PUBLIC DRAFT

DRAFT EIR

FOR THE

UNION RANCH NORTH PROJECT

Volume II: Appendices

FEBRUARY 23, 2024

Prepared for:

City of Manteca
Development Services
1215 W. Center Street, Suite 201
Manteca, CA 95337
(209) 456-8500

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

PUBLIC DRAFT EIR

FOR THE

UNION RANCH NORTH PROJECT

Volume II: Appendices

FEBRUARY 23, 2024

Prepared for:

City of Manteca
Development Services
1215 W. Center Street, Suite 201
Manteca, CA 95337
(209) 456-8500

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

Appendix A

Notice of Preparation and NOP Comments

CITY OF MANTECA

COMMUNITY DEVELOPMENT DEPARTMENT

DATE: **November 28, 2023**

TO: Interested Parties

SUBJECT: **Notice of Preparation of an Environmental Impact Report (EIR) for the Proposed Union Ranch North Project**

LEAD AGENCY CONTACT:
Lea C. Simvoulakis, Deputy Director
Development Services Department
City of Manteca
1215 W. Center Street
Manteca, CA 95337
(209) 456-8516
LSimvoulakis@manteca.gov

REVIEW PERIOD: **November 28, 2023 – December 29, 2023**

Notice is hereby given that the City of Manteca is the lead agency for the preparation of a project-level Environmental Impact Report (EIR) for the proposed Union Ranch North Project (proposed Project), in accordance with the California Environmental Quality Act (CEQA), Section 15050. The purpose of this Notice of Preparation (NOP) is to provide responsible agencies and interested persons with sufficient information in order to provide meaningful input on the scope and content of the EIR. Your timely comments will ensure an appropriate level of environmental review for the proposed Project.

Scoping Meeting: The Lead Agency will hold a public scoping meeting via ZOOM to receive verbal comments on the scope of the EIR on **December 12, 2023 at 6:00pm.**

Pursuant to Governor Newsom's Executive Order N-29-20, the meeting will be held via video- and teleconference. Members of the public are invited to participate in the Scoping Meeting via Zoom, which will be used to share information during the meeting. The City is requesting that you RSVP to Lea Simvoulakis, Deputy Director at LSimvoulakis@manteca.gov to obtain the link and/or telephone call-in instructions/information for the Zoom meeting.

A copy of this NOP is available for review at the City of Manteca Community Development Department and on the City of Manteca website:

https://www.manteca.gov/departments/development-services/planning/planning-division-documents/-folder-206/-npage-2

PROJECT DESCRIPTION

Project Location and Setting

The Project site is located directly north of the City of Manteca's limit line. The Project site is immediately east of the Union Ranch Specific Plan Area. The Project site is bounded on the north by farmland, on the east by agricultural land, on the south by existing residences and agricultural fields, and on the west by Union Road and the Union Ranch Specific Plan. Figures 1 and 2 show the proposed Project's regional location and vicinity. The Project site is located within Sections 12 of Township 2 South, Range 6 East Mount Diablo Base and Meridian (MDBM). Figure 3 illustrates the Project location on the USGS Manteca, California, 7.5-minute series quadrangle map.

Project Site Defined

The Project site includes several distinct planning boundaries defined below. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Annexation Area – includes the whole of the Project site (approximately 133.18 acres), including the approximate 106.04-acre Development Area, the approximate 27.14-acre Non-Development Areas, and all public right-of-way along Union Road fronting the Development and Non-Development Areas.
- Development Area - includes the parcels being annexed that will be entitled for subdivision and development (106.04 acres).
- Non-Development Area - includes the parcels being annexed that will not be entitled for subdivision or development. This includes three separate areas, each described as an Annexation SubArea. The three areas total (27.14 acres) and are further defined below:
    - Annexation SubArea 1 - 9.82 ac
    - Annexation SubArea 2 - 6.04 ac
    - Annexation SubArea 3 - 11.28 ac

Existing Site Conditions

The Annexation Area includes approximately 133.18 acres within seventeen Assessor parcels (APNs). This includes the Union Ranch North Project Area (APNs 197-020-21, 197-020-22, 197-020-23, 197-020-35, 197-020-41, 197-020-46, 197-020-47), Annexation SubArea 1 (APN 197-020-20), Annexation SubArea 2 (APNs 197-020-29, 197-020-30, 197-020-36), and Annexation SubArea 3 (APNs 204-100-03, 204-100-05, 204-100-06, 204-100-07, 204-100-08, 204-100-28). Figure 4 shows an APN map of the Project site.

Site Topography

The Project site is relatively flat with natural gentle slope from south to north. The Project site topography ranges in elevation from approximately 29 to 36' feet above sea level.

Existing Site Uses

Figure 5 shows aerial imagery of the existing site uses within the Project site and the surrounding. The existing uses within the Development and Non-Development Areas are described in detail below.

The Development Area primarily contains farmland, with a few existing homes and outbuildings. The outbuildings include barns, sheds, livestock/farm animal pens, bee hives, equipment yards, dirt/gravel roadways, irrigation ditches, and overhead power lines. The majority of the Development Area is in active agricultural use (orchards), with all existing homes and outbuildings clustered on each parcel.

The Non-Development areas contain farmland and existing ranchettes. Each SubArea is uniquely different and is described in detail below:

> Annexation SubArea 1 includes mostly active agricultural use (orchards), with a cluster of existing structures along Union Road. The cluster of structures in this SubArea includes existing homes, barns, sheds, livestock/farm animal pens, equipment yards, dirt/gravel roadways, irrigation ditches, and overhead power lines. Union Road is located along the western side of this SubArea and is fully improved on the southbound portion of the roadway to a City standard with 2 southbound lanes, a landscaped median, and landscaped pedestrian sidewalks. The eastside of Union Road functions as an unimproved County roadway with one northbound lane and no pedestrian sidewalk, curb/gutter, or landscaping.

Annexation SubArea 2 is characterized as existing ranchettes, with homes, barns, sheds, livestock/farm animal pens, equipment yards, dirt/gravel roadways, irrigation ditches, and overhead power lines. The agricultural land within this SubArea is pasture and/or cropland. Union Road is located along the western side of this SubArea and is an unimproved 2-lane County roadway without any landscaping or pedestrian facilities in either the northbound or southbound direction.

Annexation SubArea 3 is characterized as existing ranchettes, with existing homes, barns, sheds, livestock/farm animal pens, equipment yards, dirt/gravel roadways, and overhead power lines. There is no active production agricultural operation in this area, but there are small livestock pens that would be expected to house sheep, goats, horses, cows, hogs, foul, or poultry. Union Road is located along the eastern side of this SubArea and is an unimproved 2-lane County roadway without any landscaping or pedestrian facilities in either the northbound or southbound direction. Shady Pines Street is located along the southern side of this SubArea and is a fully improved City roadway that serves as an access road into the existing Woodbridge residential development.

Existing Surrounding Uses

Uses immediately adjacent to the north of the Project site include agricultural uses. Uses immediately to the west of the Project site include residential uses. Uses to the south and east of the Project site include agricultural and residential uses, including ranchettes and large estates lots (to east) and a residential subdivision (to the south).

General Plan Land Use Designations

The City of Manteca adopted a General Plan Update on July 18, 2023. Figure 6 depicts the General Plan Update land uses for the Project site. The General Plan Update shows the Development Area portion of the Project site with a Low Density Residential, High Density Residential, and Park land use designation. Additionally, the General Plan Update shows the Annexation SubArea 1 and 2 as Low Density Residential, and Annexation SubArea 3 as Low Density Residential, Medium Density Residential, and Commercial.

The proposed Project includes a General Plan Amendment that proposes land uses that are mostly consistent with the land uses shown in the General Plan Update. The exception is a portion of the Project site is designated High Density Residential in the General Plan Update, and the proposed Project would require a General Plan Amendment to change that use to Low Density Residential. It should be noted that a referendum to overturn the recently adopted General Plan is planned for mid-2024. Should the referendum pass, the adoption of the new General Plan would be overturned, and the land uses associated with the Project site would revert to the pre-existing land uses within the Project site prior to adoption of the new General Plan update. As such, the proposed General Plan Amendment is also intended to accommodate the proposed Project should the referendum of the General Plan Update be approved.

The following presents the definition of the existing uses under the General Plan Update, as well as the Previous General Plan.

General Plan Update

LDR (Low Density Residential): This designation provides for a mix of single-family housing, including small lots, clustered lots, attached homes, and conventional large lot detached residences. Density ranges from 2.1 to 8 dwelling units per acre.

HDR (High Density Residential): This designation provides for multi-family townhome, condominium, and apartment style housing and mobile home parks. The multi-family dwelling sites are typically located with direct access to arterial streets. The sites have access to the pedestrian and bikeway network along the street corridor and are located along the conceptual route of a public transportation shuttle route. Sites should be located near a neighborhood park, a neighborhood commercial center, or jobs centers and should provide pedestrian and bicycle connections to these amenities and services.

Park (P): This designation provides for neighborhood, community and regional parks, golf courses, and other outdoor recreational facilities within urban development. Specific uses include public recreation sites, including ball fields, tot lots and play apparatus, adult softball and soccer playing fields, swimming pools, community center buildings, meeting facilities, libraries, art centers, after school care facilities, art in public places, facilities for night-time recreation, trails benches, interpretive markers, picnic areas, barbecue facilities, landscaping, city irrigation, city potable wells, trees and natural habitat areas.

Previous General Plan

LDR (Low Density Residential): The LDR land use will establish a mix of dwelling unit types and character determined by the individual site and market conditions. The density range allows substantial flexibility in selecting dwelling unit types and parcel configurations to suit particular site conditions and housing needs. The type of dwelling units anticipated in this density range include small lots and clustered lots as well as conventional large lot detached residences.

VLDR (Very Low Density Residential): The VLDR land use category will provide for residences on larger lots and small, quasi-agricultural activities, including raising and boarding livestock. Residential units shall be permitted to deviate from standard lot dimensions within agricultural areas in order to cluster dwellings together and thereby allow for continued agricultural use. The agricultural use areas that remain on the residential parcel shall be subject to an easement dedicated to the City that allows continued agricultural use, but prohibits any further non-agricultural related development.

AG (Agriculture): This designation provides for agricultural uses (such as vineyards, orchards, row crops, farm animals), single family homes directly related to the agricultural use of the property, limited industrial uses directly related to agriculture, and similar and compatible uses.

Park (P): This designation provides for neighborhood, community and regional parks, golf courses, and other outdoor recreational facilities within urban development. Specific uses include public recreation sites, including ball fields, tot lots and play apparatus, adult softball and soccer playing fields, swimming pools, community center buildings, meeting facilities, libraries, art centers, after school care facilities, art in public places, facilities for night-time recreation, trails benches, interpretive markers, picnic areas, barbecue facilities, landscaping, city irrigation, city potable wells, trees and natural habitat areas.

PROJECT GOALS AND OBJECTIVES

Consistent with CEQA Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the proposed Project shall be discussed.

Project Objectives

The principal objective of the proposed Project is the annexation of the Project site into the City of Manteca, and approval and subsequent development of the Project. The quantifiable objectives of the proposed Project include annexation of 133.18 acres, which includes a Development and Non-development Area.

The quantifiable objectives include the development of 465 single family residential units. The quantifiable objectives include the development of park, open space, and trail totaling approximately 9.44 acres for the development of park, open space, and trail, including 6.23 acres of neighborhood park, an additional one acre of upland play area, and 2.21 acres of the continuation of the Tide Water Bike Trail. The Project objectives also include the installation of new public roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping.

