6	159.6	21.2	383.8	0.0
LnGrp LOS	A	F	F	C	F	A
Approach Vol, veh/h	1647			749	1040	
Approach Delay, s/veh	365.6			26.7	383.8	
Approach LOS	F			C	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		94.0		56.0	6.0	88.0
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		89.5		51.0	3.0	83.5
Max Q Clear Time (g_c+I1), s		39.8		53.0	4.5	85.5
Green Ext Time (p_c), s		6.7		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		297.3
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	1336	400	410	867	100	640	779	896	70	680	140
Future Volume (veh/h)	250	1336	400	410	867	100	640	779	896	70	680	140
Initial Q (Qb), veh	0	0	0	0	0	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	1518	0	466	985	0	727	885	0	80	773	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	1592		370	1600		548	1258		194	894	
Arrive On Green	0.10	0.31	0.00	0.11	0.31	0.00	0.16	0.35	0.00	0.06	0.25	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	284	1518	0	466	985	0	727	885	0	80	773	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	10.9	39.5	0.0	14.5	22.2	0.0	21.5	29.0	0.0	3.0	28.2	0.0
Cycle Q Clear(g_c), s	10.9	39.5	0.0	14.5	22.2	0.0	21.5	29.0	0.0	3.0	28.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	1592		370	1600		548	1258		194	894	
V/C Ratio(X)	0.84	0.95		1.26	0.62		1.33	0.70		0.41	0.86	
Avail Cap(c_a), veh/h	574	1597		370	1600		548	1491		204	1138	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	60.1	45.7	0.0	60.5	39.6	0.0	57.0	37.7	0.0	61.8	48.5	0.0
Incr Delay (d2), s/veh	2.1	13.2	0.0	137.5	0.8	0.0	159.3	1.2	0.0	1.4	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	17.7	0.0	13.3	9.2	0.0	21.2	12.3	0.0	1.3	12.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.2	58.9	0.0	198.0	40.4	0.0	216.3	38.9	0.0	63.2	54.4	0.0
LnGrp LOS	E	E		F	D		F	D		E	D	
Approach Vol, veh/h		1802			1451			1612			853	
Approach Delay, s/veh		59.4			91.0			118.9			55.2	
Approach LOS		E			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.8	48.6	27.0	40.2	20.0	48.4	13.1	54.1
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	22.5	33.4	21.5	43.4	14.5	42.4	8.0	56.9
Max Q Clear Time (g_c+I1), s	12.9	24.2	23.5	30.2	16.5	41.5	5.0	31.0
Green Ext Time (p_c), s	0.3	5.1	0.0	3.9	0.0	0.8	0.0	5.9

Intersection Summary	
HCM 6th Ctrl Delay	83.6
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	775	20	755	140	50	270	500	1285	50	110	780	600
Future Volume (veh/h)	775	20	755	140	50	270	500	1285	50	110	780	600
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	842	22	726	187	54	248	543	1713	19	147	1040	320
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	908	790	670	210	57	262	574	1441	427	229	882	704
Arrive On Green	0.26	0.42	0.42	0.06	0.21	0.21	0.11	0.28	0.28	0.07	0.25	0.25
Sat Flow, veh/h	3510	1900	1610	3456	278	1277	5103	5106	1515	3456	3554	2834
Grp Volume(v), veh/h	842	22	726	187	0	302	543	1713	19	147	1040	320
Grp Sat Flow(s),veh/h/ln	1755	1900	1610	1728	0	1556	1701	1702	1515	1728	1777	1417
Q Serve(g_s), s	28.1	0.8	49.9	6.4	0.0	23.0	12.7	33.9	1.1	5.0	29.8	11.5
Cycle Q Clear(g_c), s	28.1	0.8	49.9	6.4	0.0	23.0	12.7	33.9	1.1	5.0	29.8	11.5
Prop In Lane	1.00		1.00	1.00		0.82	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	908	790	670	210	0	320	574	1441	427	229	882	704
V/C Ratio(X)	0.93	0.03	1.08	0.89	0.00	0.95	0.95	1.19	0.04	0.64	1.18	0.45
Avail Cap(c_a), veh/h	936	790	670	210	0	320	574	1441	427	230	882	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	20.7	35.1	55.9	0.0	47.0	52.9	43.1	31.3	54.6	45.1	38.2
Incr Delay (d2), s/veh	14.9	0.0	59.8	33.9	0.0	36.0	24.8	92.3	0.0	4.6	92.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	0.4	30.4	3.8	0.0	12.1	6.5	25.8	0.4	2.2	23.8	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.3	20.7	94.9	89.8	0.0	83.1	77.7	135.3	31.3	59.2	137.2	38.4
LnGrp LOS	E	C	F	F	A	F	E	F	C	E	F	D
Approach Vol, veh/h		1590			489			2275			1507	
Approach Delay, s/veh		74.5			85.7			120.7			108.6	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	35.8	11.8	54.4	13.9	39.9	37.1	29.1
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	13.5	29.8	7.3	49.9	8.0	33.8	32.0	23.7
Max Q Clear Time (g_c+I1), s	14.7	31.8	8.4	51.9	7.0	35.9	30.1	25.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	102.1
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	933	420	86	1412	1333	232
Future Volume (veh/h)	933	420	86	1412	1333	232
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1014	384	93	1535	1449	248
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	522	465	84	1213	886	152
Arrive On Green	0.29	0.29	0.05	0.64	0.56	0.56
Sat Flow, veh/h	1810	1610	1810	1900	1581	271
Grp Volume(v), veh/h	1014	384	93	1535	0	1697
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1851
Q Serve(g_s), s	43.3	33.4	7.0	95.8	0.0	84.1
Cycle Q Clear(g_c), s	43.3	33.4	7.0	95.8	0.0	84.1
Prop In Lane	1.00	1.00	1.00			0.15
Lane Grp Cap(c), veh/h	522	465	84	1213	0	1038
V/C Ratio(X)	1.94	0.83	1.10	1.26	0.00	1.63
Avail Cap(c_a), veh/h	522	465	84	1213	0	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.3	49.8	71.5	27.1	0.0	33.0
Incr Delay (d2), s/veh	430.5	11.7	128.1	125.9	0.0	290.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	82.1	28.9	6.2	80.3	0.0	117.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	483.9	61.5	199.6	153.0	0.0	323.1
LnGrp LOS	F	E	F	F	A	F
Approach Vol, veh/h	1398			1628	1697	
Approach Delay, s/veh	367.9			155.7	323.1	
Approach LOS	F			F	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		102.0		48.0	11.7	90.3
Change Period (Y+Rc), s		6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s		95.8		* 43	* 7	84.1
Max Q Clear Time (g_c+I1), s		97.8		45.3	9.0	86.1
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		278.6
HCM 6th LOS		F

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)	0	0	0	40	0	362	0	1288	42	358	1178	0
Future Volume (veh/h)	0	0	0	40	0	362	0	1288	42	358	1178	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	48	0	339	0	1533	49	426	1402	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	114	0	501	72	984	31	451	1398	0
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.55	0.55	0.25	0.75	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	1802	58	1781	1870	0
Grp Volume(v), veh/h	0	0	0	48	0	339	0	0	1582	426	1402	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	0	1860	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	3.2	0.0	7.8	0.0	0.0	67.8	29.1	92.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.2	0.0	7.8	0.0	0.0	67.8	29.1	92.8	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	114	0	501	72	0	1016	451	1398	0
V/C Ratio(X)	0.00	0.00	0.00	0.42	0.00	0.68	0.00	0.00	1.56	0.94	1.00	0.00
Avail Cap(c_a), veh/h	0	119	0	114	0	501	121	0	1016	478	1398	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	56.0	0.0	36.9	0.0	0.0	28.2	45.5	15.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.5	0.0	3.6	0.0	0.0	255.8	26.9	24.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.5	0.0	9.3	0.0	0.0	98.7	15.7	36.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	58.5	0.0	40.5	0.0	0.0	284.0	72.4	40.5	0.0
LnGrp LOS	A	A	A	E	A	D	A	A	F	E	F	A
Approach Vol, veh/h		0			387			1582			1828	
Approach Delay, s/veh		0.0			42.8			284.0			47.9	
Approach LOS					D			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	36.2	74.0		0.0	11.2	99.0		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 33	67.8		7.8	8.3	* 93		7.8				
Max Q Clear Time (g_c+I1), s	31.1	69.8		0.0	0.0	94.8		9.8				
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		145.7
HCM 6th LOS		F

Notes

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



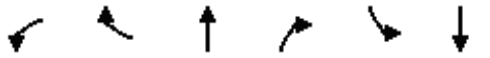
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	746	1027	552	353	868	444	243	859	212	567	1426	152
Future Volume (veh/h)	746	1027	552	353	868	444	243	859	212	567	1426	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	769	1059	0	364	895	239	251	886	86	585	1470	96
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	631	1512		429	1213	370	313	1212	369	629	1168	513
Arrive On Green	0.18	0.30	0.00	0.12	0.24	0.24	0.09	0.24	0.24	0.18	0.33	0.33
Sat Flow, veh/h	3456	5106	1585	3456	5106	1555	3456	5106	1555	3456	3554	1561
Grp Volume(v), veh/h	769	1059	0	364	895	239	251	886	86	585	1470	96
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1555	1728	1702	1555	1728	1777	1561
Q Serve(g_s), s	25.0	25.2	0.0	14.1	22.2	19.0	9.8	21.9	6.1	22.8	45.0	6.0
Cycle Q Clear(g_c), s	25.0	25.2	0.0	14.1	22.2	19.0	9.8	21.9	6.1	22.8	45.0	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	631	1512		429	1213	370	313	1212	369	629	1168	513
V/C Ratio(X)	1.22	0.70		0.85	0.74	0.65	0.80	0.73	0.23	0.93	1.26	0.19
Avail Cap(c_a), veh/h	631	1678		631	1678	511	631	1678	511	631	1168	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	42.8	0.0	58.7	48.3	47.0	61.1	48.2	42.2	55.2	46.0	32.9
Incr Delay (d2), s/veh	112.5	1.2	0.0	7.2	1.1	1.9	4.8	1.0	0.3	21.1	123.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.5	10.5	0.0	6.6	9.5	7.4	4.4	9.2	2.4	11.6	39.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	168.5	44.0	0.0	65.9	49.4	48.9	65.8	49.2	42.5	76.3	169.6	33.1
LnGrp LOS	F	D		E	D	D	E	D	D	E	F	C
Approach Vol, veh/h		1828			1498			1223			2151	
Approach Delay, s/veh		96.3			53.3			52.2			138.1	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	46.6	29.9	38.5	30.0	38.5	17.4	51.0
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	16.1	27.2	24.8	23.9	27.0	24.2	11.8	47.0
Green Ext Time (p_c), s	0.9	6.5	0.1	6.0	0.0	7.1	0.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	92.1
HCM 6th LOS	F

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	895	816	683	953	969	622
Future Volume (veh/h)	895	816	683	953	969	622
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	932	359	711	596	1009	648
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	481	428	388	322	586	1113
Arrive On Green	0.27	0.27	0.21	0.21	0.33	0.60
Sat Flow, veh/h	1781	1585	1870	1551	1781	1870
Grp Volume(v), veh/h	932	359	711	596	1009	648
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1551	1781	1870
Q Serve(g_s), s	21.6	17.1	16.6	16.6	26.3	17.2
Cycle Q Clear(g_c), s	21.6	17.1	16.6	16.6	26.3	17.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	481	428	388	322	586	1113
V/C Ratio(X)	1.94	0.84	1.83	1.85	1.72	0.58
Avail Cap(c_a), veh/h	481	428	388	322	586	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	27.6	31.7	31.7	26.8	10.0
Incr Delay (d2), s/veh	429.6	14.0	384.3	395.4	332.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	65.9	7.6	48.3	41.0	64.0	5.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	458.8	41.5	416.0	427.1	359.4	10.9
LnGrp LOS	F	D	F	F	F	B
Approach Vol, veh/h	1291		1307			1657
Approach Delay, s/veh	342.8		421.1			223.1
Approach LOS	F		F			F

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	31.0	22.0			53.0	27.0
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 26	16.6			47.6	21.6
Max Q Clear Time (g_c+I1), s	28.3	18.6			19.2	23.6
Green Ext Time (p_c), s	0.0	0.0			5.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	320.2
HCM 6th LOS	F

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)	40	1244	61	61	1026	61	42	84	42	526	313	63
Future Volume (veh/h)	40	1244	61	61	1026	61	42	84	42	526	313	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	1352	62	66	1115	64	46	91	25	487	459	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	1062	49	107	576	33	71	170	47	533	612	84
Arrive On Green	0.04	0.30	0.30	0.06	0.32	0.32	0.04	0.12	0.12	0.29	0.37	0.37
Sat Flow, veh/h	1810	3515	161	1810	1779	102	1810	1435	394	1810	1635	224
Grp Volume(v), veh/h	43	693	721	66	0	1179	46	0	116	487	0	522
Grp Sat Flow(s),veh/h/ln	1810	1805	1871	1810	0	1882	1810	0	1829	1810	0	1860
Q Serve(g_s), s	2.0	25.5	25.5	3.0	0.0	27.3	2.1	0.0	5.0	21.9	0.0	20.6
Cycle Q Clear(g_c), s	2.0	25.5	25.5	3.0	0.0	27.3	2.1	0.0	5.0	21.9	0.0	20.6
Prop In Lane	1.00		0.09	1.00		0.05	1.00		0.22	1.00		0.12
Lane Grp Cap(c), veh/h	68	546	565	107	0	609	71	0	217	533	0	696
V/C Ratio(X)	0.63	1.27	1.27	0.62	0.00	1.93	0.65	0.00	0.54	0.91	0.00	0.75
Avail Cap(c_a), veh/h	129	546	565	107	0	609	139	0	217	654	0	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	29.4	29.4	38.7	0.0	28.5	40.0	0.0	35.0	28.7	0.0	23.0
Incr Delay (d2), s/veh	9.3	135.7	136.9	10.1	0.0	426.6	9.6	0.0	2.6	15.3	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	31.1	32.4	1.6	0.0	83.9	1.1	0.0	2.4	11.4	0.0	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	165.1	166.4	48.8	0.0	455.2	49.6	0.0	37.6	44.0	0.0	26.9
LnGrp LOS	D	F	F	D	A	F	D	A	D	D	A	C
Approach Vol, veh/h		1457			1245			162			1009	
Approach Delay, s/veh		162.3			433.6			41.0			35.1	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	30.2	29.4	15.8	7.2	32.0	7.8	37.4
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	5.0	* 26	30.5	10.0	6.0	* 25	6.5	34.0
Max Q Clear Time (g_c+I1), s	5.0	27.5	23.9	7.0	4.0	29.3	4.1	22.6
Green Ext Time (p_c), s	0.0	0.0	1.0	0.1	0.0	0.0	0.0	2.6

Intersection Summary		
HCM 6th Ctrl Delay		211.3
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	548	972	360	50	531	340	460	877	310	290	1015	315
Future Volume (veh/h)	548	972	360	50	531	340	460	877	310	290	1015	315
Initial Q (Qb), veh	0	0	0	0	0	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	1900	1870	1900	1900	1900	1870	1870	1900	1900	1870	1870
Adj Flow Rate, veh/h	596	1057	161	54	577	138	500	953	188	315	1103	139
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	0	2	0	0	0	2	2	0	0	2	2
Cap, veh/h	550	1337	587	70	475	403	456	856	388	337	1050	468
Arrive On Green	0.16	0.37	0.37	0.04	0.25	0.25	0.13	0.24	0.24	0.19	0.30	0.30
Sat Flow, veh/h	3456	3610	1585	1810	1900	1610	3456	3554	1610	1810	3554	1585
Grp Volume(v), veh/h	596	1057	161	54	577	138	500	953	188	315	1103	139
Grp Sat Flow(s),veh/h/ln	1728	1805	1585	1810	1900	1610	1728	1777	1610	1810	1777	1585
Q Serve(g_s), s	17.5	28.7	7.8	3.3	27.5	7.7	14.5	26.5	11.0	18.9	32.5	7.4
Cycle Q Clear(g_c), s	17.5	28.7	7.8	3.3	27.5	7.7	14.5	26.5	11.0	18.9	32.5	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	550	1337	587	70	475	403	456	856	388	337	1050	468
V/C Ratio(X)	1.08	0.79	0.27	0.77	1.21	0.34	1.10	1.11	0.48	0.93	1.05	0.30
Avail Cap(c_a), veh/h	550	1337	587	90	475	403	456	856	388	337	1050	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	30.8	24.3	52.4	41.3	33.8	47.8	41.8	35.9	44.1	38.8	29.9
Incr Delay (d2), s/veh	63.1	3.3	0.2	25.8	114.7	0.5	71.3	66.7	0.9	32.4	42.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	12.8	3.0	2.0	27.8	3.1	10.5	18.9	4.4	11.1	19.3	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	109.4	34.1	24.5	78.2	155.9	34.3	119.1	108.5	36.8	76.5	80.8	30.3
LnGrp LOS	F	C	C	E	F	C	F	F	D	E	F	C
Approach Vol, veh/h		1814			769			1641			1557	
Approach Delay, s/veh		58.0			128.7			103.5			75.4	
Approach LOS		E			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	37.0	8.7	45.3	25.0	31.0	22.0	32.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	14.5	32.5	5.5	39.5	20.5	26.5	17.5	27.5
Max Q Clear Time (g_c+I1), s	16.5	34.5	5.3	30.7	20.9	28.5	19.5	29.5
Green Ext Time (p_c), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	85.0
HCM 6th LOS	F