The goals of the proposed Development are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Manteca.
- Establish a mixture of residential product types that collectively provide for local and regional housing and that take advantage of the area’s high level of accessibility.

- Provide infrastructure and park space that meets City standards, is integrated with existing and planned facilities and connections, and increases recreation opportunities for existing and future residents of the City.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Annex the three Annexation SubAreas in order to avoid the creation of islands. Annexation of these areas would establish a logical and orderly city limit line that promotes the efficient extension of municipal services.
- Allow all existing property owners with existing and legal non-conforming uses located in the Non-Development Areas (SubArea 1, 2, and 3) to continue to use and enjoy their properties in perpetuity in the same manner as prior to annexation. Non-conforming uses include the existing agricultural uses (orchards, row crops, livestock/farm animals, fowl/poultry, apiary, etc.), existing residences, existing outbuildings, equipment storage, roadways, irrigation, etc. even if left fallow or not used for such temporarily.

PROJECT ENTITLEMENTS

General Plan Amendment
Amend the General Plan Land Use Map to replace the High Density Residential uses on the Project site with Low Density Residential uses. The existing land use designations are shown in Figure 6, and the proposed land use designations are shown in Figure 7a.

Prezoning
The Project site is currently outside of the jurisdiction of the City of Manteca, and therefore does not have zoning. The proposed Project includes a request for pre-zoning of the Project site consistent with the General Plan Land Uses that are proposed in the General Plan Amendment. The proposed prezoning is shown in Figure 7b.

Tentative Map
The proposed Project includes a Tentative Map that would ultimately be developed in phases. The Tentative Map covers approximately 106.04 acres within seven Assessor parcels (APNs). This includes the Union Ranch North Project Area (APNs 197-020-21, 197-020-22, 197-020-23, 197-020-35, 197-020-41, 197-020-46, 197-020-47).

The Tentative Map would result in the subdivision of a total of approximately 106.04 acres into 465 single family residential units. The proposed Project would provide development of park, open space, and trail totaling approximately 9.44 acres for the development of park, open space, and trail, including 6.23 acres of neighborhood park, an additional one acre of upland play area, and 2.21 acres of the continuation of the Tide Water Bike Trail. The Project objectives also include the installation of new public roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping. Figure 8 illustrates the proposed site plan for the Project site, and the full Tentative Map for each Subdivision is included as Attachment A.

Annexation
The proposed Project includes an annexation of seventeen APNs totaling approximately 133.18 acres. This includes 106.04 acres for development, and 27.14 acres that is not proposed for development, but is being annexed to avoid the creation of islands. The 27.14 acres is located on ten APNs and will be designated as an existing and legal non-conforming use whereby all property owners are allowed to continue to use and enjoy their properties in perpetuity in the same manner as prior to annexation. Non-conforming uses include the existing agricultural uses (orchards, row crops, livestock/farm animals, fowl/poultry, apiary, etc.), existing residences, existing outbuildings, equipment storage, roadways, irrigation, etc. even if left fallow or not used for such temporarily.

Development Agreement

The proposed Project anticipates a Development Agreement that will be negotiated between the City and Applicant. Terms of the Development Agreement are not available at this early stage of review, but will be required to be consistent with the environmental analysis, including any mitigation measures that are created to reduce impacts.

DEVELOPMENT PROJECT CHARACTERISTICS

Residential

The proposed Project is primarily a residential development anticipated to provide up to approximately 465 single-family residential units. Development of housing will depend on market conditions and demand.

Park/Open Space/Trails

The proposed Project would provide development of park, open space, and trail totaling approximately 9.44 acres for the development of park, open space, and trail, including 6.23 acres of neighborhood park, an additional one acre of upland play area, and 2.21 acres of the continuation of the Tide Water Bike Trail.

Circulation

The proposed Project will expand the existing circulation system to serve the proposed Project and northern Manteca. Roadway access to the Project site would also be available directly from the residential community just to the south of the Project site. Additionally, the proposed Project will provide sidewalks, bike lanes, and landscaping to offer additional bicycling and walking facilities for all of Manteca's residents. This includes the continuation of the Tide Water Bike Trail through the Project site. The Development Area and its circulation system is a natural progression of the existing developed land uses and the street network in northern Manteca.

Utilities and Planned Infrastructure Improvements

The construction of on-site infrastructure improvements would be required to accommodate development of the Project site, as described below.

Water System: The Project site would be served by a new potable and non-potable water distribution system. The proposed water system will be a looped system of water lines with various points-of-connection to existing City mains to comply with City Master Plans and standards. A water system analysis will be prepared during future design of Improvement Plans to ensure that the final design is compliant with fire flow and pressure standards.

Wastewater System: The Project site would be served by a new wastewater collection system installed within the North Manteca Collection Shed (NMCS). The NMCS has been planned to serve areas of future growth in the north of Manteca. The proposed wastewater conveyance facilities would connect to the existing sewer mains as part of the City of Manteca collection and treatment system. Wastewater treatment would be provided at the City’s existing Wastewater Quality Control Facility (WQCF) at 2450 West Yosemite Avenue in western Manteca.

Storm Drainage: The Project site would include construction of a new storm drainage system, including a drainage collection system, storm drain pump stations, and detention basins. The final basin location and design will conform to the Manteca Design Specifications and Standards and will be finalized during the Improvement Plan phase. The detention basins are intended to help attenuate peak flows before drainage discharge is pumped into storm drainage facilities. The proposed detention basins are joint-use facilities providing park/recreation uses when not being used for stormwater detention. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Manteca regulations, including: Manteca Storm Drain Master Plan, 2013; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

Regulated Public Utilities: Electrical, gas, phone, cable and related internet services would be extended to all portions of the Project site from existing facilities located along Union Road, and from existing residential development surrounding the Project site. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Utility improvements would be installed in conjunction with planned street improvements.

USES OF THE EIR AND REQUIRED AGENCY APPROVALS

This EIR may be used for the following direct and indirect approvals and permits associated with adoption and implementation of the proposed Project.

City of Manteca

The City of Manteca will be the Lead Agency for the proposed Project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. Actions that would be required from the City include, but are not limited to the following:

- Certification of the EIR;
- Adoption of the Mitigation Monitoring and Reporting Program;
- Approval of City of Manteca General Plan Amendment;
- Approval of City of Manteca Zoning Pre-zoning;
- Approval of Annexation of the Development and Non-Development Areas and Authorization to submit an Annexation request to San Joaquin LAFCo;
- Approval of Development Agreement;
- Approval of Tentative Maps;
- Approval of future Final Maps, including Large Lot Final Maps;
- Approval of future Improvement Plans;
- Approval of future Grading Plans;
- Approval of future Site Plan and Design Review;
- City review, approval, and construction and utility plans;
- Approval of future Building Permits;
- Approval of future Conditional Use Permits.

Other Governmental Agency Approvals

The following agencies may be required to issue permits or approve certain aspects of the proposed Project. Other governmental agencies that may require approval include, but are not limited to, the following:

- San Joaquin Local Agency Formation Commission (LAFCo) – Annexation and Detachment from Lathrop Manteca Fire District;
- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits;
- SJVAPCD - Authority to Construct, Permit to Operate for stationary sources of air pollution; and
- San Joaquin Council of Governments - SJCOG, Inc. (SJCOG) - Issuance of incidental take permit under the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).
- South San Joaquin Irrigation District - Irrigation Service Abandonment Agreements, Improvement Plan review and Board of Directors consideration.

PROBABLE ENVIRONMENTAL EFFECTS AND SCOPE OF THE EIR

The City has reviewed the proposed Project application and has determined that an EIR should be prepared for the proposed Project because it may have a significant effect on the environment. All environmental topics identified in Appendix G of the State CEQA Guidelines require analysis within an EIR. The Draft EIR will examine the following: Aesthetics, Agricultural and Forest Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology/Soils, Greenhouse Gases/Climate Change, Hazards and Hazardous Materials, Hydrology/Water Quality, Land Use/Planning, Mineral Resources, Noise, Population/Housing, Public Services, Recreation, Transportation/Circulation, Tribal Resources, Utilities, Cumulative Impacts, and Growth Inducing Impacts.

Each chapter of this EIR will include a discussion of the existing setting, thresholds of significance, evaluation of potential impacts, and if necessary, feasible mitigation measures to reduce or eliminate potentially significant impacts to the applicable resource. Additionally, the EIR will include cumulative impacts analyses, as well as analyses of alternatives to the proposed Project.

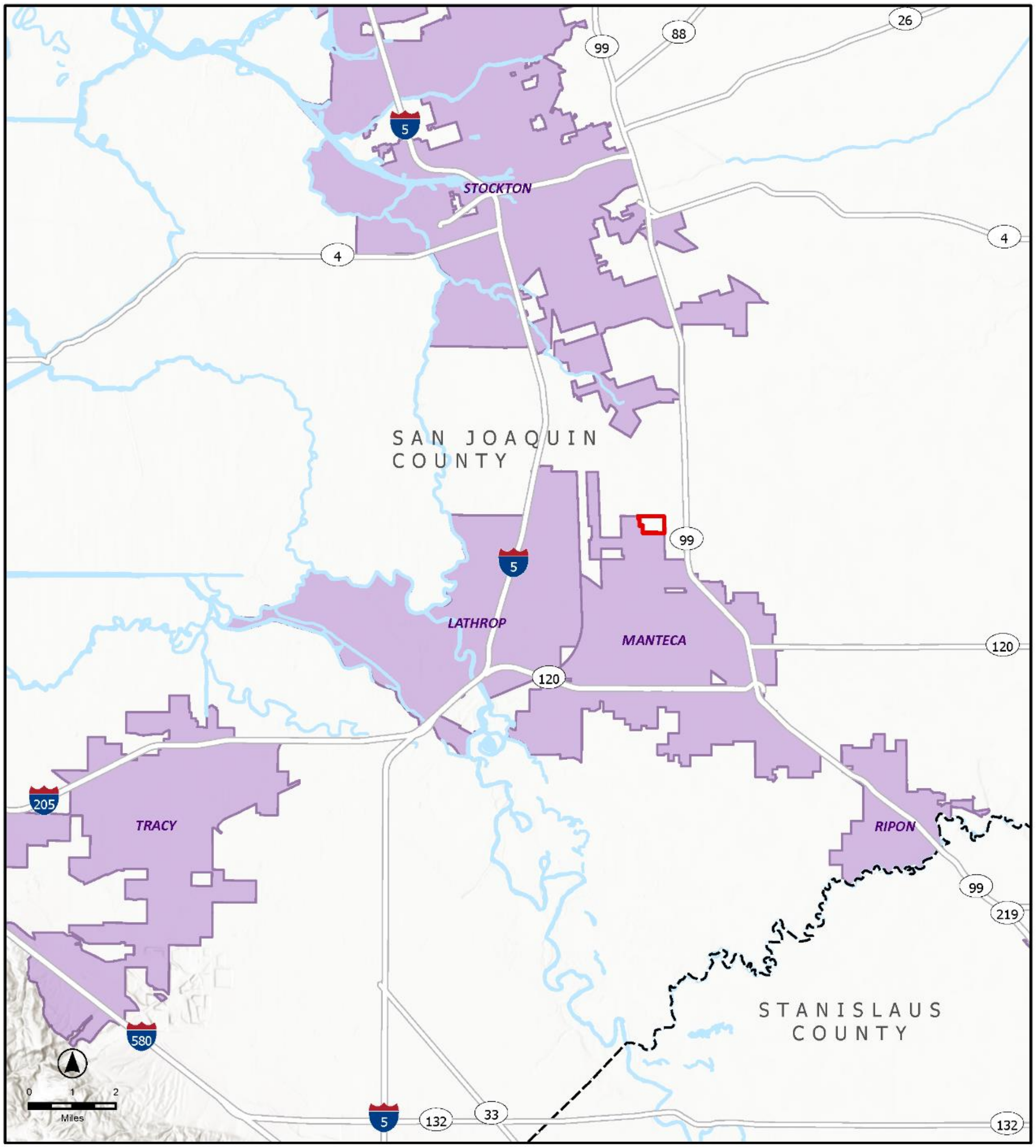
An Initial Study has not been prepared for the proposed Project. As noted above, each environmental topic identified in Appendix G of the State CEQA Guidelines requires analysis in an EIR.

SUBMITTING COMMENTS

To ensure that all significant issues related to the proposed Project are identified and addressed, written comments are invited from all interested parties. To be considered, all comments must be in writing and clearly legible. Written comments concerning the proposed CEQA analysis for the Union Ranch North Project should be directed to the name and address below:

Lea C. Simvoulakis, Senior Planner
Community Development Department
City of Manteca
1001 West Center Street
Manteca, CA 95337
Office:(209) 456-8516
Email: LSimvoulakis@ci.manteca.ca.us
Written comments are due to the City of Manteca at the location addressed above by 5:00 p.m. December 29, 2023.

Figure 1: Regional Location



LEGEND

Project Location

Incorporated Area

County Area

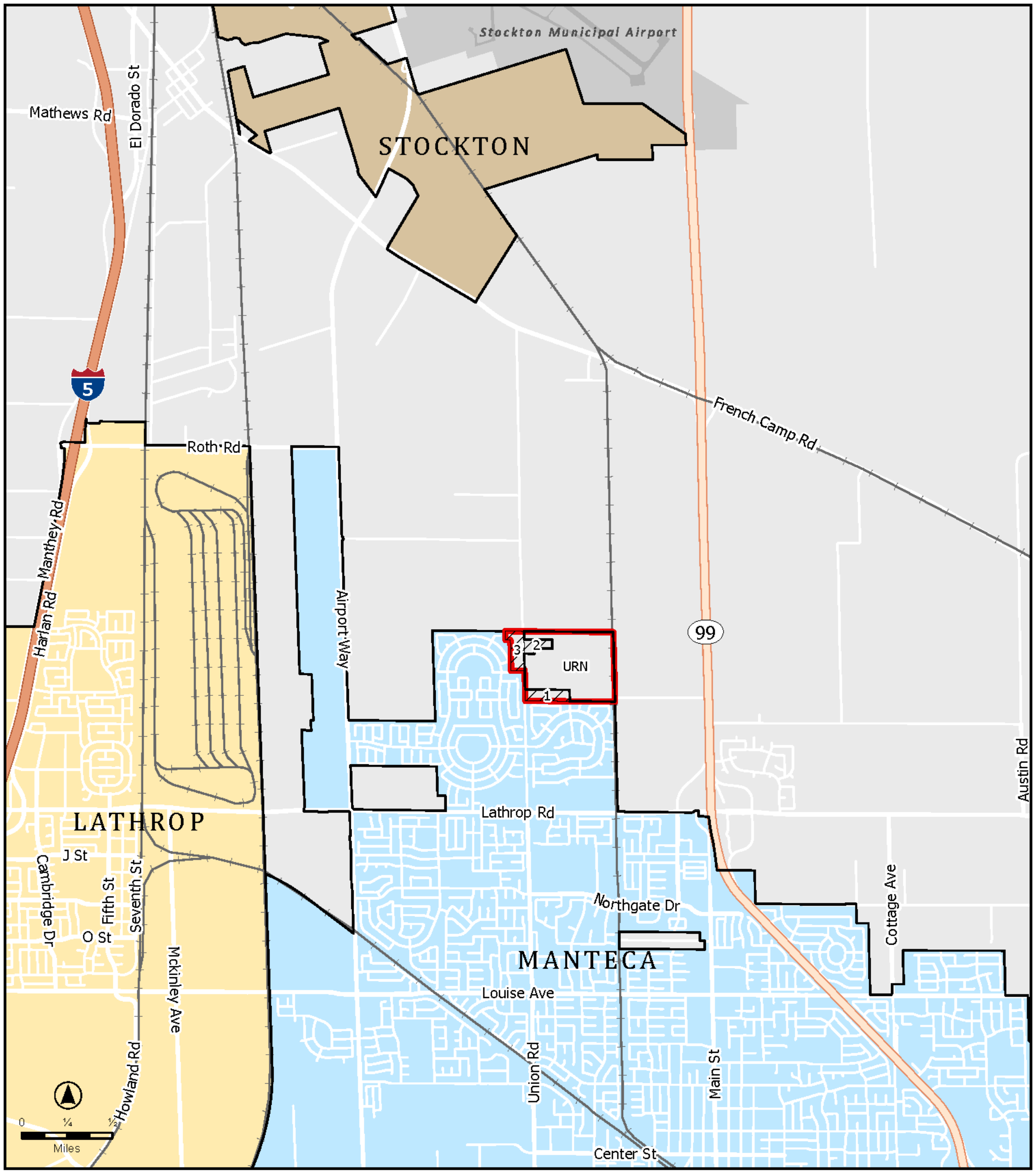
UNION RANCH NORTH

Figure 2.0-1. Regional Location Map

Sources: California State Geoportal; ArcGIS Online World Hillshade Map Service.
Map Date: October 24, 2023

De Novo Planning Group

Figure 2: Project Vicinity



LEGEND

Annexation Area

Union Ranch North

Annexation Subarea

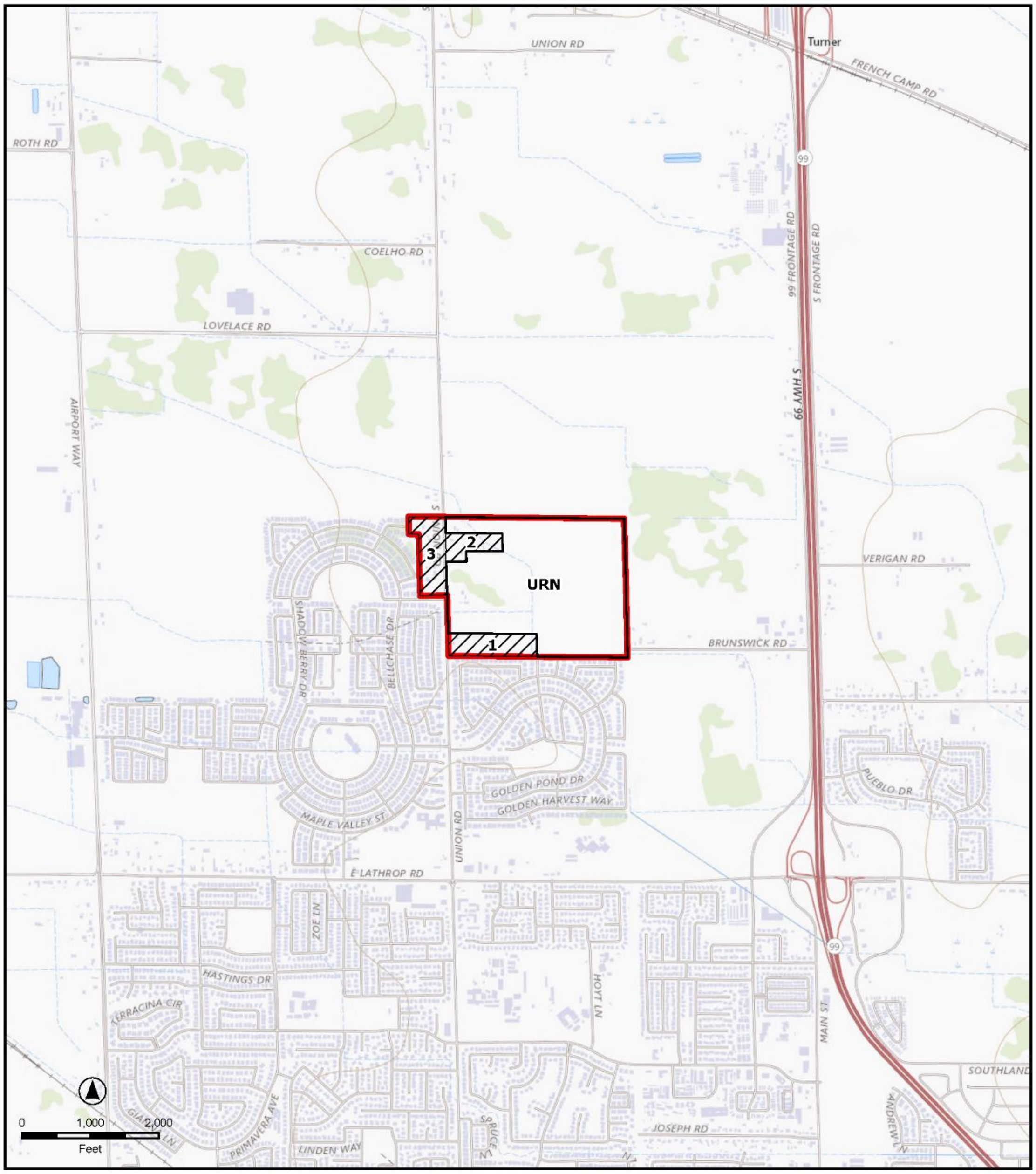
City Limits

UNION RANCH NORTH

Figure 2.0-2. Vicinity Map

Sources: San Joaquin County GIS, City of Manteca. Map date: October 23, 2023.

Figure 3: USGS Map



LEGEND

Annexation Area

Union Ranch North

Annexation Subarea

UNION RANCH NORTH

Figure 2.0-3. USGS Topographic Map

Sources: San Joaquin County GIS; City of Manteca; ArcGIS Online USGS Topographic Map Service. Map date: October 23, 2023.