Intersection	
Intersection Delay, s/veh	1494.1
Intersection LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1421	1288	540	1092	659	293
Future Vol, veh/h	1421	1288	540	1092	659	293
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1545	1400	587	1187	716	318
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	2053.1	1159.8	476.4
HCM LOS	F	F	F

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	69%	0%	33%
Vol Thru, %	0%	52%	67%
Vol Right, %	31%	48%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	952	2709	1632
LT Vol	659	0	540
Through Vol	0	1421	1092
RT Vol	293	1288	0
Lane Flow Rate	1035	2945	1774
Geometry Grp	1	1	1
Degree of Util (X)	1.998	5.49	3.48
Departure Headway (Hd)	8.302	13.392	17.171
Convergence, Y/N	Yes	Yes	Yes
Cap	445	324	231
Service Time	6.302	11.392	15.171
HCM Lane V/C Ratio	2.326	9.09	7.68
HCM Control Delay	476.4	2053.1	1159.8
HCM Lane LOS	F	F	F
HCM 95th-tile Q	59.6	154.5	69



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	15	29	147	53	794	46	996	122	766	1253	58
Future Volume (veh/h)	15	15	29	147	53	794	46	996	122	766	1253	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	16	2	158	57	130	49	1071	46	824	1347	39
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	207	176	246	208	175	67	1811	561	932	2085	930
Arrive On Green	0.07	0.11	0.11	0.07	0.11	0.11	0.04	0.35	0.35	0.27	0.59	0.59
Sat Flow, veh/h	1781	1870	1585	3456	1870	1576	1781	5106	1582	3456	3554	1585
Grp Volume(v), veh/h	16	16	2	158	57	130	49	1071	46	824	1347	39
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1576	1781	1702	1582	1728	1777	1585
Q Serve(g_s), s	0.8	0.8	0.1	4.4	2.7	7.8	2.7	16.8	1.9	22.4	24.8	1.0
Cycle Q Clear(g_c), s	0.8	0.8	0.1	4.4	2.7	7.8	2.7	16.8	1.9	22.4	24.8	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	207	176	246	208	175	67	1811	561	932	2085	930
V/C Ratio(X)	0.13	0.08	0.01	0.64	0.27	0.74	0.73	0.59	0.08	0.88	0.65	0.04
Avail Cap(c_a), veh/h	490	598	507	951	598	504	91	1811	561	1127	2085	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	39.1	38.9	44.4	40.0	42.3	46.7	25.9	21.1	34.4	13.5	8.6
Incr Delay (d2), s/veh	0.4	0.2	0.0	2.8	0.7	6.1	17.9	1.4	0.3	7.5	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.0	1.9	1.3	3.2	1.5	6.6	0.7	9.8	8.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	39.3	38.9	47.1	40.7	48.3	64.6	27.3	21.3	41.8	15.1	8.7
LnGrp LOS	D	D	D	D	D	D	E	C	C	D	B	A
Approach Vol, veh/h		34			345			1166			2210	
Approach Delay, s/veh		41.1			46.5			28.6			24.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	63.4	11.6	15.5	30.5	40.6	11.6	15.5
Change Period (Y+Rc), s	4.0	5.8	4.6	4.6	4.0	5.8	4.6	4.6
Max Green Setting (Gmax), s	5.0	57.6	27.0	31.4	32.0	30.6	27.0	31.4
Max Q Clear Time (g_c+I1), s	4.7	26.8	6.4	2.8	24.4	18.8	2.8	9.8
Green Ext Time (p_c), s	0.0	11.5	0.4	0.0	2.0	5.4	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	176	94	891	98	313	92	798	1013	316	1066	48
Future Volume (veh/h)	47	176	94	891	98	313	92	798	1013	316	1066	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	181	0	919	101	144	95	823	614	326	1099	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	315		969	575	646	128	1078	925	365	1199	520
Arrive On Green	0.06	0.09	0.00	0.28	0.31	0.31	0.07	0.30	0.30	0.11	0.34	0.34
Sat Flow, veh/h	1781	3647	0	3456	1870	1557	1781	3554	1582	3456	3554	1542
Grp Volume(v), veh/h	48	181	0	919	101	144	95	823	614	326	1099	16
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1557	1781	1777	1582	1728	1777	1542
Q Serve(g_s), s	3.5	6.6	0.0	35.3	5.3	8.1	7.1	28.4	35.7	12.6	40.1	0.9
Cycle Q Clear(g_c), s	3.5	6.6	0.0	35.3	5.3	8.1	7.1	28.4	35.7	12.6	40.1	0.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	110	315		969	575	646	128	1078	925	365	1199	520
V/C Ratio(X)	0.44	0.57		0.95	0.18	0.22	0.74	0.76	0.66	0.89	0.92	0.03
Avail Cap(c_a), veh/h	132	386		978	595	663	132	1122	944	365	1235	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	59.2	0.0	47.7	34.3	25.7	61.6	42.7	19.1	59.7	43.0	30.0
Incr Delay (d2), s/veh	3.8	2.4	0.0	17.9	0.2	0.2	21.1	3.0	1.7	23.4	10.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.1	0.0	17.3	2.5	3.0	3.9	12.6	12.8	6.6	18.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	61.6	0.0	65.6	34.5	25.9	82.6	45.8	20.9	83.2	53.9	30.1
LnGrp LOS	E	E		E	C	C	F	D	C	F	D	C
Approach Vol, veh/h		229			1164			1532			1441	
Approach Delay, s/veh		62.3			58.0			38.1			60.3	
Approach LOS		E			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.8	48.5	45.4	19.5	17.2	53.1	15.9	49.1
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	14.3	42.7	38.3	14.7	10.0	47.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	14.6	37.7	37.3	8.6	9.1	42.1	5.5	10.1
Green Ext Time (p_c), s	0.0	3.1	0.7	0.6	0.0	3.4	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	273	86	40	180	13	219	315	51	38	432	252
Future Volume (veh/h)	37	273	86	40	180	13	219	315	51	38	432	252
Initial Q (Qb), veh	0	0	0	0	0	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	300	16	44	198	2	241	346	26	42	475	75
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	574	256	82	583	259	310	1283	571	154	822	366
Arrive On Green	0.04	0.16	0.16	0.05	0.16	0.16	0.17	0.36	0.36	0.04	0.23	0.23
Sat Flow, veh/h	3456	3554	1582	1781	3554	1582	1781	3554	1583	3456	3554	1583
Grp Volume(v), veh/h	41	300	16	44	198	2	241	346	26	42	475	75
Grp Sat Flow(s),veh/h/ln	1728	1777	1582	1781	1777	1582	1781	1777	1583	1728	1777	1583
Q Serve(g_s), s	0.5	3.7	0.4	1.2	2.4	0.1	6.2	3.3	0.5	0.6	5.7	1.8
Cycle Q Clear(g_c), s	0.5	3.7	0.4	1.2	2.4	0.1	6.2	3.3	0.5	0.6	5.7	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	152	574	256	82	583	259	310	1283	571	154	822	366
V/C Ratio(X)	0.27	0.52	0.06	0.53	0.34	0.01	0.78	0.27	0.05	0.27	0.58	0.20
Avail Cap(c_a), veh/h	1444	2970	1322	744	2970	1322	744	2970	1323	1444	2970	1323
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	18.4	17.0	22.3	17.7	16.7	18.9	10.8	9.9	22.1	16.3	14.8
Incr Delay (d2), s/veh	0.9	0.7	0.1	5.3	0.3	0.0	4.2	0.1	0.0	0.9	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.3	0.1	0.5	0.8	0.0	2.5	1.0	0.1	0.2	1.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	19.1	17.1	27.6	18.1	16.8	23.0	10.9	10.0	23.0	17.0	15.1
LnGrp LOS	C	B	B	C	B	B	C	B	A	C	B	B
Approach Vol, veh/h		357			244			613			592	
Approach Delay, s/veh		19.5			19.8			15.7			17.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	12.4	6.1	23.1	6.1	12.5	12.3	16.9
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	20.0	* 40	20.0	40.0	20.0	* 40	20.0	40.0
Max Q Clear Time (g_c+I1), s	3.2	5.7	2.6	5.3	2.5	4.4	8.2	7.7
Green Ext Time (p_c), s	0.1	1.9	0.1	2.3	0.1	1.2	0.5	3.3

Intersection Summary	
HCM 6th Ctrl Delay	17.5
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)	318	883	121	156	700	471	261	460	467	126	523	333
Future Volume (veh/h)	318	883	121	156	700	471	261	460	467	126	523	333
Initial Q (Qb), veh	0	0	0	0	0	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	342	949	50	168	753	480	281	495	424	135	562	168
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	310	1144	510	307	1141	647	213	1529	474	303	950	424
Arrive On Green	0.09	0.32	0.32	0.09	0.32	0.32	0.12	0.30	0.30	0.09	0.27	0.27
Sat Flow, veh/h	3456	3554	1585	3456	3554	1584	1781	5106	1583	3456	3554	1585
Grp Volume(v), veh/h	342	949	50	168	753	480	281	495	424	135	562	168
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1584	1781	1702	1583	1728	1777	1585
Q Serve(g_s), s	9.0	24.8	2.2	4.7	18.3	25.8	12.0	7.5	25.7	3.7	13.8	8.7
Cycle Q Clear(g_c), s	9.0	24.8	2.2	4.7	18.3	25.8	12.0	7.5	25.7	3.7	13.8	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	310	1144	510	307	1141	647	213	1529	474	303	950	424
V/C Ratio(X)	1.10	0.83	0.10	0.55	0.66	0.74	1.32	0.32	0.89	0.45	0.59	0.40
Avail Cap(c_a), veh/h	310	1254	559	310	1229	686	213	1628	505	482	1204	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	31.5	23.8	43.8	29.4	25.2	44.2	27.3	33.6	43.5	32.0	30.1
Incr Delay (d2), s/veh	81.8	4.8	0.1	2.0	1.4	4.5	172.7	0.2	18.1	1.0	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	10.8	0.8	2.0	7.4	9.7	15.3	2.9	11.6	1.6	5.7	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.5	36.3	23.9	45.8	30.8	29.7	216.9	27.4	51.7	44.5	32.8	31.0
LnGrp LOS	F	D	C	D	C	C	F	C	D	D	C	C
Approach Vol, veh/h		1341			1401			1200			865	
Approach Delay, s/veh		59.1			32.2			80.4			34.3	
Approach LOS		E			C			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	38.8	12.8	35.8	13.0	38.7	16.0	32.6
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	9.0	* 35	14.0	32.0	9.0	34.7	12.0	34.0
Max Q Clear Time (g_c+I1), s	10.7	26.8	5.7	27.7	11.0	27.8	14.0	15.8
Green Ext Time (p_c), s	0.1	5.0	0.2	2.3	0.0	4.4	0.0	5.3

Intersection Summary	
HCM 6th Ctrl Delay	52.1
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)	204	1314	204	0	879	362	0	0	0	639	33	739
Future Volume (veh/h)	204	1314	204	0	879	362	0	0	0	639	33	739
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	229	1476	166	0	988	0				744	0	521
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	313	2366	719	0	1606					1449	0	636
Arrive On Green	0.09	0.46	0.46	0.00	0.31	0.00				0.41	0.00	0.41
Sat Flow, veh/h	3456	5106	1551	0	5274	1585				3563	0	1565
Grp Volume(v), veh/h	229	1476	166	0	988	0				744	0	521
Grp Sat Flow(s),veh/h/ln	1728	1702	1551	0	1702	1585				1781	0	1565
Q Serve(g_s), s	5.2	17.6	5.2	0.0	13.3	0.0				12.7	0.0	23.9
Cycle Q Clear(g_c), s	5.2	17.6	5.2	0.0	13.3	0.0				12.7	0.0	23.9
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	313	2366	719	0	1606					1449	0	636
V/C Ratio(X)	0.73	0.62	0.23	0.00	0.62					0.51	0.00	0.82
Avail Cap(c_a), veh/h	389	3337	1013	0	2465					2288	0	1005
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	35.8	16.4	13.0	0.0	23.5	0.0				18.0	0.0	21.3
Incr Delay (d2), s/veh	5.6	0.4	0.2	0.0	0.5	0.0				0.3	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	6.1	1.7	0.0	5.0	0.0				4.9	0.0	19.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.4	16.7	13.2	0.0	24.0	0.0				18.3	0.0	24.8
LnGrp LOS	D	B	B	A	C					B	A	C
Approach Vol, veh/h		1871			988						1265	
Approach Delay, s/veh		19.4			24.0						21.0	
Approach LOS		B			C						C	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	42.8		38.0	12.0	30.8
Change Period (Y+Rc), s	5.4		5.1	* 4.7	5.4
Max Green Setting (Gmax), s	52.8		51.9	* 9.1	39.0
Max Q Clear Time (g_c+I1), s	19.6		25.9	7.2	15.3
Green Ext Time (p_c), s	17.8		6.9	0.2	8.8

Intersection Summary		
HCM 6th Ctrl Delay	21.0	
HCM 6th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	248	853	40	445	482	103
Future Volume (veh/h)	248	853	40	445	482	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	285	339	46	511	633	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	599	508	140	894	972	432
Arrive On Green	0.32	0.32	0.08	0.48	0.27	0.00
Sat Flow, veh/h	1870	1585	1781	1870	3563	1585
Grp Volume(v), veh/h	285	339	46	511	633	0
Grp Sat Flow(s),veh/h/ln	1870	1585	1781	1870	1781	1585
Q Serve(g_s), s	4.7	7.0	0.9	7.5	6.0	0.0
Cycle Q Clear(g_c), s	4.7	7.0	0.9	7.5	6.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	599	508	140	894	972	432
V/C Ratio(X)	0.48	0.67	0.33	0.57	0.65	0.00
Avail Cap(c_a), veh/h	1351	1145	187	1694	1965	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.4	11.2	16.6	7.1	12.2	0.0
Incr Delay (d2), s/veh	0.7	1.8	0.5	0.7	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.8	0.3	1.5	1.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.1	13.0	17.1	7.8	13.1	0.0
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	624			557	633	
Approach Delay, s/veh	12.1			8.6	13.1	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		22.7		15.4	6.0	16.7
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		34.5		21.0	4.0	27.5
Max Q Clear Time (g_c+I1), s		9.5		8.0	2.9	9.0
Green Ext Time (p_c), s		3.7		2.4	0.0	3.2