De Novo Planning Group

Figure 4: Assessor Parcel Map

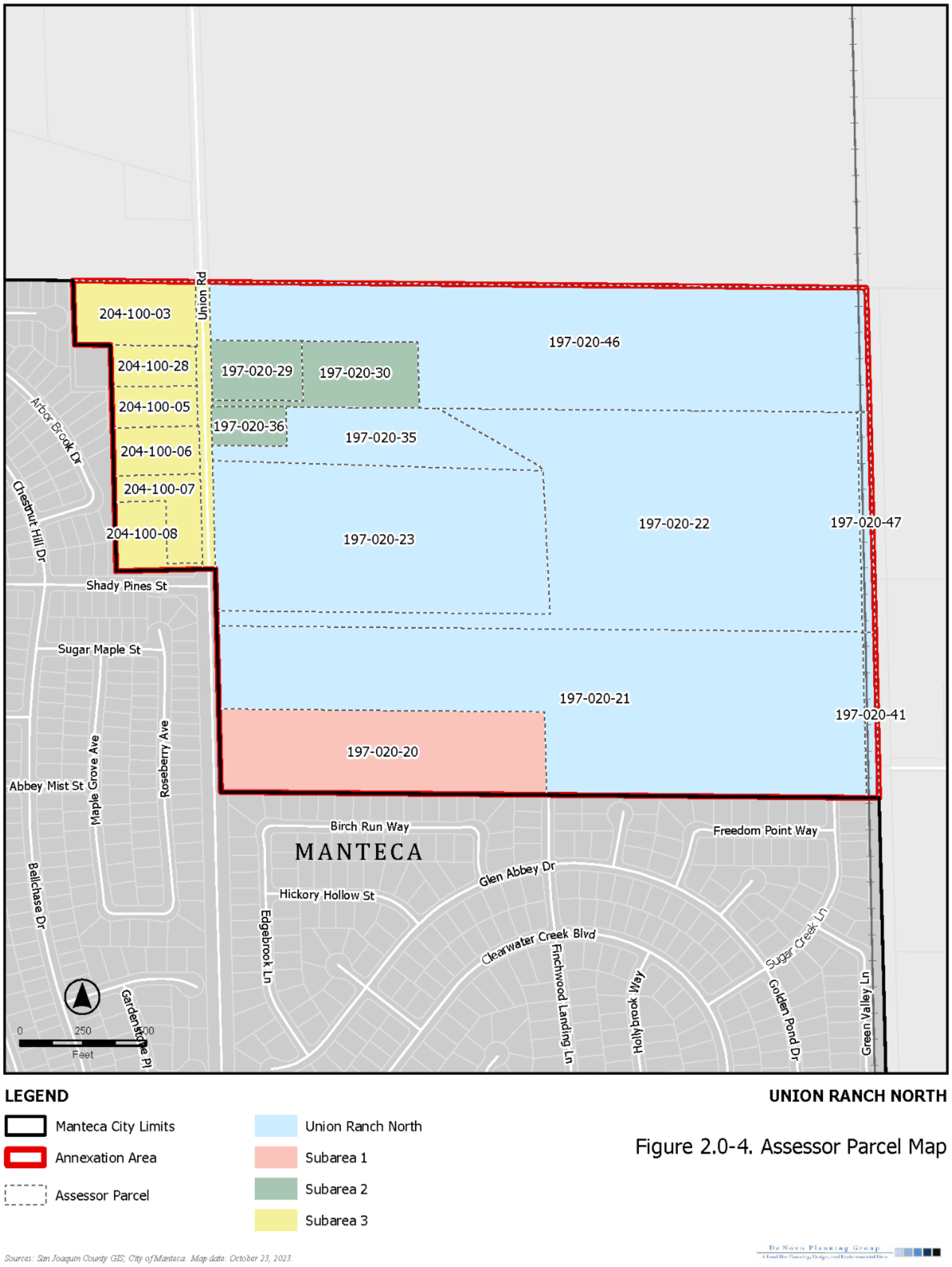
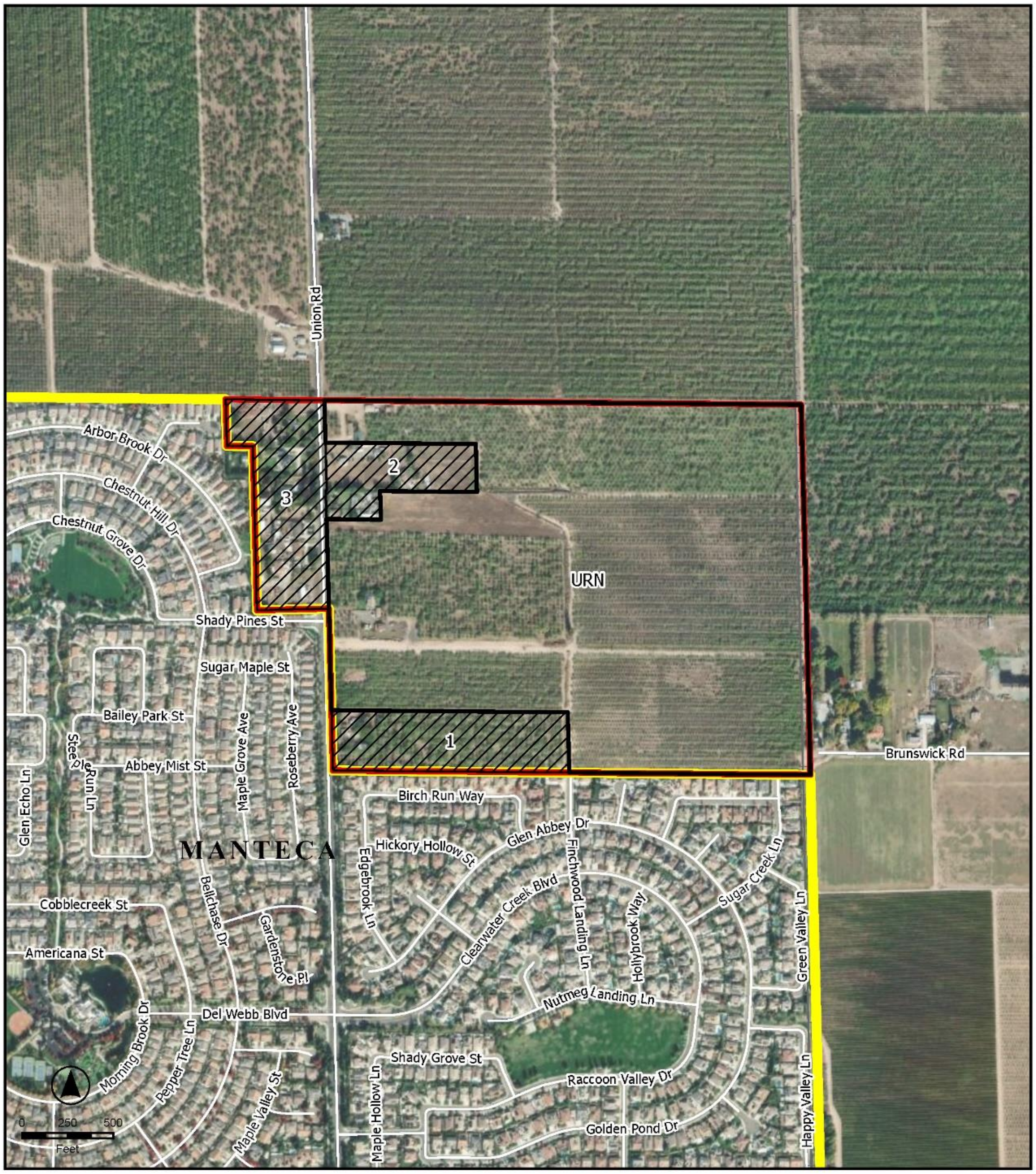


Figure 5: Aerial View Photo



LEGEND

Manteca City Limits

Annexation Area

Union Ranch North

Annexation Subarea

UNION RANCH NORTH

Figure 2.0-5. Aerial View

Sources: San Joaquin County GIS; City of Manteca; ArcGIS Online World Imagery Map Service. Map date: October 23, 2023.