Intersection Summary		
HCM 6th Ctrl Delay		11.4
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	288	130	880	919	80	340	540	586	30	874	140
Future Volume (veh/h)	60	288	130	880	919	80	340	540	586	30	874	140
Initial Q (Qb), veh	0	0	0	0	0	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	75	360	0	1100	1149	0	425	675	0	38	1092	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	708		1299	1722		537	1182		176	1412	
Arrive On Green	0.05	0.14	0.00	0.26	0.34	0.00	0.11	0.33	0.00	0.05	0.28	0.00
Sat Flow, veh/h	3456	5106	1585	5023	5106	1585	5023	3554	1585	3456	5106	1585
Grp Volume(v), veh/h	75	360	0	1100	1149	0	425	675	0	38	1092	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1674	1702	1585	1674	1777	1585	1728	1702	1585
Q Serve(g_s), s	2.2	6.9	0.0	22.0	20.4	0.0	8.7	16.6	0.0	1.1	20.8	0.0
Cycle Q Clear(g_c), s	2.2	6.9	0.0	22.0	20.4	0.0	8.7	16.6	0.0	1.1	20.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	708		1299	1722		537	1182		176	1412	
V/C Ratio(X)	0.43	0.51		0.85	0.67		0.79	0.57		0.22	0.77	
Avail Cap(c_a), veh/h	229	1583		1638	2861		688	1562		261	1930	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.8	42.2	0.0	37.2	30.0	0.0	46.1	29.1	0.0	48.2	35.2	0.0
Incr Delay (d2), s/veh	0.6	0.8	0.0	3.5	0.6	0.0	4.8	0.4	0.0	0.6	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.8	0.0	9.0	8.0	0.0	3.7	6.7	0.0	0.5	8.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	43.0	0.0	40.8	30.6	0.0	50.9	29.5	0.0	48.8	36.6	0.0
LnGrp LOS	D	D		D	C		D	C		D	D	
Approach Vol, veh/h		435			2249			1100			1130	
Approach Delay, s/veh		44.1			35.6			37.8			37.0	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	41.8	16.8	35.4	32.9	20.8	10.9	41.3
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	7.0	59.3	14.5	40.0	34.5	32.8	8.0	46.5
Max Q Clear Time (g_c+I1), s	4.2	22.4	10.7	22.8	24.0	8.9	3.1	18.6
Green Ext Time (p_c), s	0.0	13.3	0.6	6.4	3.4	2.9	0.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay	37.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	20	210	110	20	270	330	926	190	450	964	470
Future Volume (veh/h)	270	20	210	110	20	270	330	926	190	450	964	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	293	22	76	147	22	53	359	1235	74	600	1285	328
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	454	312	739	230	156	125	493	1537	464	678	1493	1557
Arrive On Green	0.13	0.16	0.16	0.07	0.08	0.08	0.10	0.30	0.30	0.20	0.42	0.42
Sat Flow, veh/h	3510	1900	2834	3456	1900	1527	5103	5106	1540	3456	3554	2834
Grp Volume(v), veh/h	293	22	76	147	22	53	359	1235	74	600	1285	328
Grp Sat Flow(s),veh/h/ln	1755	1900	1417	1728	1900	1527	1701	1702	1540	1728	1777	1417
Q Serve(g_s), s	6.1	0.8	1.6	3.2	0.8	2.5	5.3	17.2	2.7	13.0	25.4	4.6
Cycle Q Clear(g_c), s	6.1	0.8	1.6	3.2	0.8	2.5	5.3	17.2	2.7	13.0	25.4	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	454	312	739	230	156	125	493	1537	464	678	1493	1557
V/C Ratio(X)	0.65	0.07	0.10	0.64	0.14	0.42	0.73	0.80	0.16	0.88	0.86	0.21
Avail Cap(c_a), veh/h	1455	1026	1804	439	443	356	568	1884	568	850	1859	1849
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	27.3	21.7	35.1	32.9	33.7	33.9	24.9	19.8	30.2	20.3	8.9
Incr Delay (d2), s/veh	2.2	0.1	0.1	2.9	0.4	2.2	4.0	1.7	0.1	8.1	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.3	0.5	1.4	0.4	1.0	2.2	6.3	1.0	5.6	9.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.1	27.4	21.7	38.1	33.3	35.9	37.9	26.6	19.9	38.3	23.4	8.9
LnGrp LOS	C	C	C	D	C	D	D	C	B	D	C	A
Approach Vol, veh/h		391			222			1668			2213	
Approach Delay, s/veh		31.3			37.1			28.7			25.3	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	38.4	9.6	17.2	21.2	29.2	16.0	10.8
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	8.6	40.4	9.8	41.7	19.0	28.5	32.0	18.0
Max Q Clear Time (g_c+I1), s	7.3	27.4	5.2	3.6	15.0	19.2	8.1	4.5
Green Ext Time (p_c), s	0.2	3.0	0.2	0.4	0.1	3.8	1.6	0.2

Intersection Summary	
HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	237	327	482	1204	548	537
Future Volume (veh/h)	237	327	482	1204	548	537
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	258	129	524	1309	596	560
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	437	201	577	2547	1131	504
Arrive On Green	0.12	0.12	0.32	0.71	0.31	0.31
Sat Flow, veh/h	3510	1610	1810	3705	3705	1610
Grp Volume(v), veh/h	258	129	524	1309	596	560
Grp Sat Flow(s),veh/h/ln	1755	1610	1810	1805	1805	1610
Q Serve(g_s), s	4.5	4.9	17.8	10.7	8.7	20.1
Cycle Q Clear(g_c), s	4.5	4.9	17.8	10.7	8.7	20.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	437	201	577	2547	1131	504
V/C Ratio(X)	0.59	0.64	0.91	0.51	0.53	1.11
Avail Cap(c_a), veh/h	1040	477	714	2819	1131	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	26.7	20.9	4.4	18.1	22.0
Incr Delay (d2), s/veh	1.3	3.4	12.9	0.2	0.6	73.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	4.5	8.2	1.6	3.1	16.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.8	30.2	33.9	4.6	18.7	95.8
LnGrp LOS	C	C	C	A	B	F
Approach Vol, veh/h	387			1833	1156	
Approach Delay, s/veh	28.6			13.0	56.1	
Approach LOS	C			B	E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	51.5		12.7	25.2	26.3
Change Period (Y+Rc), s	6.2		* 4.7	* 4.7	6.2
Max Green Setting (Gmax), s	50.1		* 19	* 25	20.1
Max Q Clear Time (g_c+I1), s	12.7		6.9	19.8	22.1
Green Ext Time (p_c), s	16.2		1.0	0.7	0.0

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)	0	0	0	42	0	530	0	903	55	272	680	0
Future Volume (veh/h)	0	0	0	42	0	530	0	903	55	272	680	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	52	0	488	0	1129	5	340	850	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	3	0	219	0	536	472	1440	6	387	1173	0
Arrive On Green	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.40	0.40	0.22	0.33	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	3628	16	1781	3647	0
Grp Volume(v), veh/h	0	0	0	52	0	488	0	553	581	340	850	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	1777	1867	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	1.7	0.0	7.8	0.0	17.6	17.6	11.9	13.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.7	0.0	7.8	0.0	17.6	17.6	11.9	13.6	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	219	0	536	472	705	741	387	1173	0
V/C Ratio(X)	0.00	0.00	0.00	0.24	0.00	0.91	0.00	0.78	0.78	0.88	0.72	0.00
Avail Cap(c_a), veh/h	0	230	0	219	0	536	472	985	1035	422	2411	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	25.7	0.0	20.4	0.0	17.1	17.1	24.4	19.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	19.6	0.0	2.8	2.7	17.5	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.7	0.0	9.1	0.0	6.2	6.5	6.2	4.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	26.2	0.0	40.0	0.0	19.9	19.7	42.0	19.9	0.0
LnGrp LOS	A	A	A	C	A	D	A	B	B	D	B	A
Approach Vol, veh/h		0			540			1134			1190	
Approach Delay, s/veh		0.0			38.7			19.8			26.2	
Approach LOS					D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.7	31.8		0.0	23.0	27.5		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 15	35.8		7.8	7.3	* 44		7.8				
Max Q Clear Time (g_c+I1), s	13.9	19.6		0.0	0.0	15.6		9.8				
Green Ext Time (p_c), s	0.2	6.0		0.0	0.0	5.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		26.0
HCM 6th LOS		C

Notes

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



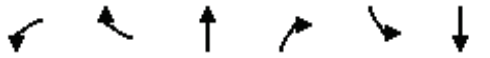
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	566	207	246	984	195	316	1029	143	261	574	500
Future Volume (veh/h)	311	566	207	246	984	195	316	1029	143	261	574	500
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	342	622	0	270	1081	118	347	1131	84	287	631	331
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	481	1471		355	1507	460	435	1553	474	468	1385	424
Arrive On Green	0.10	0.29	0.00	0.10	0.30	0.30	0.13	0.30	0.30	0.09	0.27	0.27
Sat Flow, veh/h	5023	5106	1585	3456	5106	1558	3456	5106	1558	5023	5106	1563
Grp Volume(v), veh/h	342	622	0	270	1081	118	347	1131	84	287	631	331
Grp Sat Flow(s),veh/h/ln	1674	1702	1585	1728	1702	1558	1728	1702	1558	1674	1702	1563
Q Serve(g_s), s	6.9	10.3	0.0	7.9	19.7	6.0	10.1	20.6	4.1	5.7	10.7	20.3
Cycle Q Clear(g_c), s	6.9	10.3	0.0	7.9	19.7	6.0	10.1	20.6	4.1	5.7	10.7	20.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	481	1471		355	1507	460	435	1553	474	468	1385	424
V/C Ratio(X)	0.71	0.42		0.76	0.72	0.26	0.80	0.73	0.18	0.61	0.46	0.78
Avail Cap(c_a), veh/h	1210	2213		832	2213	675	832	2213	675	1210	2213	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	30.0	0.0	45.3	32.7	27.9	44.1	32.3	26.6	45.3	31.5	35.0
Incr Delay (d2), s/veh	2.0	0.2	0.0	3.4	0.7	0.3	3.4	0.7	0.2	2.8	0.2	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.0	0.0	3.5	8.0	2.2	4.4	8.1	1.5	2.4	4.3	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	30.1	0.0	48.7	33.4	28.2	47.5	33.0	26.8	48.1	31.7	38.2
LnGrp LOS	D	C		D	C	C	D	C	C	D	C	D
Approach Vol, veh/h		964			1469			1562			1249	
Approach Delay, s/veh		36.3			35.8			35.9			37.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	35.9	14.7	37.6	14.9	36.6	18.1	34.2
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	25.0	45.0	25.0	45.0	25.0	45.0
Max Q Clear Time (g_c+I1), s	9.9	12.3	7.7	22.6	8.9	21.7	12.1	22.3
Green Ext Time (p_c), s	0.8	4.2	2.0	8.1	1.1	8.5	1.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	36.2
HCM 6th LOS	D

Notes

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	693	867	530	315	653	449
Future Volume (veh/h)	693	867	530	315	653	449
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	745	245	570	116	702	483
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	912	737	803	333	809	1002
Arrive On Green	0.26	0.26	0.21	0.21	0.23	0.54
Sat Flow, veh/h	3456	2790	3741	1551	3456	1870
Grp Volume(v), veh/h	745	245	570	116	702	483
Grp Sat Flow(s),veh/h/ln	1728	1395	1870	1551	1728	1870
Q Serve(g_s), s	10.9	3.8	7.6	3.4	10.5	8.7
Cycle Q Clear(g_c), s	10.9	3.8	7.6	3.4	10.5	8.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	912	737	803	333	809	1002
V/C Ratio(X)	0.82	0.33	0.71	0.35	0.87	0.48
Avail Cap(c_a), veh/h	1000	807	1013	420	916	1165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	16.0	19.6	18.0	19.9	7.8
Incr Delay (d2), s/veh	5.2	0.3	1.9	0.8	7.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	1.1	3.0	1.1	4.3	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.8	16.3	21.5	18.7	27.3	8.3
LnGrp LOS	C	B	C	B	C	A
Approach Vol, veh/h	990		686			1185
Approach Delay, s/veh	21.9		21.1			19.5
Approach LOS	C		C			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.3	17.0			34.3	19.6
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 14	14.6			33.6	15.6
Max Q Clear Time (g_c+I1), s	12.5	9.6			10.7	12.9
Green Ext Time (p_c), s	0.1	2.0			3.4	1.3

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	1046	87	51	1023	173	129	77	296	96	60	204
Future Volume (veh/h)	347	1046	87	51	1023	173	129	77	296	96	60	204
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	377	1137	90	55	1112	183	140	84	206	104	65	147
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	363	1783	141	91	1167	191	171	81	199	121	264	224
Arrive On Green	0.20	0.53	0.53	0.05	0.38	0.38	0.09	0.17	0.17	0.07	0.14	0.14
Sat Flow, veh/h	1810	3389	268	1810	3104	509	1810	488	1197	1810	1900	1610
Grp Volume(v), veh/h	377	605	622	55	645	650	140	0	290	104	65	147
Grp Sat Flow(s),veh/h/ln	1810	1805	1852	1810	1805	1808	1810	0	1685	1810	1900	1610
Q Serve(g_s), s	20.0	23.9	23.9	3.0	34.7	34.9	7.6	0.0	16.6	5.7	3.0	8.6
Cycle Q Clear(g_c), s	20.0	23.9	23.9	3.0	34.7	34.9	7.6	0.0	16.6	5.7	3.0	8.6
Prop In Lane	1.00		0.14	1.00		0.28	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h	363	950	974	91	679	680	171	0	280	121	264	224
V/C Ratio(X)	1.04	0.64	0.64	0.61	0.95	0.96	0.82	0.00	1.04	0.86	0.25	0.66
Avail Cap(c_a), veh/h	363	950	974	145	682	683	203	0	280	121	264	224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	16.9	16.9	46.4	30.3	30.3	44.4	0.0	41.6	46.1	38.3	40.7
Incr Delay (d2), s/veh	58.0	1.4	1.4	6.4	23.0	24.0	19.7	0.0	63.2	41.6	0.5	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.6	9.7	10.0	1.5	18.8	19.2	4.3	0.0	11.7	3.9	1.4	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.9	18.3	18.3	52.8	53.3	54.4	64.0	0.0	104.8	87.7	38.8	47.6
LnGrp LOS	F	B	B	D	D	D	E	A	F	F	D	D
Approach Vol, veh/h		1604			1350			430			316	
Approach Delay, s/veh		37.0			53.8			91.5			59.0	
Approach LOS		D			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	57.2	11.2	22.4	24.0	42.2	13.9	19.7
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	5.0	* 50	6.7	16.6	20.0	* 38	11.2	12.1
Max Q Clear Time (g_c+I1), s	5.0	25.9	7.7	18.6	22.0	36.9	9.6	10.6
Green Ext Time (p_c), s	0.0	9.4	0.0	0.0	0.0	0.6	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	51.3
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)	62	139	323	122	206	373	56	604	129	122	84	24
Future Volume (veh/h)	62	139	323	122	206	373	56	604	129	122	84	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	67	151	56	133	224	181	61	657	131	133	91	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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	93	410	183	169	560	250	89	734	146	331	1585	205
Arrive On Green	0.05	0.11	0.11	0.09	0.16	0.16	0.05	0.48	0.48	0.06	0.49	0.49
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	1538	307	5103	3214	416
Grp Volume(v), veh/h	67	151	56	133	224	181	61	0	788	133	50	53
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	0	1845	1701	1805	1825
Q Serve(g_s), s	2.6	2.8	2.3	5.2	4.0	7.7	2.4	0.0	27.9	1.8	1.0	1.1
Cycle Q Clear(g_c), s	2.6	2.8	2.3	5.2	4.0	7.7	2.4	0.0	27.9	1.8	1.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.23
Lane Grp Cap(c), veh/h	93	410	183	169	560	250	89	0	881	331	890	900
V/C Ratio(X)	0.72	0.37	0.31	0.79	0.40	0.72	0.69	0.00	0.89	0.40	0.06	0.06
Avail Cap(c_a), veh/h	159	912	407	205	1003	447	215	0	1048	363	940	950
HCM Platoon Ratio	1.00	1.00	1.00	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	33.5	29.4	29.2	31.8	27.3	28.8	33.5	0.0	17.1	32.2	9.5	9.5
Incr Delay (d2), s/veh	10.0	0.6	0.9	15.5	0.5	4.0	9.0	0.0	8.9	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.2	0.9	2.9	1.7	3.1	1.2	0.0	12.5	0.7	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	29.9	30.1	47.3	27.7	32.8	42.6	0.0	26.0	33.0	9.5	9.5
LnGrp LOS	D	C	C	D	C	C	D	A	C	C	A	A
Approach Vol, veh/h		274			538			849			236	
Approach Delay, s/veh		33.3			34.3			27.2			22.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	38.7	11.2	12.6	8.0	39.8	8.2	15.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	40.7	8.1	18.1	8.5	37.3	6.3	19.9
Max Q Clear Time (g_c+I1), s	3.8	29.9	7.2	4.8	4.4	3.1	4.6	9.7
Green Ext Time (p_c), s	0.0	4.3	0.0	0.8	0.0	0.6	0.0	1.5

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	700	210	80	1173	996	206
Future Volume (veh/h)	700	210	80	1173	996	206
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	761	228	87	1275	1083	224
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1283	1007	112	1755	1322	606
Arrive On Green	0.36	0.36	0.06	0.49	0.38	0.38
Sat Flow, veh/h	3705	2834	1810	3705	3510	1610
Grp Volume(v), veh/h	761	228	87	1275	1083	224
Grp Sat Flow(s),veh/h/ln	1805	1417	1810	1805	1755	1610
Q Serve(g_s), s	11.3	3.7	3.1	18.4	18.2	6.6
Cycle Q Clear(g_c), s	11.3	3.7	3.1	18.4	18.2	6.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1283	1007	112	1755	1322	606
V/C Ratio(X)	0.59	0.23	0.78	0.73	0.82	0.37
Avail Cap(c_a), veh/h	2132	1674	146	2672	1741	799
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	14.8	30.3	13.4	18.4	14.8
Incr Delay (d2), s/veh	0.4	0.1	17.3	0.6	2.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	1.1	1.8	6.5	7.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.7	14.9	47.6	14.0	20.9	15.2
LnGrp LOS	B	B	D	B	C	B
Approach Vol, veh/h	989			1362	1307	
Approach Delay, s/veh	17.0			16.1	19.9	
Approach LOS	B			B	B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	36.3		29.2	8.6	27.8
Change Period (Y+Rc), s	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	48.5		32.5	5.3	38.7
Max Q Clear Time (g_c+I1), s	20.4		20.2	5.1	13.3
Green Ext Time (p_c), s	11.5		4.5	0.0	6.8

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	238	103	332	64	498	166	1391	132	409	1256	24
Future Volume (veh/h)	52	238	103	332	64	498	166	1391	132	409	1256	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	60	274	7	382	74	267	191	1599	68	470	1444	10
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	307	260	449	454	384	210	2114	656	525	1594	711
Arrive On Green	0.05	0.16	0.16	0.13	0.24	0.24	0.12	0.41	0.41	0.15	0.45	0.45
Sat Flow, veh/h	1781	1870	1585	3456	1870	1583	1781	5106	1584	3456	3554	1585
Grp Volume(v), veh/h	60	274	7	382	74	267	191	1599	68	470	1444	10
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1583	1781	1702	1584	1728	1777	1585
Q Serve(g_s), s	4.5	19.5	0.5	14.7	4.2	20.9	14.4	36.3	3.6	18.2	51.4	0.5
Cycle Q Clear(g_c), s	4.5	19.5	0.5	14.7	4.2	20.9	14.4	36.3	3.6	18.2	51.4	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	307	260	449	454	384	210	2114	656	525	1594	711
V/C Ratio(X)	0.65	0.89	0.03	0.85	0.16	0.69	0.91	0.76	0.10	0.89	0.91	0.01
Avail Cap(c_a), veh/h	354	371	315	686	454	384	210	2114	656	584	1594	711
HCM Platoon Ratio	1.00	1.00	1.00	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	63.3	55.7	47.7	57.9	40.6	46.9	59.3	34.0	24.4	56.6	34.9	20.8
Incr Delay (d2), s/veh	7.7	20.1	0.0	6.4	0.2	5.3	38.7	2.6	0.3	15.3	9.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	11.0	0.2	6.7	2.0	8.6	8.6	14.9	1.4	8.9	23.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	75.8	47.8	64.3	40.8	52.3	98.0	36.6	24.7	71.9	43.8	20.9
LnGrp LOS	E	E	D	E	D	D	F	D	C	E	D	C
Approach Vol, veh/h		341			723			1858			1924	
Approach Delay, s/veh		74.3			57.4			42.5			50.6	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	66.8	22.3	27.0	24.7	62.1	11.6	37.6
Change Period (Y+Rc), s	4.0	5.8	4.6	4.6	4.0	5.8	4.6	4.6
Max Green Setting (Gmax), s	16.0	61.0	27.0	27.0	23.0	54.0	27.0	27.0
Max Q Clear Time (g_c+I1), s	16.4	53.4	16.7	21.5	20.2	38.3	6.5	22.9
Green Ext Time (p_c), s	0.0	5.2	1.0	0.7	0.5	9.6	0.1	0.5

Intersection Summary	
HCM 6th Ctrl Delay	50.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	65	65	656	93	273	76	1229	743	152	1341	38
Future Volume (veh/h)	54	65	65	656	93	273	76	1229	743	152	1341	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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	70	0	705	100	143	82	1322	496	163	1442	17
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	284		805	466	505	122	1432	1006	245	1441	640
Arrive On Green	0.06	0.08	0.00	0.23	0.25	0.25	0.07	0.40	0.40	0.07	0.41	0.41
Sat Flow, veh/h	1781	3647	0	3456	1870	1575	1781	3554	1581	3456	3554	1577
Grp Volume(v), veh/h	58	70	0	705	100	143	82	1322	496	163	1442	17
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1728	1870	1575	1781	1777	1581	1728	1777	1577
Q Serve(g_s), s	4.4	2.6	0.0	27.6	6.0	9.5	6.3	49.7	23.4	6.5	57.0	0.9
Cycle Q Clear(g_c), s	4.4	2.6	0.0	27.6	6.0	9.5	6.3	49.7	23.4	6.5	57.0	0.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	284		805	466	505	122	1432	1006	245	1441	640
V/C Ratio(X)	0.51	0.25		0.88	0.21	0.28	0.67	0.92	0.49	0.66	1.00	0.03
Avail Cap(c_a), veh/h	127	407		907	572	595	127	1434	1007	253	1441	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.7	60.7	0.0	52.0	41.9	35.7	63.9	39.9	13.6	63.6	41.8	25.1
Incr Delay (d2), s/veh	5.0	0.6	0.0	10.2	0.3	0.4	14.3	10.3	0.4	7.0	23.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.2	0.0	12.9	2.8	3.7	3.3	22.8	8.0	3.0	28.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.6	61.3	0.0	62.1	42.2	36.2	78.2	50.2	14.0	70.7	65.6	25.1
LnGrp LOS	E	E		E	D	D	E	D	B	E	F	C
Approach Vol, veh/h		128			948			1900			1622	
Approach Delay, s/veh		64.6			56.1			41.9			65.7	
Approach LOS		E			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	64.1	40.2	18.7	17.1	64.5	16.5	42.5
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	10.3	56.7	36.9	16.1	10.0	57.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	8.5	51.7	29.6	4.6	8.3	59.0	6.4	11.5
Green Ext Time (p_c), s	0.1	3.8	3.1	0.3	0.0	0.0	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	53.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	465	315	53	48	142	456	84	732	42	543	470	120
Future Volume (veh/h)	465	315	53	48	142	456	84	732	42	543	470	120
Initial Q (Qb), veh	0	0	0	0	0	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	596	404	4	62	182	299	108	938	13	696	603	57
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	644	1114	497	80	611	614	133	1016	453	745	1517	677
Arrive On Green	0.19	0.31	0.31	0.04	0.17	0.17	0.07	0.29	0.29	0.22	0.43	0.43
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	596	404	4	62	182	299	108	938	13	696	603	57
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	22.3	11.6	0.2	4.5	5.9	18.8	7.9	33.7	0.8	26.0	15.4	2.8
Cycle Q Clear(g_c), s	22.3	11.6	0.2	4.5	5.9	18.8	7.9	33.7	0.8	26.0	15.4	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	644	1114	497	80	611	614	133	1016	453	745	1517	677
V/C Ratio(X)	0.93	0.36	0.01	0.78	0.30	0.49	0.81	0.92	0.03	0.93	0.40	0.08
Avail Cap(c_a), veh/h	656	1412	630	149	1034	803	230	1058	472	761	1517	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	35.0	31.1	62.2	47.6	30.4	60.0	45.6	33.8	50.7	26.0	22.4
Incr Delay (d2), s/veh	19.1	0.2	0.0	14.9	0.3	0.6	11.4	12.8	0.0	18.4	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	4.9	0.1	2.3	2.6	7.0	3.9	16.3	0.3	12.8	6.4	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.7	35.2	31.1	77.1	47.8	31.0	71.4	58.4	33.9	69.2	26.2	22.5
LnGrp LOS	E	D	C	E	D	C	E	E	C	E	C	C
Approach Vol, veh/h		1004			543			1059			1356	
Approach Delay, s/veh		56.9			41.9			59.4			48.1	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	45.9	32.4	43.4	28.5	27.3	13.8	62.0
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.0	5.8
Max Green Setting (Gmax), s	11.0	* 52	29.0	39.2	25.0	* 38	17.0	51.2
Max Q Clear Time (g_c+I1), s	6.5	13.6	28.0	35.7	24.3	20.8	9.9	17.4
Green Ext Time (p_c), s	0.0	2.6	0.3	1.9	0.2	1.9	0.1	4.2

Intersection Summary	
HCM 6th Ctrl Delay	52.5
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)	267	714	256	407	534	287	120	807	334	445	847	335
Future Volume (veh/h)	267	714	256	407	534	287	120	807	334	445	847	335
Initial Q (Qb), veh	0	0	0	0	0	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	322	860	122	490	643	309	145	972	336	536	1020	180
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	348	955	426	506	1117	759	163	1199	372	569	1094	488
Arrive On Green	0.10	0.27	0.27	0.15	0.31	0.31	0.09	0.23	0.23	0.16	0.31	0.31
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	1781	5106	1585	3456	3554	1585
Grp Volume(v), veh/h	322	860	122	490	643	309	145	972	336	536	1020	180
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1781	1702	1585	1728	1777	1585
Q Serve(g_s), s	10.1	25.5	6.7	15.4	16.6	13.8	8.8	19.7	22.5	16.8	30.5	9.7
Cycle Q Clear(g_c), s	10.1	25.5	6.7	15.4	16.6	13.8	8.8	19.7	22.5	16.8	30.5	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	348	955	426	506	1117	759	163	1199	372	569	1094	488
V/C Ratio(X)	0.93	0.90	0.29	0.97	0.58	0.41	0.89	0.81	0.90	0.94	0.93	0.37
Avail Cap(c_a), veh/h	348	988	441	506	1128	764	163	1214	377	569	1105	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	38.6	31.7	46.4	31.4	18.4	49.1	39.5	40.6	45.2	36.7	29.5
Incr Delay (d2), s/veh	30.1	11.2	0.5	32.1	0.9	0.5	40.7	4.4	24.5	24.3	13.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	11.9	2.5	8.6	6.8	4.8	5.6	8.4	10.9	8.8	14.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.9	49.8	32.2	78.5	32.3	18.9	89.8	44.0	65.1	69.4	50.6	30.2
LnGrp LOS	E	D	C	E	C	B	F	D	E	E	D	C
Approach Vol, veh/h		1304			1442			1453			1736	
Approach Delay, s/veh		55.4			45.1			53.4			54.3	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	35.9	22.0	31.5	15.0	40.9	14.0	39.5
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8
Max Green Setting (Gmax), s	6.0	* 30	18.0	26.0	11.0	34.7	10.0	34.0
Max Q Clear Time (g_c+I1), s	17.4	27.5	18.8	24.5	12.1	18.6	10.8	32.5
Green Ext Time (p_c), s	0.0	1.8	0.0	1.2	0.0	6.3	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	52.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* 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)	370	2226	525	0	1625	904	0	0	0	1257	225	938
Future Volume (veh/h)	370	2226	525	0	1625	904	0	0	0	1257	225	938
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	374	2248	451	0	1641	0				1432	0	617
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	0	2	2				2	2	2
Cap, veh/h	360	2404	740	0	1669					1569	0	694
Arrive On Green	0.10	0.47	0.47	0.00	0.33	0.00				0.44	0.00	0.44
Sat Flow, veh/h	3456	5106	1572	0	5274	1585				3563	0	1575
Grp Volume(v), veh/h	374	2248	451	0	1641	0				1432	0	617
Grp Sat Flow(s),veh/h/ln	1728	1702	1572	0	1702	1585				1781	0	1575
Q Serve(g_s), s	12.3	49.2	25.2	0.0	37.7	0.0				44.4	0.0	42.6
Cycle Q Clear(g_c), s	12.3	49.2	25.2	0.0	37.7	0.0				44.4	0.0	42.6
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	360	2404	740	0	1669					1569	0	694
V/C Ratio(X)	1.04	0.94	0.61	0.00	0.98					0.91	0.00	0.89
Avail Cap(c_a), veh/h	360	2404	740	0	1669					1626	0	719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	29.6	23.2	0.0	39.4	0.0				30.9	0.0	30.4
Incr Delay (d2), s/veh	58.0	7.7	1.6	0.0	18.2	0.0				8.2	0.0	13.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	20.5	9.2	0.0	17.9	0.0				20.0	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	110.9	37.3	24.8	0.0	57.6	0.0				39.1	0.0	43.5
LnGrp LOS	F	D	C	A	E					D	A	D
Approach Vol, veh/h		3073			1641						2049	
Approach Delay, s/veh		44.4			57.6						40.4	
Approach LOS		D			E						D	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	61.0	57.1	17.0	44.0
Change Period (Y+Rc), s	5.4	5.1	* 4.7	5.4
Max Green Setting (Gmax), s	55.6	53.9	* 12	38.6
Max Q Clear Time (g_c+I1), s	51.2	46.4	14.3	39.7
Green Ext Time (p_c), s	4.3	5.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	46.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	789	868	30	712	978	51
Future Volume (veh/h)	789	868	30	712	978	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	797	418	30	719	1032	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	912	773	66	1050	1148	511
Arrive On Green	0.49	0.49	0.04	0.56	0.32	0.00
Sat Flow, veh/h	1870	1585	1781	1870	3563	1585
Grp Volume(v), veh/h	797	418	30	719	1032	0
Grp Sat Flow(s),veh/h/ln	1870	1585	1781	1870	1781	1585
Q Serve(g_s), s	31.0	14.9	1.3	22.3	22.5	0.0
Cycle Q Clear(g_c), s	31.0	14.9	1.3	22.3	22.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	912	773	66	1050	1148	511
V/C Ratio(X)	0.87	0.54	0.46	0.69	0.90	0.00
Avail Cap(c_a), veh/h	1068	905	66	1206	1225	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.6	14.5	38.4	12.7	26.3	0.0
Incr Delay (d2), s/veh	7.6	0.7	1.8	1.5	8.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	4.7	0.6	7.9	9.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.2	15.2	40.2	14.2	35.3	0.0
LnGrp LOS	C	B	D	B	D	A
Approach Vol, veh/h	1215			749	1032	
Approach Delay, s/veh	22.4			15.3	35.3	
Approach LOS	C			B	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		50.2		31.2	6.0	44.2
Change Period (Y+Rc), s		4.5		5.0	3.0	4.5
Max Green Setting (Gmax), s		52.5		28.0	3.0	46.5
Max Q Clear Time (g_c+I1), s		24.3		24.5	3.3	33.0
Green Ext Time (p_c), s		6.1		1.7	0.0	6.7

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	1336	400	410	867	100	640	779	896	70	680	140
Future Volume (veh/h)	250	1336	400	410	867	100	640	779	896	70	680	140
Initial Q (Qb), veh	0	0	0	0	0	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	1518	0	466	985	0	727	885	0	80	773	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	341	1716		451	1627		875	1110		219	1029	
Arrive On Green	0.10	0.34	0.00	0.09	0.32	0.00	0.17	0.31	0.00	0.06	0.20	0.00
Sat Flow, veh/h	3456	5106	1585	5023	5106	1585	5023	3554	1585	3456	5106	1585
Grp Volume(v), veh/h	284	1518	0	466	985	0	727	885	0	80	773	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1674	1702	1585	1674	1777	1585	1728	1702	1585
Q Serve(g_s), s	9.4	32.9	0.0	10.5	19.0	0.0	16.3	26.7	0.0	2.6	16.7	0.0
Cycle Q Clear(g_c), s	9.4	32.9	0.0	10.5	19.0	0.0	16.3	26.7	0.0	2.6	16.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	341	1716		451	1627		875	1110		219	1029	
V/C Ratio(X)	0.83	0.88		1.03	0.61		0.83	0.80		0.37	0.75	
Avail Cap(c_a), veh/h	387	1764		451	1627		1207	1911		236	1869	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.8	36.7	0.0	53.2	33.6	0.0	46.6	36.8	0.0	52.5	43.9	0.0
Incr Delay (d2), s/veh	11.7	5.8	0.0	51.2	0.8	0.0	3.6	1.4	0.0	1.0	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	13.6	0.0	6.4	7.7	0.0	6.8	11.1	0.0	1.1	6.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.4	42.5	0.0	104.4	34.4	0.0	50.2	38.2	0.0	53.5	45.1	0.0
LnGrp LOS	E	D		F	C		D	D		D	D	
Approach Vol, veh/h		1802			1451			1612			853	
Approach Delay, s/veh		45.8			56.9			43.6			45.9	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	43.4	25.9	29.7	16.0	45.4	12.9	42.6
Change Period (Y+Rc), s	6.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1
Max Green Setting (Gmax), s	13.1	36.8	28.1	42.8	10.5	40.4	8.0	62.9
Max Q Clear Time (g_c+I1), s	11.4	21.0	18.3	18.7	12.5	34.9	4.6	28.7
Green Ext Time (p_c), s	0.1	7.4	2.0	4.9	0.0	4.4	0.0	6.2