De Novo Planning Group

Figure 6: Existing General Plan Land Use Designations

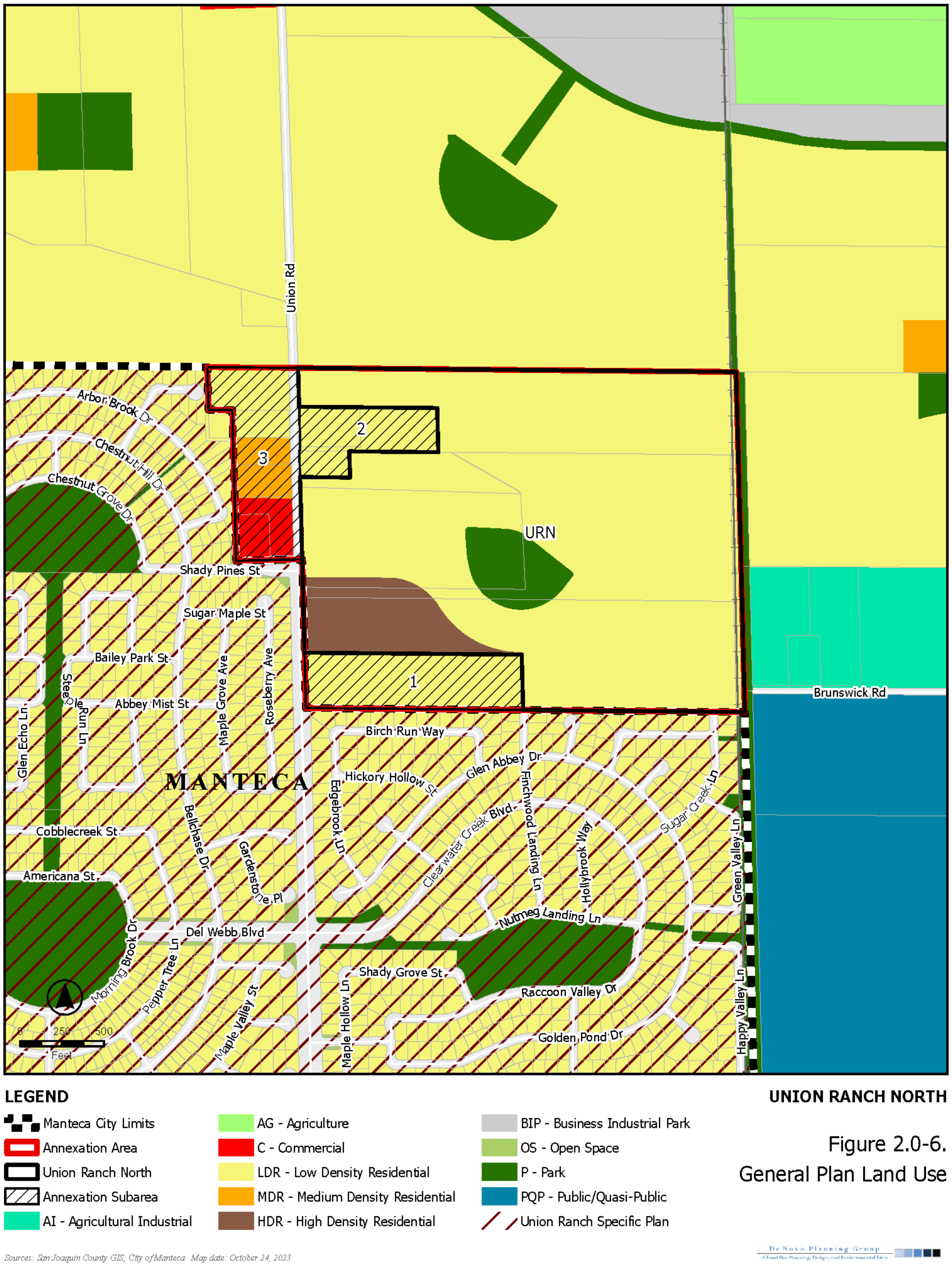


Figure 7a: Proposed General Plan Land Use Designations

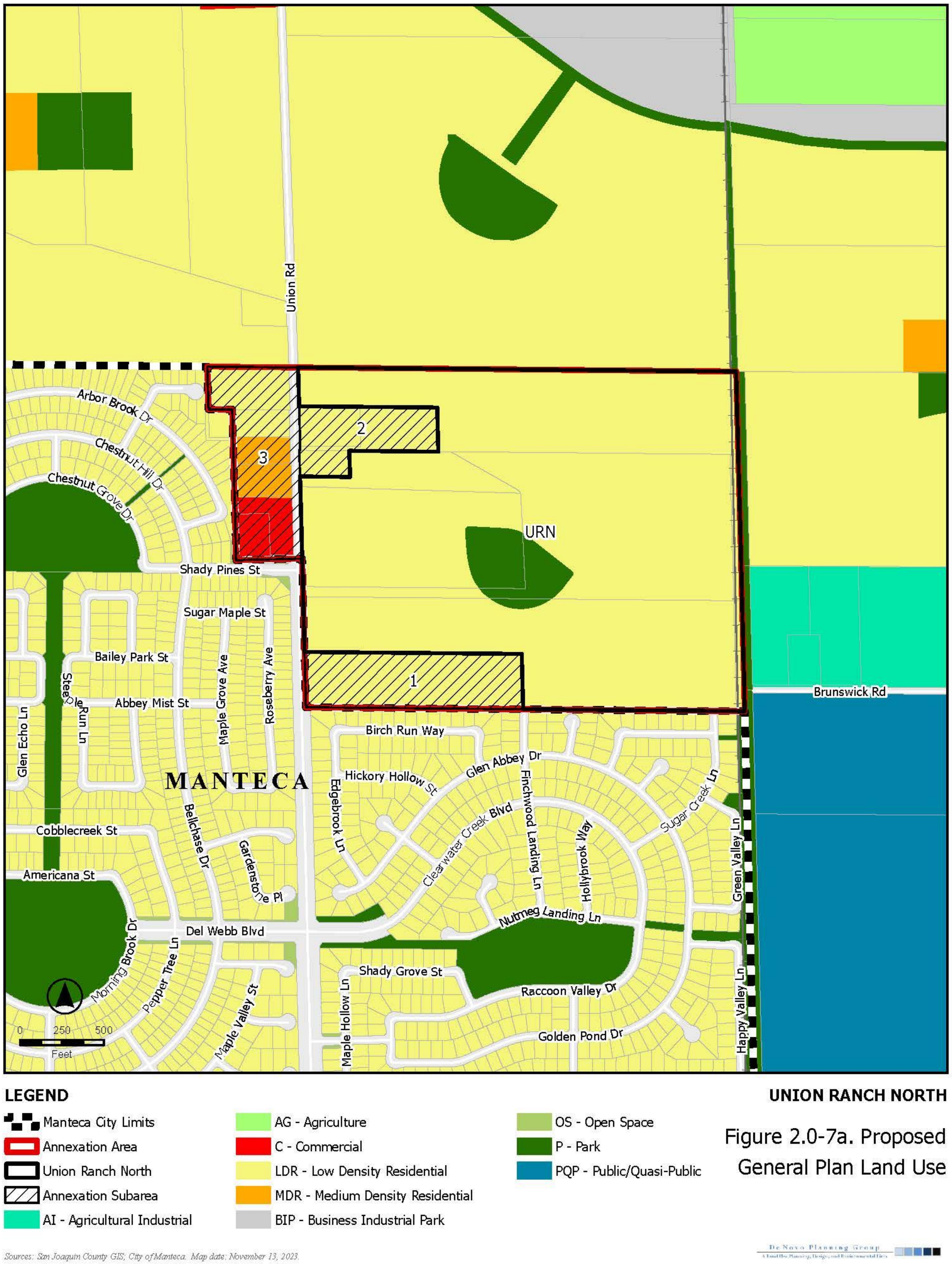
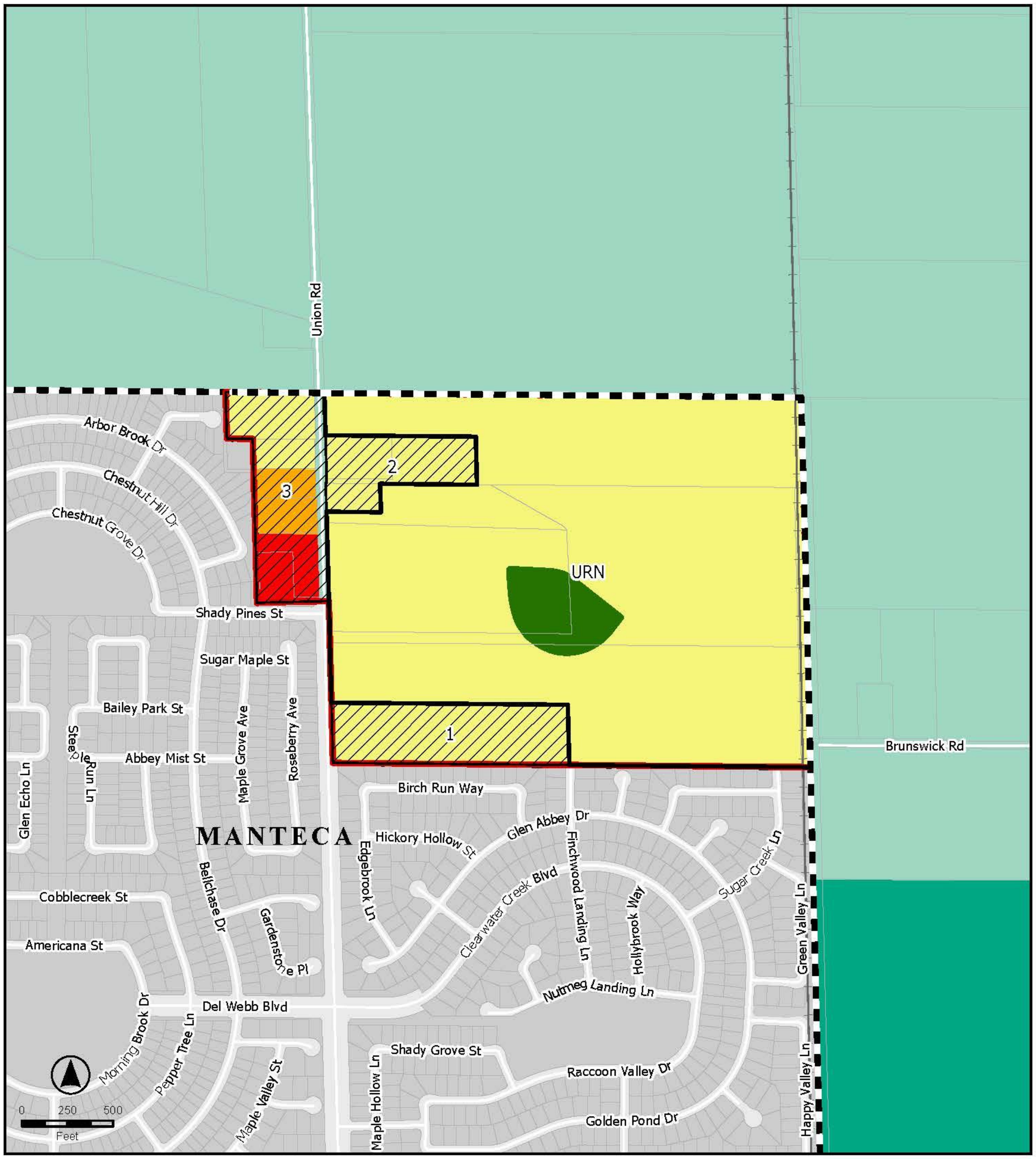


Figure 7b: Proposed Zoning Designations



LEGEND

Manteca City Limits
Annexation Area
Union Ranch North
Annexation Subarea

San Joaquin County Zoning

AG-40
AU-20

City of Manteca Zoning

R1: One-Family Dwelling
R2: Limited Multiple-Family Dwelling
GC: General Commercial
P: Park
SP: Specific Plan