Intersection Summary	
HCM 6th Ctrl Delay	48.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	775	20	755	140	50	270	500	1285	50	110	780	600
Future Volume (veh/h)	775	20	755	140	50	270	500	1285	50	110	780	600
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.94	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	1900
Adj Flow Rate, veh/h	842	22	774	187	54	179	543	1713	12	147	1040	426
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.75	0.92	0.75	0.75	0.75	0.75	0.92
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	917	656	1304	247	271	212	587	1721	522	234	1074	1597
Arrive On Green	0.26	0.35	0.35	0.07	0.14	0.14	0.11	0.34	0.34	0.07	0.30	0.30
Sat Flow, veh/h	3510	1900	2834	3456	1900	1488	5103	5106	1550	3456	3554	2834
Grp Volume(v), veh/h	842	22	774	187	54	179	543	1713	12	147	1040	426
Grp Sat Flow(s),veh/h/ln	1755	1900	1417	1728	1900	1488	1701	1702	1550	1728	1777	1417
Q Serve(g_s), s	27.4	0.9	23.8	6.2	2.9	13.8	12.4	39.3	0.6	4.9	33.9	9.1
Cycle Q Clear(g_c), s	27.4	0.9	23.8	6.2	2.9	13.8	12.4	39.3	0.6	4.9	33.9	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	917	656	1304	247	271	212	587	1721	522	234	1074	1597
V/C Ratio(X)	0.92	0.03	0.59	0.76	0.20	0.84	0.93	1.00	0.02	0.63	0.97	0.27
Avail Cap(c_a), veh/h	957	656	1304	341	291	228	587	1721	522	235	1074	1597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	25.5	23.6	53.5	44.4	49.1	51.5	38.8	26.0	53.3	40.4	13.2
Incr Delay (d2), s/veh	13.5	0.0	0.7	6.2	0.4	22.8	20.8	20.6	0.0	3.9	20.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.5	0.4	8.1	2.9	1.4	6.5	6.2	18.6	0.2	2.2	16.9	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	25.5	24.3	59.7	44.8	71.9	72.2	59.4	26.0	57.3	60.3	13.2
LnGrp LOS	E	C	C	E	D	E	E	E	C	E	E	B
Approach Vol, veh/h		1638			420			2268			1613	
Approach Delay, s/veh		40.4			63.0			62.3			47.6	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	41.5	12.9	45.0	13.9	45.6	36.7	21.2
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	6.0	6.0	6.0	4.5
Max Green Setting (Gmax), s	13.5	35.5	11.6	39.9	8.0	39.5	32.0	18.0
Max Q Clear Time (g_c+I1), s	14.4	35.9	8.2	25.8	6.9	41.3	29.4	15.8
Green Ext Time (p_c), s	0.0	0.0	0.2	3.1	0.0	0.0	1.3	0.2

Intersection Summary	
HCM 6th Ctrl Delay	52.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	933	420	86	1412	1333	232
Future Volume (veh/h)	933	420	86	1412	1333	232
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1014	407	93	1535	1449	155
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1071	491	121	2068	1576	703
Arrive On Green	0.31	0.31	0.07	0.57	0.44	0.44
Sat Flow, veh/h	3510	1610	1810	3705	3705	1610
Grp Volume(v), veh/h	1014	407	93	1535	1449	155
Grp Sat Flow(s),veh/h/ln	1755	1610	1810	1805	1805	1610
Q Serve(g_s), s	25.2	21.0	4.5	28.2	33.8	5.4
Cycle Q Clear(g_c), s	25.2	21.0	4.5	28.2	33.8	5.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1071	491	121	2068	1576	703
V/C Ratio(X)	0.95	0.83	0.77	0.74	0.92	0.22
Avail Cap(c_a), veh/h	1072	492	121	2092	1599	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	28.9	41.0	14.2	23.7	15.7
Incr Delay (d2), s/veh	16.3	11.3	26.2	1.6	9.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	1.5	2.8	9.5	14.3	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	46.6	40.2	67.3	15.7	32.8	15.9
LnGrp LOS	D	D	E	B	C	B
Approach Vol, veh/h	1421			1628	1604	
Approach Delay, s/veh	44.8			18.7	31.2	
Approach LOS	D			B	C	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	57.4		32.0	12.2	45.2
Change Period (Y+Rc), s	6.2		* 4.7	6.2	6.2
Max Green Setting (Gmax), s	51.8		* 27	6.0	39.6
Max Q Clear Time (g_c+I1), s	30.2		27.2	6.5	35.8
Green Ext Time (p_c), s	14.3		0.0	0.0	3.2

Intersection Summary	
HCM 6th Ctrl Delay	31.0
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)	0	0	0	40	0	362	0	1288	42	358	1178	0
Future Volume (veh/h)	0	0	0	40	0	362	0	1288	42	358	1178	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1870	1900	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	48	0	325	0	1533	49	426	1402	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	2	2	0
Cap, veh/h	0	2	0	132	0	525	492	1788	57	461	1711	0
Arrive On Green	0.00	0.00	0.00	0.07	0.00	0.07	0.00	0.51	0.51	0.26	0.48	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1585	1810	3515	112	1781	3647	0
Grp Volume(v), veh/h	0	0	0	48	0	325	0	773	809	426	1402	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1810	0	1585	1810	1777	1850	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	2.7	0.0	7.8	0.0	40.5	40.8	24.9	36.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.7	0.0	7.8	0.0	40.5	40.8	24.9	36.2	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	132	0	525	492	904	941	461	1711	0
V/C Ratio(X)	0.00	0.00	0.00	0.36	0.00	0.62	0.00	0.86	0.86	0.92	0.82	0.00
Avail Cap(c_a), veh/h	0	138	0	132	0	525	492	1126	1172	554	3082	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	47.2	0.0	30.1	0.0	22.9	22.9	38.7	23.8	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7	0.0	2.2	0.0	5.5	5.5	19.4	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.3	0.0	7.2	0.0	16.2	17.0	12.7	13.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	48.9	0.0	32.3	0.0	28.4	28.5	58.1	24.8	0.0
LnGrp LOS	A	A	A	D	A	C	A	C	C	E	C	A
Approach Vol, veh/h		0			373			1582			1828	
Approach Delay, s/veh		0.0			34.4			28.4			32.5	
Approach LOS					C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.4	60.6		0.0	35.3	57.7		14.0				
Change Period (Y+Rc), s	* 4.7	6.2		6.2	6.2	* 6.2		6.2				
Max Green Setting (Gmax), s	* 33	67.8		7.8	8.3	* 93		7.8				
Max Q Clear Time (g_c+I1), s	26.9	42.8		0.0	0.0	38.2		9.8				
Green Ext Time (p_c), s	0.7	11.6		0.0	0.0	13.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		31.0	
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)	746	1027	552	353	868	444	243	859	212	567	1426	152
Future Volume (veh/h)	746	1027	552	353	868	444	243	859	212	567	1426	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		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	769	1059	0	364	895	419	251	886	62	585	1470	83
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	769	1583		427	1432	641	314	1329	405	648	1522	465
Arrive On Green	0.15	0.31	0.00	0.12	0.28	0.28	0.09	0.26	0.26	0.13	0.30	0.30
Sat Flow, veh/h	5023	5106	1585	3456	5106	1557	3456	5106	1556	5023	5106	1560
Grp Volume(v), veh/h	769	1059	0	364	895	419	251	886	62	585	1470	83
Grp Sat Flow(s),veh/h/ln	1674	1702	1585	1728	1702	1557	1728	1702	1556	1674	1702	1560
Q Serve(g_s), s	19.0	22.4	0.0	12.8	19.0	27.0	8.8	19.3	3.8	14.2	35.2	4.9
Cycle Q Clear(g_c), s	19.0	22.4	0.0	12.8	19.0	27.0	8.8	19.3	3.8	14.2	35.2	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	769	1583		427	1432	641	314	1329	405	648	1522	465
V/C Ratio(X)	1.00	0.67		0.85	0.62	0.65	0.80	0.67	0.15	0.90	0.97	0.18
Avail Cap(c_a), veh/h	769	1605		529	1605	694	501	1605	489	648	1522	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.6	37.3	0.0	53.3	38.9	29.6	55.3	41.1	35.4	53.3	42.9	32.3
Incr Delay (d2), s/veh	32.5	1.1	0.0	10.7	0.6	2.0	4.7	0.8	0.2	16.8	15.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	9.2	0.0	6.1	7.9	10.1	4.0	7.9	1.5	6.9	16.6	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.0	38.3	0.0	64.0	39.6	31.6	60.0	41.9	35.5	70.1	58.6	32.5
LnGrp LOS	F	D		E	D	C	E	D	D	E	E	C
Approach Vol, veh/h		1828			1678			1199			2138	
Approach Delay, s/veh		58.0			42.9			45.4			60.7	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.3	44.5	21.0	38.3	24.0	40.8	16.3	43.0
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	39.0	16.0	39.0	19.0	39.0	18.0	37.0
Max Q Clear Time (g_c+I1), s	14.8	24.4	16.2	21.3	21.0	29.0	10.8	37.2
Green Ext Time (p_c), s	0.5	5.9	0.0	5.5	0.0	5.3	0.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	52.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	895	816	683	953	969	622
Future Volume (veh/h)	895	816	683	953	969	622
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	932	220	922	426	1009	648
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	916	739	1189	493	984	1202
Arrive On Green	0.26	0.26	0.32	0.32	0.28	0.64
Sat Flow, veh/h	3456	2790	3741	1552	3456	1870
Grp Volume(v), veh/h	932	220	922	426	1009	648
Grp Sat Flow(s),veh/h/ln	1728	1395	1870	1552	1728	1870
Q Serve(g_s), s	31.0	7.4	26.1	30.2	33.3	22.2
Cycle Q Clear(g_c), s	31.0	7.4	26.1	30.2	33.3	22.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	916	739	1189	493	984	1202
V/C Ratio(X)	1.02	0.30	0.78	0.86	1.03	0.54
Avail Cap(c_a), veh/h	916	739	1285	533	984	1250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	34.3	36.1	37.5	41.8	11.4
Incr Delay (d2), s/veh	34.3	0.3	3.0	13.4	35.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.2	2.5	11.9	12.8	18.4	8.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	77.3	34.6	39.1	50.9	77.3	11.9
LnGrp LOS	F	C	D	D	F	B
Approach Vol, veh/h	1152		1348			1657
Approach Delay, s/veh	69.1		42.8			51.7
Approach LOS	E		D			D

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	38.0	42.6			80.6	36.4
Change Period (Y+Rc), s	* 4.7	5.4			5.4	5.4
Max Green Setting (Gmax), s	* 33	40.2			78.2	31.0
Max Q Clear Time (g_c+I1), s	35.3	32.2			24.2	33.0
Green Ext Time (p_c), s	0.0	5.0			5.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1244	61	61	1026	61	42	84	42	526	313	63
Future Volume (veh/h)	40	1244	61	61	1026	61	42	84	42	526	313	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	1352	62	66	1115	64	46	91	25	572	340	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	1391	64	75	1408	81	60	120	33	581	705	598
Arrive On Green	0.03	0.40	0.40	0.04	0.41	0.41	0.03	0.08	0.08	0.32	0.37	0.37
Sat Flow, veh/h	1810	3515	161	1810	3470	199	1810	1435	394	1810	1900	1610
Grp Volume(v), veh/h	43	693	721	66	580	599	46	0	116	572	340	63
Grp Sat Flow(s),veh/h/ln	1810	1805	1871	1810	1805	1864	1810	0	1829	1810	1900	1610
Q Serve(g_s), s	2.8	45.2	45.4	4.4	33.7	33.8	3.0	0.0	7.4	37.7	16.4	3.1
Cycle Q Clear(g_c), s	2.8	45.2	45.4	4.4	33.7	33.8	3.0	0.0	7.4	37.7	16.4	3.1
Prop In Lane	1.00		0.09	1.00		0.11	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	57	714	741	75	732	756	60	0	152	581	705	598
V/C Ratio(X)	0.75	0.97	0.97	0.88	0.79	0.79	0.77	0.00	0.76	0.99	0.48	0.11
Avail Cap(c_a), veh/h	75	715	741	75	732	756	128	0	152	581	705	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(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	57.6	35.6	35.6	57.2	31.2	31.2	57.6	0.0	53.8	40.5	28.9	24.7
Incr Delay (d2), s/veh	25.0	26.4	26.5	63.3	5.9	5.8	18.6	0.0	19.8	33.5	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	24.6	25.7	3.3	15.7	16.2	1.7	0.0	4.3	21.9	7.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.6	62.0	62.1	120.5	37.1	37.0	76.2	0.0	73.7	73.9	29.4	24.8
LnGrp LOS	F	E	E	F	D	D	E	A	E	E	C	C
Approach Vol, veh/h		1457			1245			162			975	
Approach Delay, s/veh		62.7			41.5			74.4			55.2	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	52.2	43.0	15.8	7.8	53.4	8.5	50.3
Change Period (Y+Rc), s	4.0	* 4.7	4.5	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	5.0	* 48	38.5	10.0	5.0	* 48	8.5	40.0
Max Q Clear Time (g_c+I1), s	6.4	47.4	39.7	9.4	4.8	35.8	5.0	18.4
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	6.0	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	548	972	360	50	531	340	460	877	310	290	1015	315
Future Volume (veh/h)	548	972	360	50	531	340	460	877	310	290	1015	315
Initial Q (Qb), veh	0	0	0	0	0	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	1900	1870	1900	1900	1900	1870	1870	1900	1900	1870	1870
Adj Flow Rate, veh/h	596	1057	141	54	577	130	500	953	221	315	1103	120
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	0	2	0	0	0	2	2	0	0	2	2
Cap, veh/h	607	1568	479	70	598	267	513	1040	471	336	1171	523
Arrive On Green	0.18	0.30	0.30	0.04	0.17	0.17	0.15	0.29	0.29	0.19	0.33	0.33
Sat Flow, veh/h	3456	5187	1585	1810	3610	1610	3456	3554	1610	1810	3554	1585
Grp Volume(v), veh/h	596	1057	141	54	577	130	500	953	221	315	1103	120
Grp Sat Flow(s),veh/h/ln	1728	1729	1585	1810	1805	1610	1728	1777	1610	1810	1777	1585
Q Serve(g_s), s	17.1	17.8	6.8	2.9	15.8	7.3	14.4	25.8	11.2	17.1	30.1	5.5
Cycle Q Clear(g_c), s	17.1	17.8	6.8	2.9	15.8	7.3	14.4	25.8	11.2	17.1	30.1	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	607	1568	479	70	598	267	513	1040	471	336	1171	523
V/C Ratio(X)	0.98	0.67	0.29	0.77	0.97	0.49	0.97	0.92	0.47	0.94	0.94	0.23
Avail Cap(c_a), veh/h	607	1568	479	104	598	267	513	1052	477	336	1184	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	30.5	26.6	47.4	41.3	37.7	42.2	34.1	28.9	40.0	32.5	24.2
Incr Delay (d2), s/veh	31.9	1.2	0.3	17.9	28.2	1.4	33.0	12.3	0.7	33.3	14.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	7.4	2.6	1.7	9.3	3.0	8.1	12.1	4.4	10.3	14.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.8	31.6	27.0	65.4	69.5	39.1	75.3	46.3	29.6	73.3	46.8	24.4
LnGrp LOS	E	C	C	E	E	D	E	D	C	E	D	C
Approach Vol, veh/h		1794			761			1674			1538	
Approach Delay, s/veh		44.9			64.0			52.8			50.5	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	37.3	8.4	34.6	23.0	33.6	22.0	21.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	14.8	33.2	5.7	28.3	18.5	29.5	17.5	16.5
Max Q Clear Time (g_c+I1), s	16.4	32.1	4.9	19.8	19.1	27.8	19.1	17.8
Green Ext Time (p_c), s	0.0	0.8	0.0	4.8	0.0	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	462	414	255	404	378	26	261	42	1091	539	25
Future Volume (veh/h)	252	462	414	255	404	378	26	261	42	1091	539	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	274	502	255	277	439	77	28	284	39	1186	586	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	293	684	305	295	688	307	51	322	44	1234	1451	59
Arrive On Green	0.16	0.19	0.19	0.16	0.19	0.19	0.03	0.20	0.20	0.24	0.41	0.41
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	1635	225	5103	3534	145
Grp Volume(v), veh/h	274	502	255	277	439	77	28	0	323	1186	299	311
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	0	1860	1701	1805	1874
Q Serve(g_s), s	12.9	11.3	13.2	13.1	9.7	3.5	1.3	0.0	14.6	19.8	10.1	10.1
Cycle Q Clear(g_c), s	12.9	11.3	13.2	13.1	9.7	3.5	1.3	0.0	14.6	19.8	10.1	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.08
Lane Grp Cap(c), veh/h	293	684	305	295	688	307	51	0	366	1234	741	770
V/C Ratio(X)	0.93	0.73	0.84	0.94	0.64	0.25	0.55	0.00	0.88	0.96	0.40	0.40
Avail Cap(c_a), veh/h	293	752	335	295	756	337	117	0	409	1234	741	770
HCM Platoon Ratio	1.00	1.00	1.00	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	35.7	33.0	33.7	35.7	32.2	29.7	41.4	0.0	33.7	32.3	18.0	18.0
Incr Delay (d2), s/veh	35.6	3.4	15.5	36.2	1.6	0.4	8.8	0.0	18.2	17.1	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	5.2	6.3	8.6	4.3	1.4	0.7	0.0	8.3	9.8	4.1	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.3	36.3	49.2	71.9	33.8	30.1	50.2	0.0	52.0	49.4	18.3	18.3
LnGrp LOS	E	D	D	E	C	C	D	A	D	D	B	B
Approach Vol, veh/h		1031			793			351			1796	
Approach Delay, s/veh		48.8			46.8			51.8			38.8	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.4	21.5	18.6	20.9	6.9	40.0	18.5	21.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.9	19.0	14.1	18.0	5.6	34.3	14.0	18.1
Max Q Clear Time (g_c+I1), s	21.8	16.6	15.1	15.2	3.3	12.1	14.9	11.7
Green Ext Time (p_c), s	0.0	0.4	0.0	1.2	0.0	3.8	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	44.2
HCM 6th LOS	D