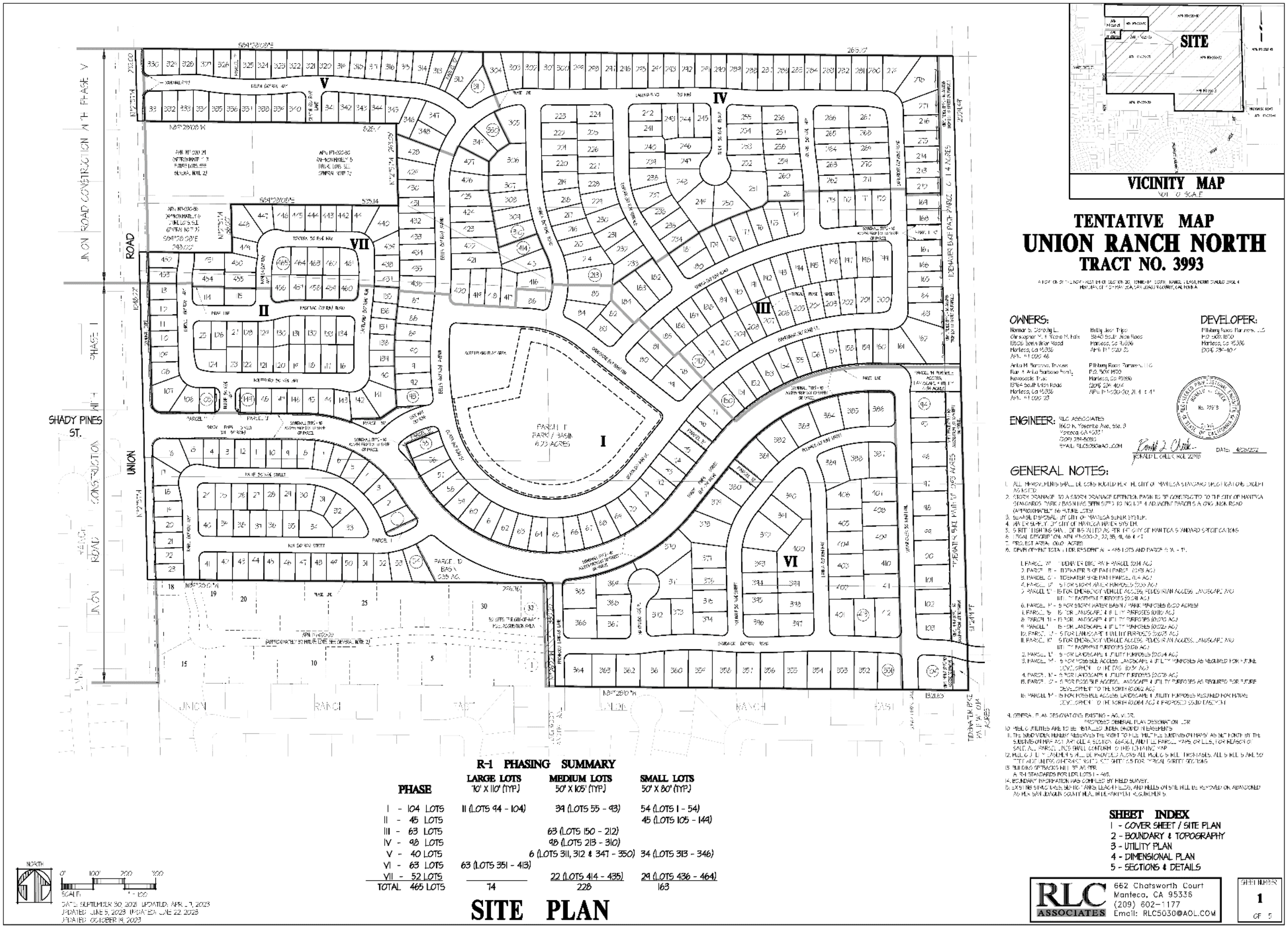
UNION RANCH NORTH

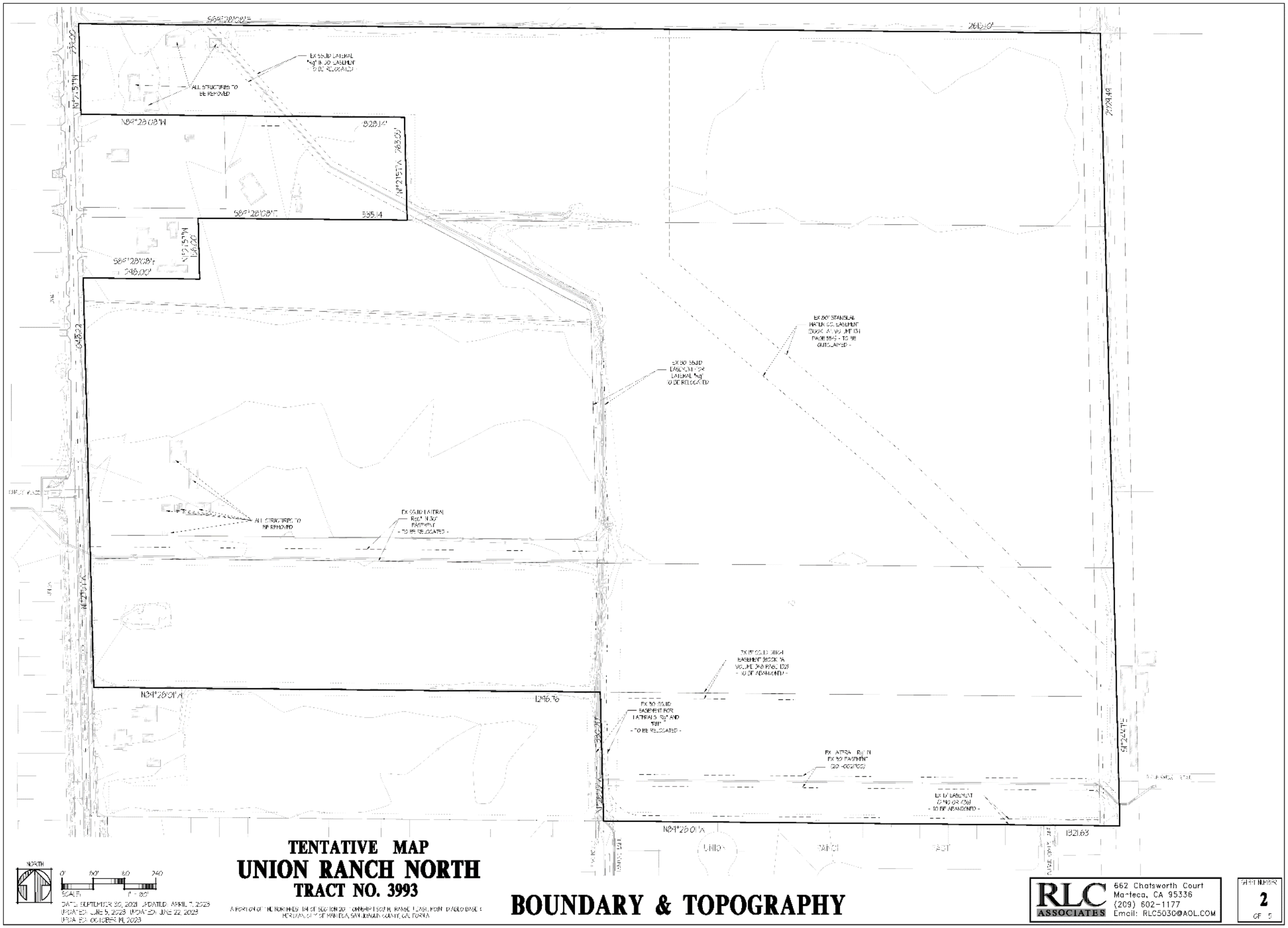
Figure 2.0-7b. Proposed Zoning

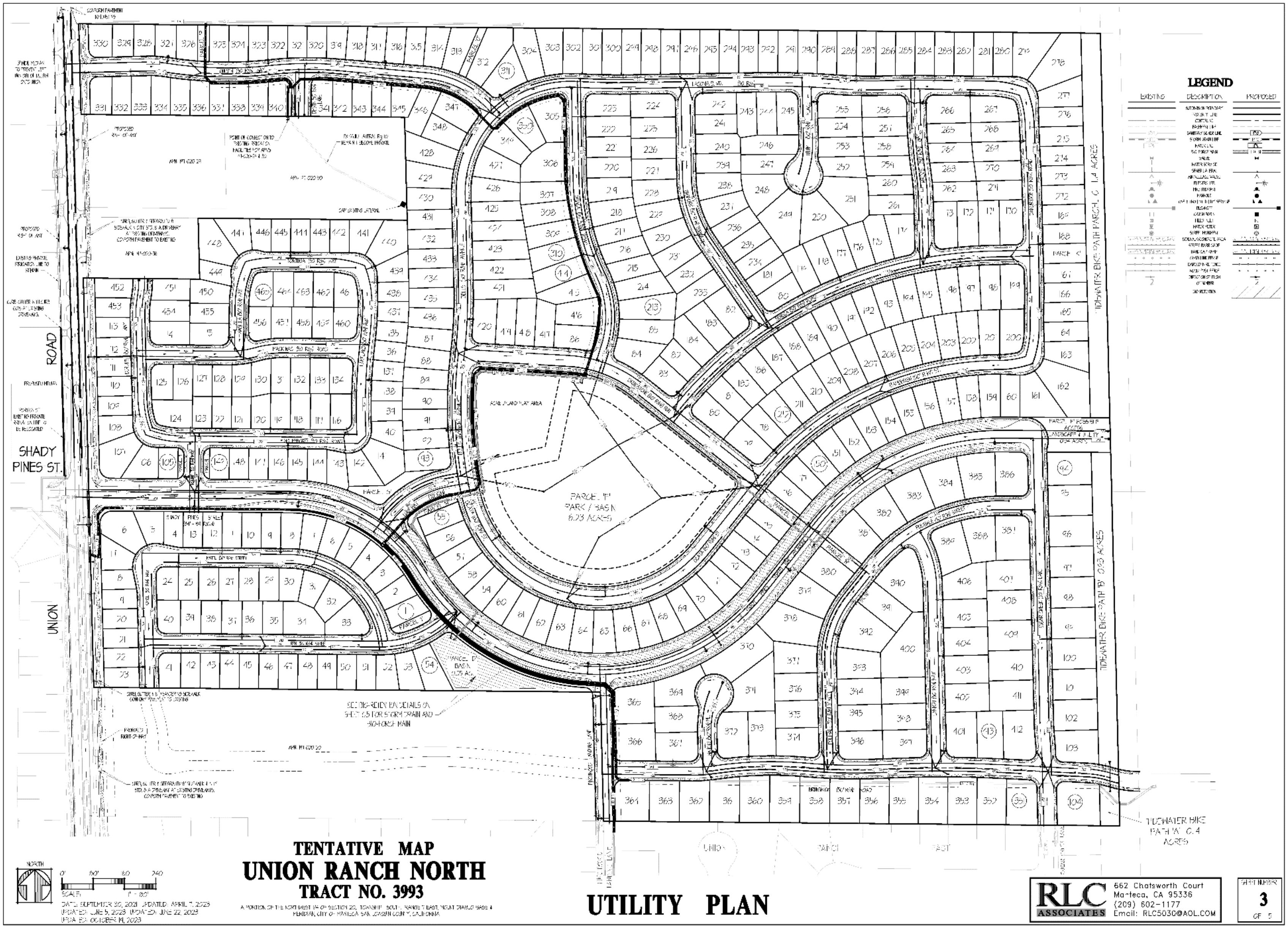
Sources: San Joaquin County GIS; City of Manteca. Map date: November 13, 2023.

Figure 8: Site Plan for Subdivision 1 (Union Ranch North)

Attachment A Tentative Maps

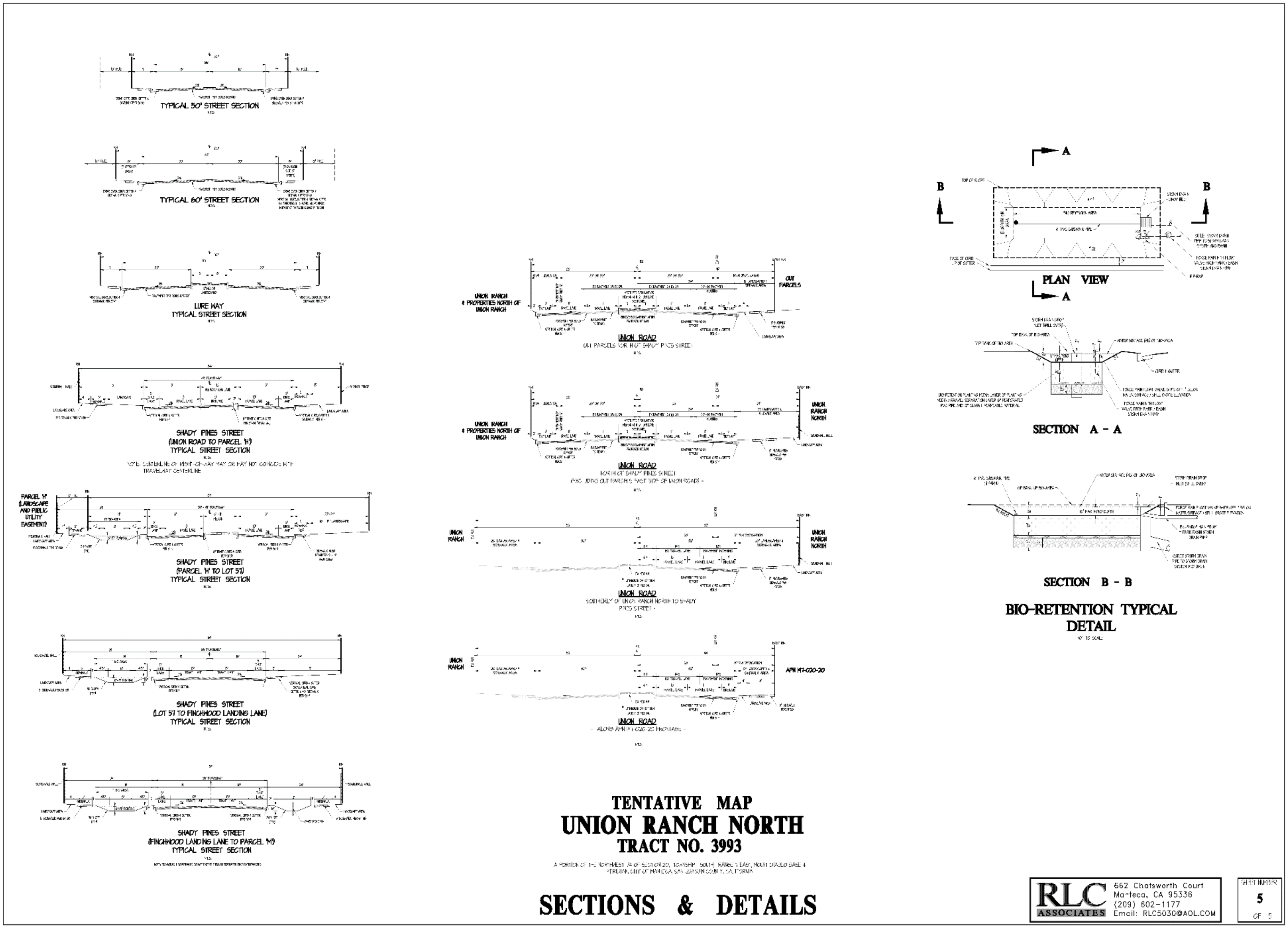



ALL STRUCTURES TO BE REMOVED
1296.76
1321.63
TENTATIVE MAP
UNION RANCH NORTH
TRACT NO. 3993
NORTH
0' 80' 160 240
SCALE: 1" = 80'
DATE: SEPTEMBER 30, 2021 UPDATED: APRIL 7, 2023
UPDATED: JUNE 5, 2023 UPDATED: JUNE 22, 2023
UPDATED: OCTOBER 19, 2023
BOUNDARY & TOPOGRAPHY
RLC ASSOCIATES
662 Chatsworth Court
Manteca, CA 95336
(209) 602-1177
Email: RLC5030@AOL.COM
SHEET NUMBER
2
OF 5