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1421	1288	540	1092	659	293
Future Volume (veh/h)	1421	1288	540	1092	659	293
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1545	1387	587	1187	716	317
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1460	1675	518	2642	654	761
Arrive On Green	0.40	0.40	0.29	0.73	0.19	0.19
Sat Flow, veh/h	3705	2834	1810	3705	3510	1610
Grp Volume(v), veh/h	1545	1387	587	1187	716	317
Grp Sat Flow(s),veh/h/ln	1805	1417	1810	1805	1755	1610
Q Serve(g_s), s	44.5	43.1	31.5	14.5	20.5	14.2
Cycle Q Clear(g_c), s	44.5	43.1	31.5	14.5	20.5	14.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1460	1675	518	2642	654	761
V/C Ratio(X)	1.06	0.83	1.13	0.45	1.09	0.42
Avail Cap(c_a), veh/h	1460	1675	518	2642	654	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	18.0	39.2	5.9	44.8	19.0
Incr Delay (d2), s/veh	40.5	3.6	81.5	0.1	63.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.0	20.0	25.5	4.7	14.6	14.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	73.3	21.6	120.7	6.0	108.5	19.4
LnGrp LOS	F	C	F	A	F	B
Approach Vol, veh/h	2932			1774	1033	
Approach Delay, s/veh	48.9			44.0	81.2	
Approach LOS	D			D	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		85.0		25.0	36.0	49.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		80.5		20.5	31.5	44.5
Max Q Clear Time (g_c+I1), s		16.5		22.5	33.5	46.5
Green Ext Time (p_c), s		12.6		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		53.2
HCM 6th LOS		D