TENTATIVE MAP
UNION RANCH NORTH
TRACT NO. 3993
UTILITY PLAN
LEGEND
SHADY PINES ST.
UNION ROAD
PARCEL "I" PARK / BASIN
TIDEWATER BIKE PATH "A" 0.4 ACRES
RLC ASSOCIATES
662 Chatsworth Court
Manteca, CA 95336
(209) 602-1177
Email: RLC5030@AOL.COM
3
OF 5

ROAD
UNION
SHADY PINES ST.
PARCEL "A" PARK / BASIN 6.23 ACRES
NORTH
SCALE 1" = 80'
TENTATIVE MAP
UNION RANCH NORTH
TRACT NO. 3993
DIMENSIONAL PLAN
RLC ASSOCIATES
662 Chatsworth Court
Manteca, CA 95336
(209) 602-1177
Email: RLC5030@AOL.COM
SHEET NUMBER
4
OF 5



TYPICAL 50' STREET SECTION
TYPICAL 60' STREET SECTION
LURE WAY
TYPICAL STREET SECTION
SHADY PINES STREET
(UNION ROAD TO PARCEL 'H')
TYPICAL STREET SECTION
PARCEL 'H'
(LANDSCAPE
AND PUBLIC
UTILITY
EASEMENT)
SHADY PINES STREET
(PARCEL 'H' TO LOT 57)
TYPICAL STREET SECTION
SHADY PINES STREET
(LOT 57 TO FINCHWOOD LANDING LANE)
TYPICAL STREET SECTION
SHADY PINES STREET
(FINCHWOOD LANDING LANE TO PARCEL 'M')
TYPICAL STREET SECTION
UNION RANCH
& PROPERTIES NORTH OF
UNION RANCH
OUT PARCELS
UNION ROAD
UNION RANCH NORTH
UNION RANCH
UNION ROAD
UNION RANCH
UNION RANCH NORTH
UNION ROAD
UNION RANCH
UNION ROAD
A
B
B
PLAN VIEW
A
SECTION A - A
SECTION B - B
BIO-RETENTION TYPICAL
DETAIL
TENTATIVE MAP
UNION RANCH NORTH
TRACT NO. 3993
SECTIONS & DETAILS
RLC
ASSOCIATES
662 Chatsworth Court
Manteca, CA 95336
(209) 602-1177
Email: RLC5030@AOL.COM
5
OF 5

Central Valley Regional Water Quality Control Board

27 December 2023

Lea Simvoulakis
City of Manteca
1001 West Center Street
Manteca, CA 95337
LSimvoulakis@ci.manteca.ca.us

COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, UNION RANCH NORTH PROJECT, SCH#2023110668, SAN JOAQUIN COUNTY

Pursuant to the State Clearinghouse's 28 November 2023 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environmental Impact Report* for the Union Ranch North Project, located in San Joaquin County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by

the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]
The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Clean Water Act Section 404 Permit
If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification
If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/

Waste Discharge Requirements – Discharges to Waters of the State

If USACE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board’s Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:
https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/help/permit/

If you have questions regarding these comments, please contact me at (916) 464-4684 or Peter.Minkel2@waterboards.ca.gov.

Peter Minkel

Peter Minkel
Engineering Geologist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

smcmurtry@denovoplanning.com

Subject: FW: EIR - Union Ranch North Project

From: Ray Gedney <gedney777@yahoo.com>
Sent: Monday, December 18, 2023 12:37 PM
To: Simvoulakis, Lea <lsimvoulakis@manteca.gov>
Cc: kmgedney@gmail.com
Subject: EIR - Union Ranch North Project

As the resident owner of 2597 Edgebrook Ln, Manteca, I am opposed to the approval of this project. I believe that this project would have a significant negative environmental impact on the Union Ranch development that I currently reside in. The increase in the roadway traffic noise by the addition of the proposed residential project would be even more extreme than it is currently (the quality of life in the backyard areas bordered by Union Rd. is already intolerable). I believe that the "noise pollution" created by the roadway traffic on Union Rd. falls under the realm of a significant environmental impact. I request that a study be conducted to project the level of roadway/traffic noise that would be increased by the Union Ranch North Project. Please include my meaningful input in the EIR. Thank you for your time and attention. Please do not hesitate to contact me with any questions or concerns.

Raymond H. Gedney
925 9220801

HERUM \ CRABTREE \ SUNTAG
ATTORNEYS

Steven A. Herum
sherum@herumcrabtree.com

December 14, 2023

BY ELECTRONIC MAIL

Ms. Lea C. Simvoulakis
Deputy Director
City of Manteca
1215 W. Center Street
Manteca, CA 95337
LSimvoulakis@manteca.gov

Re: Notice of Notice of Preparation of an Environmental Impact Report (EIR) for the Proposed Union Ranch North Project (November 28, 2023)

Dear Ms. Simvoulakis:

This office represents Delicato Family Wines (DFW), sponsors of a referendum to the Manteca General Plan that has qualified for the November 2024 ballot. DFW supports the City's decision to prepare a comprehensive environmental impact report for this large land use project.

We urge Manteca to study in depth the relevant environmental concerns such as those we raised in previous the previous round of comments, including but not limited to conflicts between proposed urban uses and farming/agricultural processing operations and the inherent conflict between truck and residential vehicular traffic.

With respect to land use conflicts between urban uses and farming/agricultural processing operations, we respectfully ask the City to evaluate each potential mitigation measure and policy presented in the various letters Delicato submitted during the General Plan Update. Regarding the traffic conflict, we respectfully point out that traditional methods of quantifying traffic impacts—VMT or LOS—omit the inherent conflict between industrial truck and residential vehicular traffic. This represents a serious problem concerning this proposal. The proposal is located near major agricultural processing operations and potential for traffic conflict is great.

As you know, qualifying the referendum operates to suspend the effectiveness of the subject ordinance; therefore, Manteca cannot use the challenged General Plan Update as the basis to consider or authority to allow this land use application. It should, however, impose all of the mitigation measures found in the General Plan update designed to lessen the conflict between urban uses and farming/agricultural processing operations. As part of the update process each mitigation measure was found to be feasible. An approval of the land use request should also include satisfaction of the new General Plan Policy proposed by the City/Delicato Settlement Agreement concerning the financing of infrastructure.

Finally, we point out that relying on the former General Plan to process this application is troubling from a legal and conceptual context. In oral and written communications the City planning staff repeatedly expressed its opinion that this General Plan was outdated and no longer a legally sufficient document to measure site-specific land use applications. DFV questions whether processing this site-specific land use application should happen based on a General Plan the relevant agency has concluded is legally deficient.

DFV will continue to monitor the processing of this EIR and the underlying land use applications. Depending upon implementation of the Settlement Agreement it reserves the right to provide the City with more exhaustive and comprehensive comments regarding the EIR and project.

Very truly yours,

Steven A Herum

STEVEN A. HERUM
Attorney-at-Law

SAH:sb

Scoping Meeting for Union Ranch North EIR

December 12, 2023

6:00pm to 7:00pm

Introductions

- Lea Simvoulakis, City of Manteca Planning Manager.
- Steve McMurtry, De Novo Planning Group (EIR Consultant).

Meeting Agenda

- Presentation by Mr. Steve McMurtry of De Novo Planning Group.
- Questions and Comments.
  - Please use “Raise Hand” Feature in Zoom to speak and provide comment.

Purpose of Today's Scoping Meeting

- To receive input from the public and interested agencies on the environmental issues that the Draft EIR should address.
- To enhance public participation as part of the project's review under the California Environmental Quality Act (CEQA).
- Today's meeting is NOT intended as a forum to discuss the merits or design of the proposed project.

State Law

Section 15060(c) of the CEQA Guidelines requires the City of Manteca to perform a preliminary screening of applications to determine if the activity is a “project” as defined by CEQA. The term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

City's Preliminary Review

- City of Manteca is the lead agency, and after review of the applications, has determined that the Union Ranch North Project is a "Project" subject to CEQA.
- City of Manteca determined that a project-level Environmental Impact Report (EIR) must be prepared in accordance with the California Environmental Quality Act (CEQA), Section 15050.
- City of Manteca released a Notice of Preparation (NOP) in order to provide meaningful input on the scope and content of the EIR.
- City of Manteca scheduled a scoping meeting to provide additional opportunities for public comment.

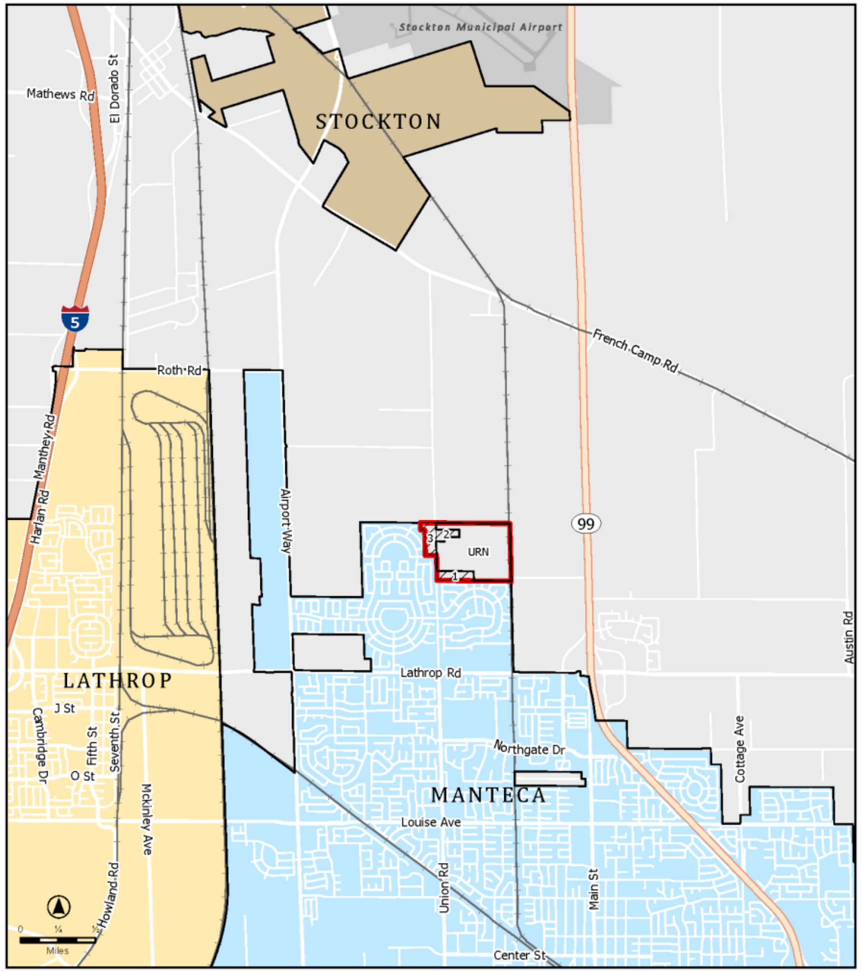
Environmental Review Process

What is an EIR:

- An informational document describing the anticipated environmental effects of implementing a project, as required by CEQA
- Acts as a forum for public participation in the environmental review process.
- An EIR includes Mitigation Measures to reduce potential adverse environmental impacts.
- An EIR does not advocate or promote the project.