MOVEMENT SUMMARY

Site: 101 [EPAP No Project AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	33	3.0	33	3.0	0.313	5.9	LOS A	1.7	44.3	0.34	0.16	0.34	32.6
8	T1	All MCs	250	3.0	250	3.0	0.313	5.9	LOS A	1.7	44.3	0.34	0.16	0.34	33.3
18b	R3	All MCs	87	3.0	87	3.0	0.313	5.9	LOS A	1.7	44.3	0.34	0.16	0.34	32.7
Approach			370	3.0	370	3.0	0.313	5.9	LOS A	1.7	44.3	0.34	0.16	0.34	33.1
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	109	3.0	109	3.0	0.420	8.6	LOS A	2.3	58.3	0.60	0.42	0.60	30.0
3ax	L1	All MCs	196	3.0	196	3.0	0.420	8.6	LOS A	2.3	58.3	0.60	0.42	0.60	30.0
18ax	R1	All MCs	87	3.0	87	3.0	0.420	8.6	LOS A	2.3	58.3	0.60	0.42	0.60	30.7
Approach			391	3.0	391	3.0	0.420	8.6	LOS A	2.3	58.3	0.60	0.42	0.60	30.2
North: Pavillion Pkwy															
7a	L1	All MCs	43	3.0	43	3.0	0.099	4.5	LOS A	0.4	9.7	0.42	0.29	0.42	32.5
4	T1	All MCs	54	3.0	54	3.0	0.099	4.5	LOS A	0.4	9.7	0.42	0.29	0.42	33.2
14	R2	All MCs	11	3.0	11	3.0	0.007	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			109	3.0	109	3.0	0.099	4.1	LOS A	0.4	9.7	0.38	0.26	0.38	33.2
West: RoadName															
5	L2	All MCs	54	3.0	54	3.0	0.067	3.7	LOS A	0.3	6.6	0.32	0.19	0.32	32.1
12a	R1	All MCs	22	3.0	22	3.0	0.067	3.7	LOS A	0.3	6.6	0.32	0.19	0.32	32.7
12	R2	All MCs	76	3.0	76	3.0	0.068	3.8	LOS A	0.3	7.3	0.31	0.17	0.31	34.3
Approach			152	3.0	152	3.0	0.068	3.7	LOS A	0.3	7.3	0.31	0.18	0.31	33.2
All Vehicles			1022	3.0	1022	3.0	0.420	6.4	LOS A	2.3	58.3	0.44	0.28	0.44	31.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [EPAP No Project PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	11	3.0	11	3.0	0.175	8.0	LOS A	0.7	17.2	0.64	0.58	0.64	31.6
8	T1	All MCs	62	3.0	62	3.0	0.175	8.0	LOS A	0.7	17.2	0.64	0.58	0.64	32.3
18b	R3	All MCs	34	3.0	34	3.0	0.175	8.0	LOS A	0.7	17.2	0.64	0.58	0.64	31.7
Approach			107	3.0	107	3.0	0.175	8.0	LOS A	0.7	17.2	0.64	0.58	0.64	32.0
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	77	3.0	77	3.0	0.263	5.9	LOS A	1.3	33.2	0.44	0.27	0.44	30.7
3ax	L1	All MCs	188	3.0	188	3.0	0.263	5.9	LOS A	1.3	33.2	0.44	0.27	0.44	30.7
18ax	R1	All MCs	11	3.0	11	3.0	0.263	5.9	LOS A	1.3	33.2	0.44	0.27	0.44	31.4
Approach			276	3.0	276	3.0	0.263	5.9	LOS A	1.3	33.2	0.44	0.27	0.44	30.8
North: Pavillion Pkwy															
7a	L1	All MCs	190	3.0	190	3.0	0.452	8.4	LOS A	2.5	63.8	0.54	0.35	0.54	30.9
4	T1	All MCs	286	3.0	286	3.0	0.452	8.4	LOS A	2.5	63.8	0.54	0.35	0.54	31.5
14	R2	All MCs	14	3.0	14	3.0	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			490	3.0	490	3.0	0.452	8.1	LOS A	2.5	63.8	0.52	0.34	0.52	31.4
West: RoadName															
5	L2	All MCs	153	3.0	153	3.0	0.670	16.2	LOS C	6.4	163.9	0.81	0.89	1.42	28.1
12a	R1	All MCs	384	3.0	384	3.0	0.670	16.2	LOS C	6.4	163.9	0.81	0.89	1.42	28.6
12	R2	All MCs	362	3.0	362	3.0	0.399	8.5	LOS A	2.1	53.6	0.60	0.44	0.60	32.0
Approach			899	3.0	899	3.0	0.670	13.1	LOS B	6.4	163.9	0.73	0.71	1.09	29.7
All Vehicles			1772	3.0	1772	3.0	0.670	10.3	LOS B	6.4	163.9	0.62	0.53	0.81	30.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [EPAP Plus Project AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	48	3.0	48	3.0	0.495	9.6	LOS A	3.4	86.4	0.63	0.45	0.69	30.9
8	T1	All MCs	322	3.0	322	3.0	0.495	9.6	LOS A	3.4	86.4	0.63	0.45	0.69	31.6
18b	R3	All MCs	112	3.0	112	3.0	0.495	9.6	LOS A	3.4	86.4	0.63	0.45	0.69	31.0
Approach			482	3.0	482	3.0	0.495	9.6	LOS A	3.4	86.4	0.63	0.45	0.69	31.4
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	111	3.0	111	3.0	0.489	10.7	LOS B	3.3	85.7	0.69	0.61	0.89	29.3
3ax	L1	All MCs	202	3.0	202	3.0	0.489	10.7	LOS B	3.3	85.7	0.69	0.61	0.89	29.3
18ax	R1	All MCs	96	3.0	96	3.0	0.489	10.7	LOS B	3.3	85.7	0.69	0.61	0.89	29.9
Approach			409	3.0	409	3.0	0.489	10.7	LOS B	3.3	85.7	0.69	0.61	0.89	29.4
North: Pavillion Pkwy															
7a	L1	All MCs	80	3.0	80	3.0	0.150	5.1	LOS A	0.6	15.3	0.45	0.32	0.45	32.0
4	T1	All MCs	65	3.0	65	3.0	0.150	5.1	LOS A	0.6	15.3	0.45	0.32	0.45	32.7
14	R2	All MCs	13	3.0	13	3.0	0.008	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			159	3.0	159	3.0	0.150	4.7	LOS A	0.6	15.3	0.41	0.29	0.41	32.6
West: RoadName															
5	L2	All MCs	67	3.0	67	3.0	0.203	5.2	LOS A	0.9	22.3	0.40	0.25	0.40	32.4
12a	R1	All MCs	151	3.0	151	3.0	0.203	5.2	LOS A	0.9	22.3	0.40	0.25	0.40	33.1
12	R2	All MCs	297	3.0	297	3.0	0.267	5.7	LOS A	1.4	34.8	0.39	0.22	0.39	33.3
Approach			515	3.0	515	3.0	0.267	5.5	LOS A	1.4	34.8	0.40	0.23	0.40	33.1
All Vehicles			1564	3.0	1564	3.0	0.495	8.0	LOS A	3.4	86.4	0.55	0.40	0.62	31.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [EPAP Plus Project PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	28	3.0	28	3.0	0.415	12.9	LOS B	2.0	51.6	0.74	0.76	0.94	29.6
8	T1	All MCs	171	3.0	171	3.0	0.415	12.9	LOS B	2.0	51.6	0.74	0.76	0.94	30.2
18b	R3	All MCs	34	3.0	34	3.0	0.415	12.9	LOS B	2.0	51.6	0.74	0.76	0.94	29.7
Approach			233	3.0	233	3.0	0.415	12.9	LOS B	2.0	51.6	0.74	0.76	0.94	30.0
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	77	3.0	77	3.0	0.333	7.5	LOS A	1.7	42.3	0.56	0.40	0.56	30.3
3ax	L1	All MCs	195	3.0	195	3.0	0.333	7.5	LOS A	1.7	42.3	0.56	0.40	0.56	30.3
18ax	R1	All MCs	34	3.0	34	3.0	0.333	7.5	LOS A	1.7	42.3	0.56	0.40	0.56	30.9
Approach			305	3.0	305	3.0	0.333	7.5	LOS A	1.7	42.3	0.56	0.40	0.56	30.3
North: Pavillion Pkwy															
7a	L1	All MCs	204	3.0	204	3.0	0.476	8.9	LOS A	2.8	70.8	0.57	0.39	0.59	30.6
4	T1	All MCs	286	3.0	286	3.0	0.476	8.9	LOS A	2.8	70.8	0.57	0.39	0.59	31.2
14	R2	All MCs	14	3.0	14	3.0	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			504	3.0	504	3.0	0.476	8.7	LOS A	2.8	70.8	0.56	0.38	0.57	31.1
West: RoadName															
5	L2	All MCs	153	3.0	153	3.0	0.759	20.7	LOS C	9.0	230.9	0.89	1.06	1.77	26.6
12a	R1	All MCs	447	3.0	447	3.0	0.759	20.7	LOS C	9.0	230.9	0.89	1.06	1.77	27.1
12	R2	All MCs	396	3.0	396	3.0	0.436	9.1	LOS A	2.5	64.5	0.63	0.47	0.66	31.7
Approach			996	3.0	996	3.0	0.759	16.1	LOS C	9.0	230.9	0.79	0.83	1.33	28.6
All Vehicles			2038	3.0	2038	3.0	0.759	12.6	LOS B	9.0	230.9	0.69	0.64	0.98	29.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Cumulative 1 No Project AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	98	3.0	98	3.0	0.850	21.9	LOS C	25.1	642.5	1.00	1.07	1.87	26.5
8	T1	All MCs	674	3.0	674	3.0	0.850	21.9	LOS C	25.1	642.5	1.00	1.07	1.87	27.0
18b	R3	All MCs	130	3.0	130	3.0	0.850	21.9	LOS C	25.1	642.5	1.00	1.07	1.87	26.6
Approach			902	3.0	902	3.0	0.850	21.9	LOS C	25.1	642.5	1.00	1.07	1.87	26.9
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	54	3.0	54	3.0	1.091	91.5	LOS F	27.5	702.8	1.00	2.32	5.27	14.6
3ax	L1	All MCs	217	3.0	217	3.0	1.091	91.5	LOS F	27.5	702.8	1.00	2.32	5.27	14.6
18ax	R1	All MCs	304	3.0	304	3.0	1.091	91.5	LOS F	27.5	702.8	1.00	2.32	5.27	14.7
Approach			576	3.0	576	3.0	1.091	91.5	LOS F	27.5	702.8	1.00	2.32	5.27	14.6
North: Pavillion Pkwy															
7a	L1	All MCs	109	3.0	109	3.0	0.431	8.5	LOS A	2.2	57.0	0.57	0.40	0.57	31.1
4	T1	All MCs	315	3.0	315	3.0	0.431	8.5	LOS A	2.2	57.0	0.57	0.40	0.57	31.7
14	R2	All MCs	152	3.0	152	3.0	0.094	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			576	3.0	576	3.0	0.431	6.3	LOS A	2.2	57.0	0.42	0.30	0.42	32.7
West: RoadName															
5	L2	All MCs	87	3.0	87	3.0	0.125	5.4	LOS A	0.5	12.1	0.50	0.39	0.50	31.2
12a	R1	All MCs	22	3.0	22	3.0	0.125	5.4	LOS A	0.5	12.1	0.50	0.39	0.50	31.7
12	R2	All MCs	228	3.0	228	3.0	0.252	6.5	LOS A	1.2	29.7	0.53	0.38	0.53	32.9
Approach			337	3.0	337	3.0	0.252	6.2	LOS A	1.2	29.7	0.52	0.39	0.52	32.4
All Vehicles			2391	3.0	2391	3.0	1.091	32.7	LOS D	27.5	702.8	0.79	1.09	2.15	23.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Cumulative 1 No Project PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	11	3.0	11	3.0	0.944	59.6	LOS F	11.0	281.1	0.97	1.55	2.98	18.5
8	T1	All MCs	352	3.0	352	3.0	0.944	59.6	LOS F	11.0	281.1	0.97	1.55	2.98	18.7
18b	R3	All MCs	46	3.0	46	3.0	0.944	59.6	LOS F	11.0	281.1	0.97	1.55	2.98	18.5
Approach			409	3.0	409	3.0	0.944	59.6	LOS F	11.0	281.1	0.97	1.55	2.98	18.7
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	277	3.0	277	3.0	1.447	222.9	LOS F	114.0	2917.2	1.00	4.79	11.67	7.9
3ax	L1	All MCs	388	3.0	388	3.0	1.447	222.9	LOS F	114.0	2917.2	1.00	4.79	11.67	7.9
18ax	R1	All MCs	388	3.0	388	3.0	1.447	222.9	LOS F	114.0	2917.2	1.00	4.79	11.67	8.0
Approach			1053	3.0	1053	3.0	1.447	222.9	LOS F	114.0	2917.2	1.00	4.79	11.67	8.0
North: Pavillion Pkwy															
7a	L1	All MCs	1172	3.0	1172	3.0	2.115	515.6	LOS F	311.3	7969.1	1.00	7.78	18.68	3.9
4	T1	All MCs	653	3.0	653	3.0	2.115	515.6	LOS F	311.3	7969.1	1.00	7.78	18.68	3.9
14	R2	All MCs	41	3.0	41	3.0	0.025	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			1866	3.0	1866	3.0	2.115	504.2	LOS F	311.3	7969.1	0.98	7.61	18.26	4.0
West: RoadName															
5	L2	All MCs	307	3.0	307	3.0	1.511	259.8	LOS F	84.9	2174.0	1.00	4.70	13.65	7.0
12a	R1	All MCs	439	3.0	439	3.0	1.511	259.8	LOS F	84.9	2174.0	1.00	4.70	13.65	7.1
12	R2	All MCs	416	3.0	416	3.0	0.532	12.2	LOS B	3.9	99.7	0.74	0.71	1.04	30.4
Approach			1162	3.0	1162	3.0	1.511	171.1	LOS F	84.9	2174.0	0.91	3.27	9.13	9.7
All Vehicles			4490	3.0	4490	3.0	2.115	311.5	LOS F	311.3	7969.1	0.96	5.27	12.96	6.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Cumulative 1 Plus Project AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	134	3.0	134	3.0	1.690	328.5	LOS F	169.8	4345.9	1.00	5.92	14.67	5.8
8	T1	All MCs	946	3.0	946	3.0	1.690	328.5	LOS F	169.8	4345.9	1.00	5.92	14.67	5.8
18b	R3	All MCs	167	3.0	167	3.0	1.690	328.5	LOS F	169.8	4345.9	1.00	5.92	14.67	5.8
Approach			1247	3.0	1247	3.0	1.690	328.5	LOS F	169.8	4345.9	1.00	5.92	14.67	5.8
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	55	3.0	55	3.0	1.016	65.3	LOS F	22.3	571.6	1.00	1.97	4.01	17.5
3ax	L1	All MCs	222	3.0	222	3.0	1.016	65.3	LOS F	22.3	571.6	1.00	1.97	4.01	17.5
18ax	R1	All MCs	332	3.0	332	3.0	1.016	65.3	LOS F	22.3	571.6	1.00	1.97	4.01	17.7
Approach			609	3.0	609	3.0	1.016	65.3	LOS F	22.3	571.6	1.00	1.97	4.01	17.6
North: Pavillion Pkwy															
7a	L1	All MCs	461	3.0	461	3.0	1.122	83.2	LOS F	68.2	1745.2	1.00	2.88	5.40	15.4
4	T1	All MCs	643	3.0	643	3.0	1.122	83.2	LOS F	68.2	1745.2	1.00	2.88	5.40	15.5
14	R2	All MCs	183	3.0	183	3.0	0.112	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			1287	3.0	1287	3.0	1.122	71.4	LOS F	68.2	1745.2	0.86	2.47	4.63	16.8
West: RoadName															
5	L2	All MCs	108	3.0	108	3.0	0.277	11.6	LOS B	1.0	25.0	0.70	0.71	0.74	28.8
12a	R1	All MCs	27	3.0	27	3.0	0.277	11.6	LOS B	1.0	25.0	0.70	0.71	0.74	29.2
12	R2	All MCs	321	3.0	321	3.0	0.476	12.4	LOS B	2.8	71.2	0.74	0.73	0.98	30.3
Approach			455	3.0	455	3.0	0.476	12.2	LOS B	2.8	71.2	0.73	0.72	0.91	29.8
All Vehicles			3598	3.0	3598	3.0	1.690	152.0	LOS F	169.8	4345.9	0.91	3.36	7.53	10.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Cumulative 1 Plus Project PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	33	3.0	33	3.0	1.702	347.0	LOS F	95.3	2440.9	1.00	4.79	14.27	5.5
8	T1	All MCs	618	3.0	618	3.0	1.702	347.0	LOS F	95.3	2440.9	1.00	4.79	14.27	5.6
18b	R3	All MCs	46	3.0	46	3.0	1.702	347.0	LOS F	95.3	2440.9	1.00	4.79	14.27	5.5
Approach			697	3.0	697	3.0	1.702	347.0	LOS F	95.3	2440.9	1.00	4.79	14.27	5.6
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	277	3.0	277	3.0	1.675	323.8	LOS F	151.6	3879.9	1.00	5.76	14.89	5.9
3ax	L1	All MCs	388	3.0	388	3.0	1.675	323.8	LOS F	151.6	3879.9	1.00	5.76	14.89	5.9
18ax	R1	All MCs	463	3.0	463	3.0	1.675	323.8	LOS F	151.6	3879.9	1.00	5.76	14.89	5.9
Approach			1128	3.0	1128	3.0	1.675	323.8	LOS F	151.6	3879.9	1.00	5.76	14.89	5.9
North: Pavillion Pkwy															
7a	L1	All MCs	1339	3.0	1339	3.0	2.170	539.2	LOS F	347.8	8903.2	1.00	7.86	18.05	3.8
4	T1	All MCs	653	3.0	653	3.0	2.170	539.2	LOS F	347.8	8903.2	1.00	7.86	18.05	3.8
14	R2	All MCs	41	3.0	41	3.0	0.025	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			2034	3.0	2034	3.0	2.170	528.3	LOS F	347.8	8903.2	0.98	7.70	17.69	3.9
West: RoadName															
5	L2	All MCs	463	3.0	463	3.0	1.891	427.1	LOS F	137.9	3530.7	1.00	5.99	18.23	4.7
12a	R1	All MCs	439	3.0	439	3.0	1.891	427.1	LOS F	137.9	3530.7	1.00	5.99	18.23	4.7
12	R2	All MCs	416	3.0	416	3.0	0.512	11.4	LOS B	3.7	93.9	0.72	0.66	0.96	30.7
Approach			1318	3.0	1318	3.0	1.891	295.8	LOS F	137.9	3530.7	0.91	4.30	12.78	6.3
All Vehicles			5177	3.0	5177	3.0	2.170	400.1	LOS F	347.8	8903.2	0.97	6.02	15.37	4.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Cumulative 2 No Project AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	55	3.0	55	3.0	0.787	17.4	LOS C	17.9	458.9	0.90	0.80	1.43	28.0
8	T1	All MCs	657	3.0	657	3.0	0.787	17.4	LOS C	17.9	458.9	0.90	0.80	1.43	28.6
18b	R3	All MCs	140	3.0	140	3.0	0.787	17.4	LOS C	17.9	458.9	0.90	0.80	1.43	28.1
Approach			852	3.0	852	3.0	0.787	17.4	LOS C	17.9	458.9	0.90	0.80	1.43	28.5
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	133	3.0	133	3.0	1.308	169.8	LOS F	65.0	1664.5	1.00	3.75	9.62	9.7
3ax	L1	All MCs	222	3.0	222	3.0	1.308	169.8	LOS F	65.0	1664.5	1.00	3.75	9.62	9.7
18ax	R1	All MCs	399	3.0	399	3.0	1.308	169.8	LOS F	65.0	1664.5	1.00	3.75	9.62	9.8
Approach			753	3.0	753	3.0	1.308	169.8	LOS F	65.0	1664.5	1.00	3.75	9.62	9.8
North: Pavillion Pkwy															
7a	L1	All MCs	104	3.0	104	3.0	0.195	5.4	LOS A	0.8	20.8	0.45	0.31	0.45	31.9
4	T1	All MCs	91	3.0	91	3.0	0.195	5.4	LOS A	0.8	20.8	0.45	0.31	0.45	32.6
14	R2	All MCs	26	3.0	26	3.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			222	3.0	222	3.0	0.195	4.8	LOS A	0.8	20.8	0.39	0.27	0.39	32.7
West: RoadName															
5	L2	All MCs	67	3.0	67	3.0	0.092	4.3	LOS A	0.4	9.0	0.39	0.26	0.39	31.8
12a	R1	All MCs	27	3.0	27	3.0	0.092	4.3	LOS A	0.4	9.0	0.39	0.26	0.39	32.4
12	R2	All MCs	284	3.0	284	3.0	0.260	5.7	LOS A	1.3	33.3	0.41	0.23	0.41	33.3
Approach			378	3.0	378	3.0	0.260	5.4	LOS A	1.3	33.3	0.40	0.24	0.40	33.0
All Vehicles			2205	3.0	2205	3.0	1.308	66.1	LOS F	65.0	1664.5	0.80	1.66	3.95	17.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Cumulative 2 No Project PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	11	3.0	11	3.0	0.795	37.2	LOS E	5.8	149.4	0.91	1.19	1.89	22.6
8	T1	All MCs	284	3.0	284	3.0	0.795	37.2	LOS E	5.8	149.4	0.91	1.19	1.89	22.9
18b	R3	All MCs	46	3.0	46	3.0	0.795	37.2	LOS E	5.8	149.4	0.91	1.19	1.89	22.6
Approach			340	3.0	340	3.0	0.795	37.2	LOS E	5.8	149.4	0.91	1.19	1.89	22.9
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	277	3.0	277	3.0	1.390	196.4	LOS F	111.1	2844.6	1.00	4.53	10.43	8.7
3ax	L1	All MCs	433	3.0	433	3.0	1.390	196.4	LOS F	111.1	2844.6	1.00	4.53	10.43	8.7
18ax	R1	All MCs	388	3.0	388	3.0	1.390	196.4	LOS F	111.1	2844.6	1.00	4.53	10.43	8.8
Approach			1098	3.0	1098	3.0	1.390	196.4	LOS F	111.1	2844.6	1.00	4.53	10.43	8.8
North: Pavillion Pkwy															
7a	L1	All MCs	1172	3.0	1172	3.0	2.138	526.9	LOS F	301.9	7729.0	1.00	7.86	19.55	3.9
4	T1	All MCs	586	3.0	586	3.0	2.138	526.9	LOS F	301.9	7729.0	1.00	7.86	19.55	3.9
14	R2	All MCs	27	3.0	27	3.0	0.017	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			1785	3.0	1785	3.0	2.138	518.9	LOS F	301.9	7729.0	0.98	7.74	19.25	3.9
West: RoadName															
5	L2	All MCs	274	3.0	274	3.0	1.401	212.3	LOS F	70.6	1807.0	1.00	4.22	11.93	8.2
12a	R1	All MCs	439	3.0	439	3.0	1.401	212.3	LOS F	70.6	1807.0	1.00	4.22	11.93	8.3
12	R2	All MCs	416	3.0	416	3.0	0.517	11.6	LOS B	3.7	95.4	0.72	0.67	0.98	30.6
Approach			1129	3.0	1129	3.0	1.401	138.3	LOS F	70.6	1807.0	0.90	2.91	7.90	11.2
All Vehicles			4352	3.0	4352	3.0	2.138	301.1	LOS F	301.9	7729.0	0.96	5.17	12.72	6.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Cumulative 2 Plus Project AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	61	3.0	61	3.0	0.934	35.1	LOS E	29.7	759.1	1.00	1.64	2.82	23.0
8	T1	All MCs	657	3.0	657	3.0	0.934	35.1	LOS E	29.7	759.1	1.00	1.64	2.82	23.4
18b	R3	All MCs	140	3.0	140	3.0	0.934	35.1	LOS E	29.7	759.1	1.00	1.64	2.82	23.1
Approach			858	3.0	858	3.0	0.934	35.1	LOS E	29.7	759.1	1.00	1.64	2.82	23.3
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	133	3.0	133	3.0	1.331	179.5	LOS F	68.4	1750.9	1.00	3.87	10.01	9.3
3ax	L1	All MCs	224	3.0	224	3.0	1.331	179.5	LOS F	68.4	1750.9	1.00	3.87	10.01	9.3
18ax	R1	All MCs	405	3.0	405	3.0	1.331	179.5	LOS F	68.4	1750.9	1.00	3.87	10.01	9.4
Approach			762	3.0	762	3.0	1.331	179.5	LOS F	68.4	1750.9	1.00	3.87	10.01	9.4
North: Pavillion Pkwy															
7a	L1	All MCs	133	3.0	133	3.0	0.224	5.7	LOS A	1.0	24.4	0.46	0.32	0.46	31.7
4	T1	All MCs	91	3.0	91	3.0	0.224	5.7	LOS A	1.0	24.4	0.46	0.32	0.46	32.3
14	R2	All MCs	26	3.0	26	3.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			250	3.0	250	3.0	0.224	5.1	LOS A	1.0	24.4	0.41	0.28	0.41	32.3
West: RoadName															
5	L2	All MCs	67	3.0	67	3.0	0.217	5.6	LOS A	0.9	23.6	0.45	0.31	0.45	32.2
12a	R1	All MCs	151	3.0	151	3.0	0.217	5.6	LOS A	0.9	23.6	0.45	0.31	0.45	32.9
12	R2	All MCs	351	3.0	351	3.0	0.321	6.4	LOS A	1.7	44.0	0.43	0.25	0.43	33.0
Approach			570	3.0	570	3.0	0.321	6.1	LOS A	1.7	44.0	0.44	0.27	0.44	32.9
All Vehicles			2439	3.0	2439	3.0	1.331	70.4	LOS F	68.4	1750.9	0.81	1.88	4.26	17.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Cumulative 2 Plus Project PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Pavilion Parkway/Promontory Parkway
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Pavillion Pkwy															
3	L2	All MCs	28	3.0	28	3.0	0.839	42.6	LOS E	6.8	174.8	0.93	1.27	2.12	21.4
8	T1	All MCs	284	3.0	284	3.0	0.839	42.6	LOS E	6.8	174.8	0.93	1.27	2.12	21.7
18b	R3	All MCs	46	3.0	46	3.0	0.839	42.6	LOS E	6.8	174.8	0.93	1.27	2.12	21.4
Approach			358	3.0	358	3.0	0.839	42.6	LOS E	6.8	174.8	0.93	1.27	2.12	21.6
SouthEast: Promontory Pkwy															
3bx	L3	All MCs	277	3.0	277	3.0	1.432	214.5	LOS F	120.5	3084.7	1.00	4.76	11.07	8.2
3ax	L1	All MCs	439	3.0	439	3.0	1.432	214.5	LOS F	120.5	3084.7	1.00	4.76	11.07	8.2
18ax	R1	All MCs	411	3.0	411	3.0	1.432	214.5	LOS F	120.5	3084.7	1.00	4.76	11.07	8.2
Approach			1127	3.0	1127	3.0	1.432	214.5	LOS F	120.5	3084.7	1.00	4.76	11.07	8.2
North: Pavillion Pkwy															
7a	L1	All MCs	1186	3.0	1186	3.0	2.171	541.8	LOS F	308.0	7884.4	1.00	7.95	19.88	3.8
4	T1	All MCs	586	3.0	586	3.0	2.171	541.8	LOS F	308.0	7884.4	1.00	7.95	19.88	3.8
14	R2	All MCs	27	3.0	27	3.0	0.017	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	36.5
Approach			1799	3.0	1799	3.0	2.171	533.6	LOS F	308.0	7884.4	0.98	7.83	19.58	3.8
West: RoadName															
5	L2	All MCs	274	3.0	274	3.0	1.507	256.9	LOS F	88.0	2252.5	1.00	4.77	13.72	7.1
12a	R1	All MCs	502	3.0	502	3.0	1.507	256.9	LOS F	88.0	2252.5	1.00	4.77	13.72	7.1
12	R2	All MCs	450	3.0	450	3.0	0.552	12.4	LOS B	4.4	112.3	0.74	0.70	1.06	30.3
Approach			1226	3.0	1226	3.0	1.507	167.2	LOS F	88.0	2252.5	0.91	3.28	9.07	9.8
All Vehicles			4510	3.0	4510	3.0	2.171	315.3	LOS F	308.0	7884.4	0.96	5.30	13.21	6.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Appendix C.
Signal Warrants

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

Project	Prologis IPC 2
Scenario	EPAP Plus Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	430	0	0	53
Through	0	0	504	867
Right	64	0	149	0
Total	494	0	653	920

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	448.7
Approach with Worst Case Delay	WB
Total Vehicles on Approach	920

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
EPAP Plus Project	**114.7**	**920**	**2,067**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

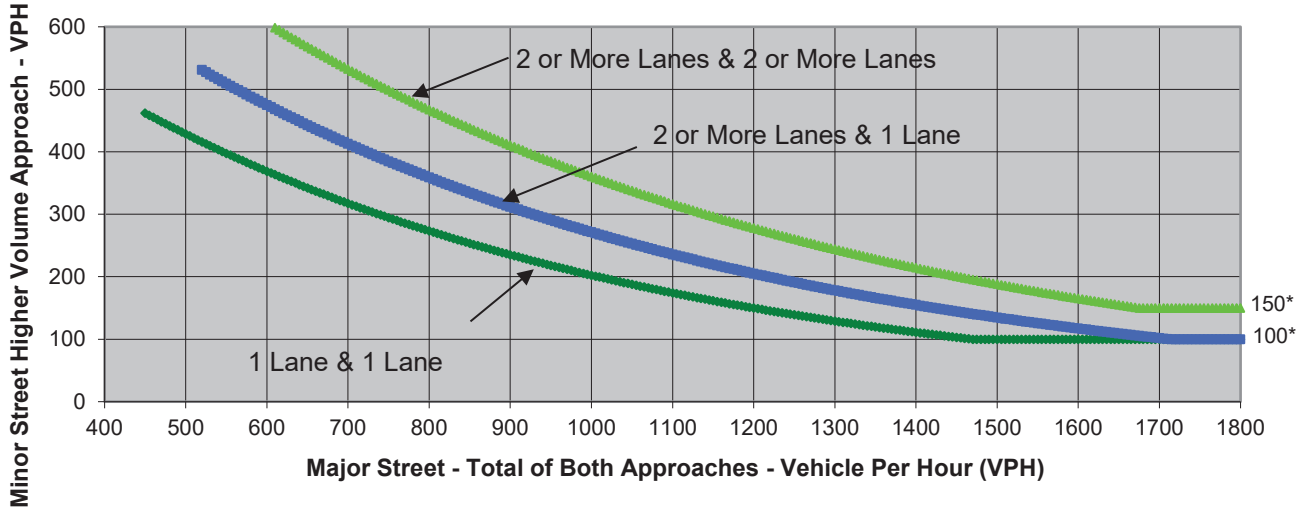
Project	Prologis IPC 2
Scenario	EPAP Plus Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	430		0	53
Through	0		504	867
Right	64		149	
Total	494	0	653	920

Major Street Direction

x	North/South
	East/West



* 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.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Pavilion Parkway	Minor Street Capital Park Drive	Warrant Met
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**494**	**920**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

Project	Prologis IPC 2
Scenario	EPAP Plus Project
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	282	0	0	192
Through	0	0	1,036	636
Right	125	0	385	0
Total	407	0	1,421	828

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	815.6
Approach with Worst Case Delay	EB
Total Vehicles on Approach	1,421

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
EPAP Plus Project	**321.9**	**1,421**	**2,656**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

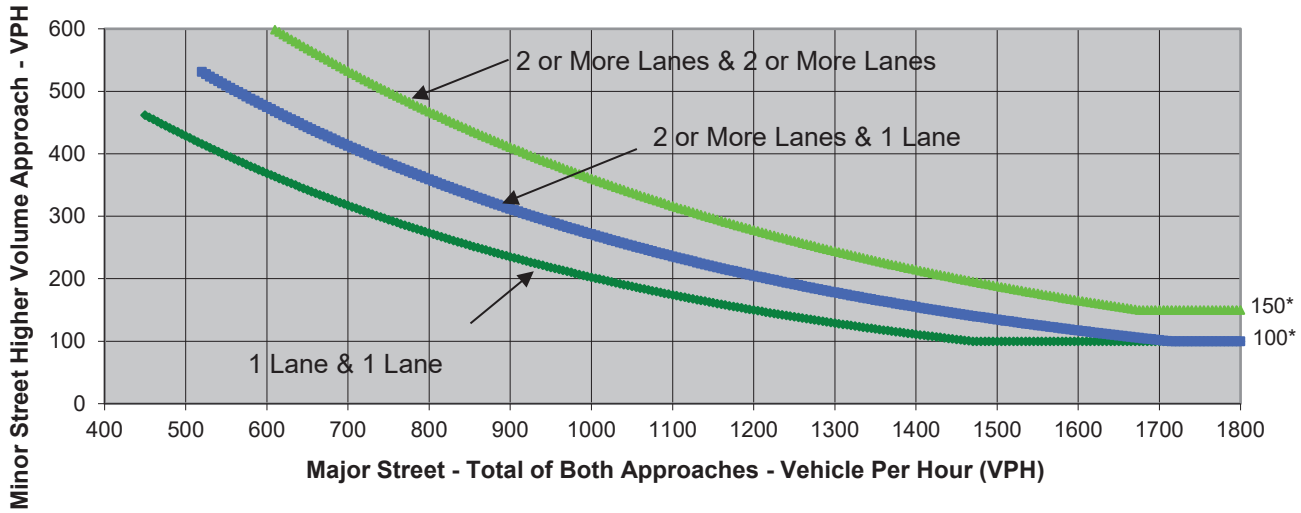
Project	Prologis IPC 2
Scenario	EPAP Plus Project
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	282		0	192
Through	0		1,036	636
Right	125		385	
Total	407	0	1,421	828

Major Street Direction

x	North/South
	East/West



* 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.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Pavilion Parkway	Capital Park Drive	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**407**	**1,421**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

Project	Prologis IPC 2
Scenario	Cumulative 1 Plus Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	453	210	74	485
Through	677	388	614	1,640
Right	293	150	121	556
Total	1,423	748	809	2,681

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	3097.4
Approach with Worst Case Delay	WB
Total Vehicles on Approach	2,681

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative 1 Plus Project	**2306.7**	**2,681**	**5,661**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

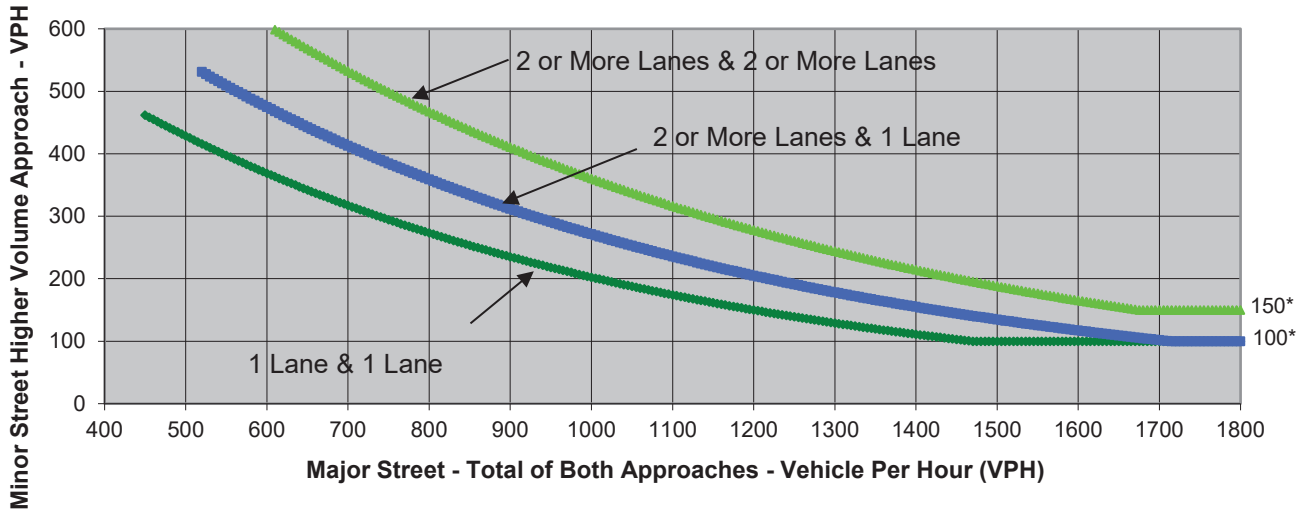
Project	Prologis IPC 2
Scenario	Cumulative 1 Plus Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	453	210	74	485
Through	677	388	614	1,640
Right	293	150	121	556
Total	1,423	748	809	2,681

Major Street Direction

x	North/South
	East/West



* 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.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Pavilion Parkway	Capital Park Drive	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**2,171**	**2,681**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

Project	Prologis IPC 2
Scenario	Cumulative 1 Plus Project
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	269	410	266	617
Through	396	556	1,289	948
Right	679	180	882	372
Total	1,344	1,146	2,437	1,937

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	2873.7
Approach with Worst Case Delay	EB
Total Vehicles on Approach	2,437

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative 1 Plus Project	**1945.3**	**2,437**	**6,864**
Limiting Value	**4**	**100**	**800**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

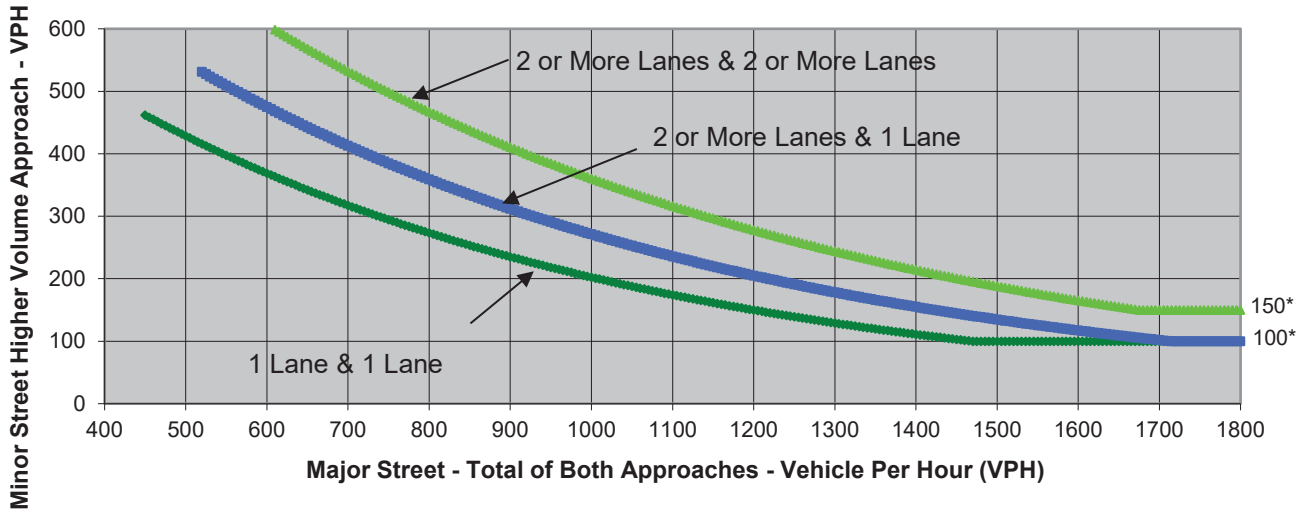
Project	Prologis IPC 2
Scenario	Cumulative 1 Plus Project
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	269	410	266	617
Through	396	556	1,289	948
Right	679	180	882	372
Total	1,344	1,146	2,437	1,937

Major Street Direction

x	North/South
	East/West



* 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.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Pavilion Parkway	Minor Street Capital Park Drive	Warrant Met
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**2,490**	**2,437**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

Project	Prologis IPC 2
Scenario	Cumulative 2 Plus Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	996	0	0	80
Through	0	0	700	1,173
Right	206	0	210	0
Total	1,202	0	910	1,253

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	778.7
Approach with Worst Case Delay	WB
Total Vehicles on Approach	1,253

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative 2 Plus Project	**271**	**1,253**	**3,365**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

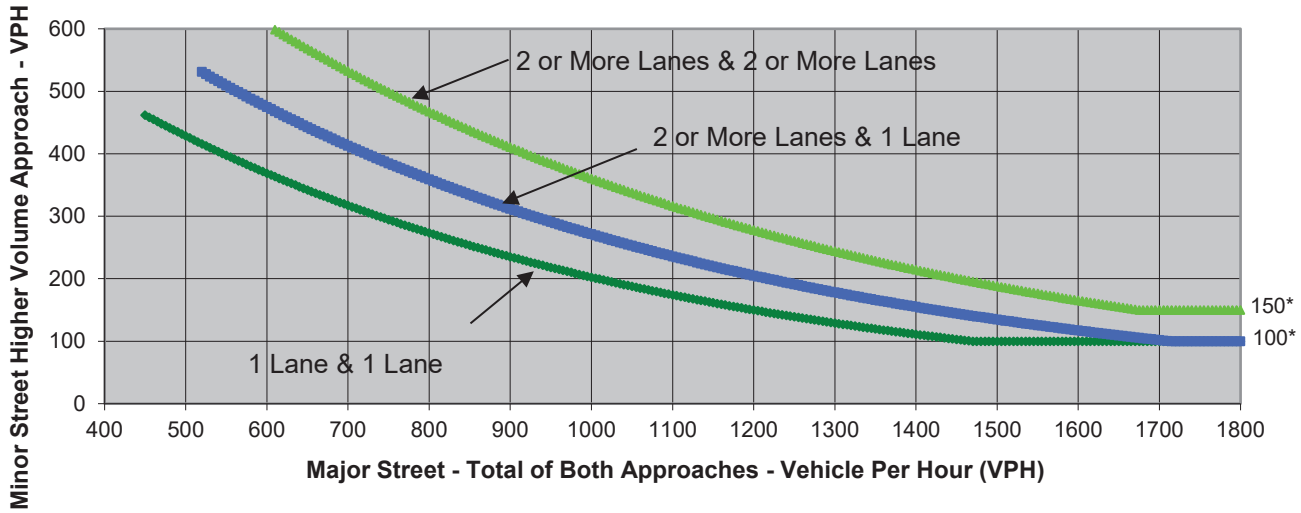
Project	Prologis IPC 2
Scenario	Cumulative 2 Plus Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	996			80
Through			700	1,173
Right	206		210	
Total	1,202	0	910	1,253

Major Street Direction

x	North/South
	East/West



* 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.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Pavilion Parkway	Capital Park Drive	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**1,202**	**1,253**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

Project	Prologis IPC 2
Scenario	Cumulative 2 Plus Project
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	659	0	0	540
Through	0	0	1,421	1,092
Right	293	0	1,288	0
Total	952	0	2,709	1,632

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	2053.1
Approach with Worst Case Delay	EB
Total Vehicles on Approach	2,709

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Cumulative 2 Plus Project	**1545**	**2,709**	**5,293**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		

FEHR PEERS

Major Street	Pavilion Parkway
Minor Street	Capital Park Drive

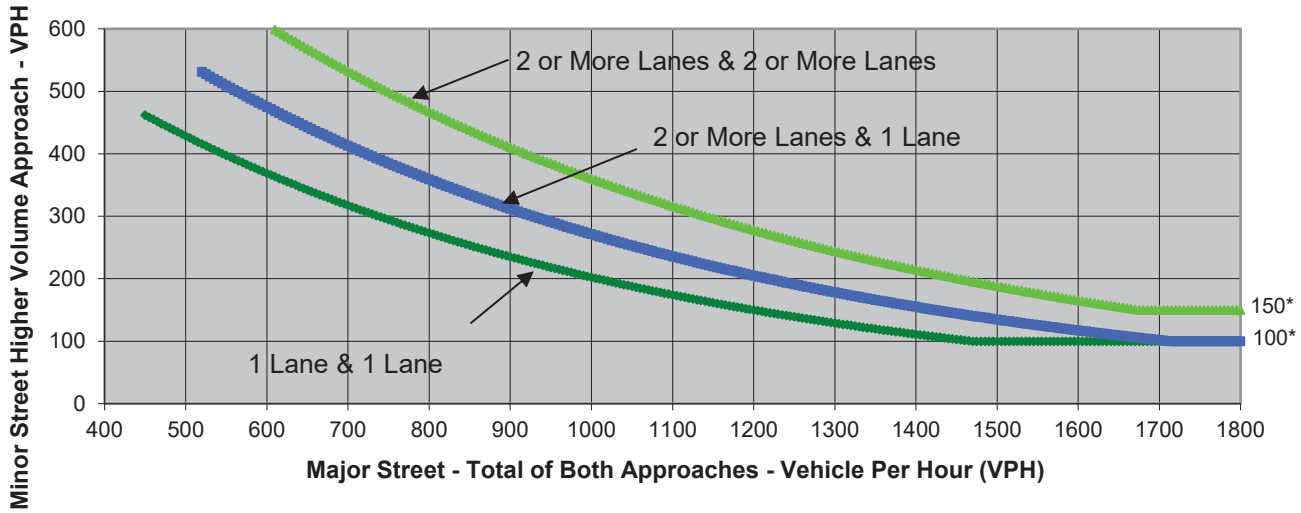
Project	Prologis IPC 2
Scenario	Cumulative 2 Plus Project
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	659			540
Through			1,421	1,092
Right	293		1,288	
Total	952	0	2,709	1,632

Major Street Direction

x	North/South
	East/West



* 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.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Pavilion Parkway	Minor Street Capital Park Drive	Warrant Met
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**952**	**2,709**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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