CITY of MANTECA, CALIFORNIA
Manteca
the family city
INCORPORATED MAY 28, 1918

Project Location



LEGEND

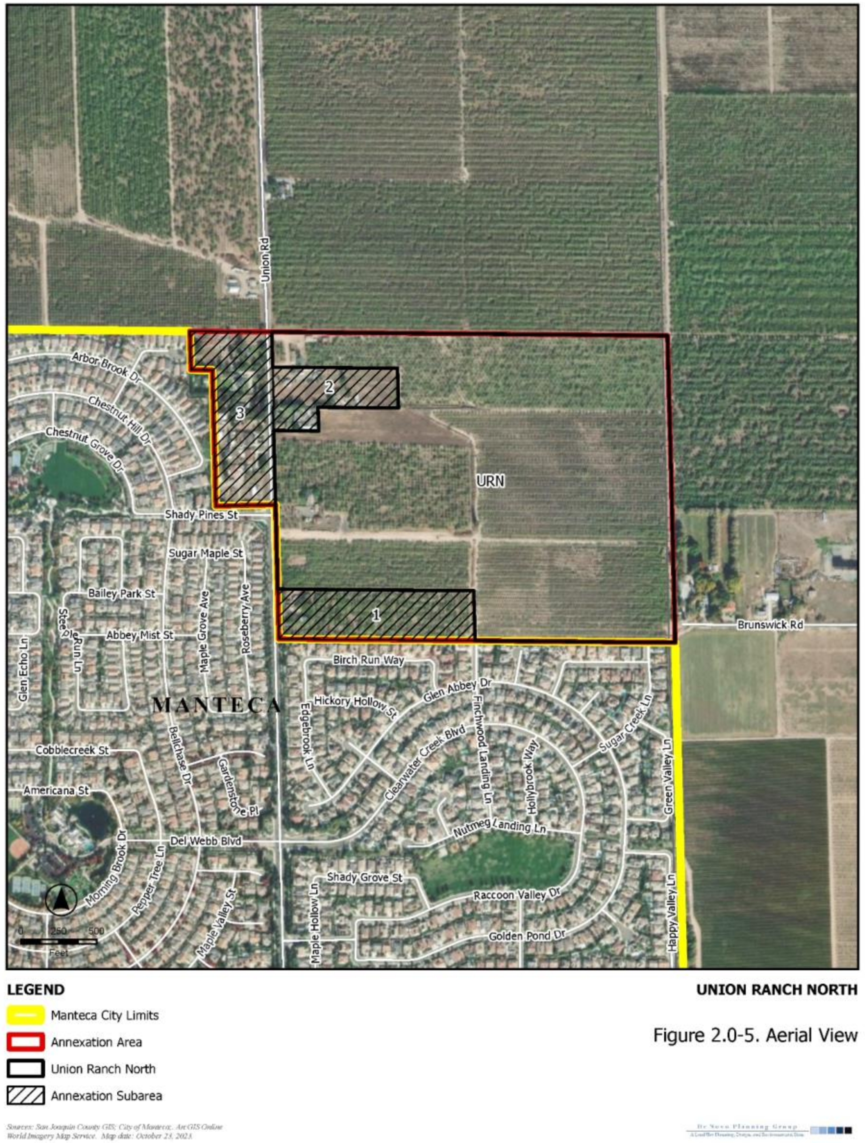
- Annexation Area
- Union Ranch North
- Annexation Subarea
- City Limits

UNION RANCH NORTH

Figure 2.0-2. Vicinity Map

- Northeastern Manteca
- Adjacent to the to the city limits.
- Union Road to the west

Project Setting – Acreages



- 17 APNs
- 133.18 acres
- 106. acres for development
- 27.14 acres for annexation only

Project Setting – Annexation Areas

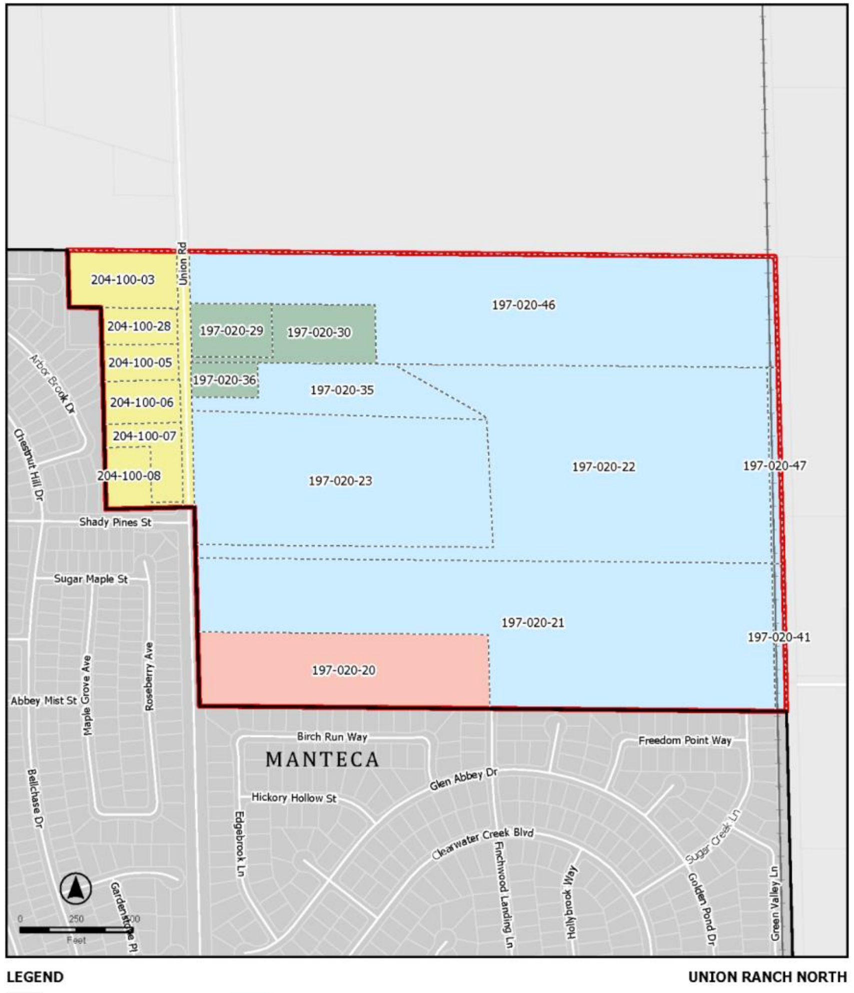
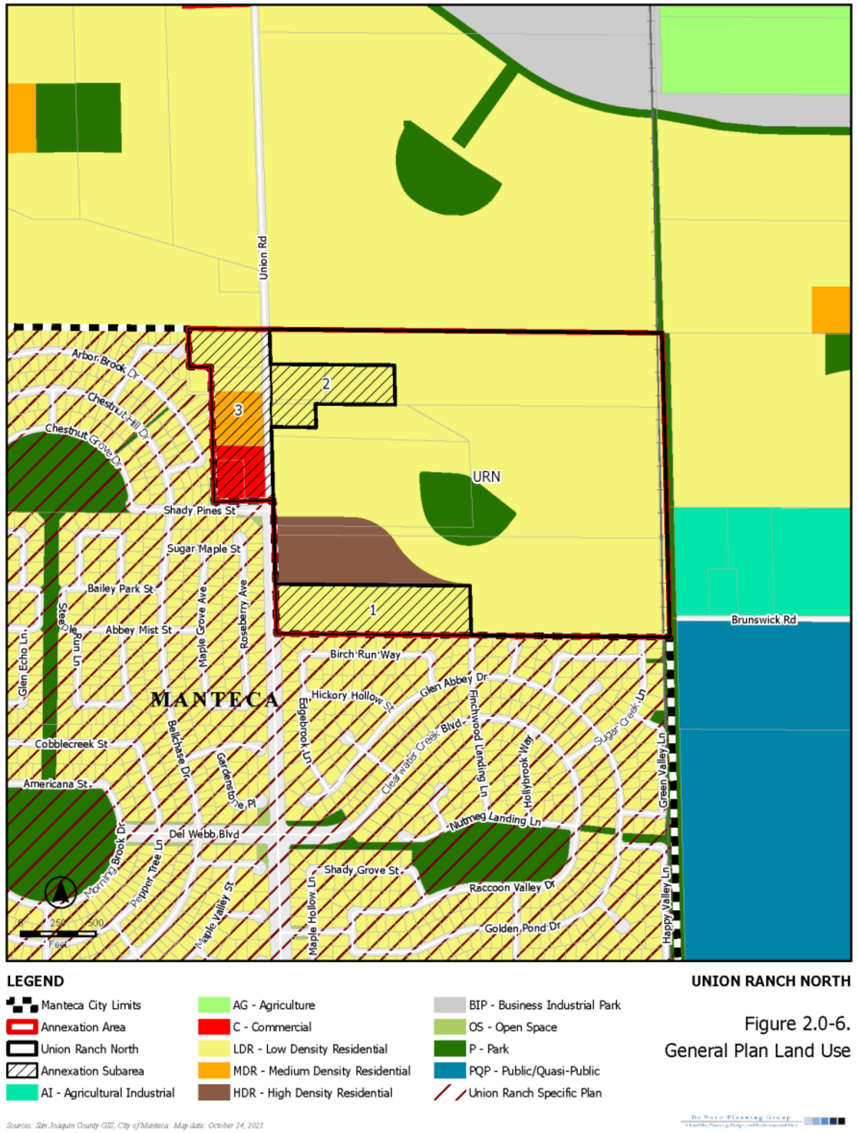


Figure 2.0-4. Assessor Parcel Map

- Distinct Planning Areas:
  - Development Area (7 parcels on 106.04 acres),
  - Non-development SubArea 1 (1 parcel on 9.82 acres),
  - Non-development SubArea 2 (3 parcels on 6.04 acres),
  - Non-development SubArea 3 (6 parcels on 11.28 acres),

Project Setting – Existing General Plan



- Development Area **(LDR, HDR, P)**
- Non-development Area 1 **(LDR)**
- Non-development Area 2 **(LDR)**
- Non-development Area 3 **(LDR, MDR, C)**

Project Entitlements Requested

Project Entitlements:

- General Plan Amendment;
- Pre-zoning;
- Tentative Subdivision Map;
- Annexation; and,
- Development Agreement.

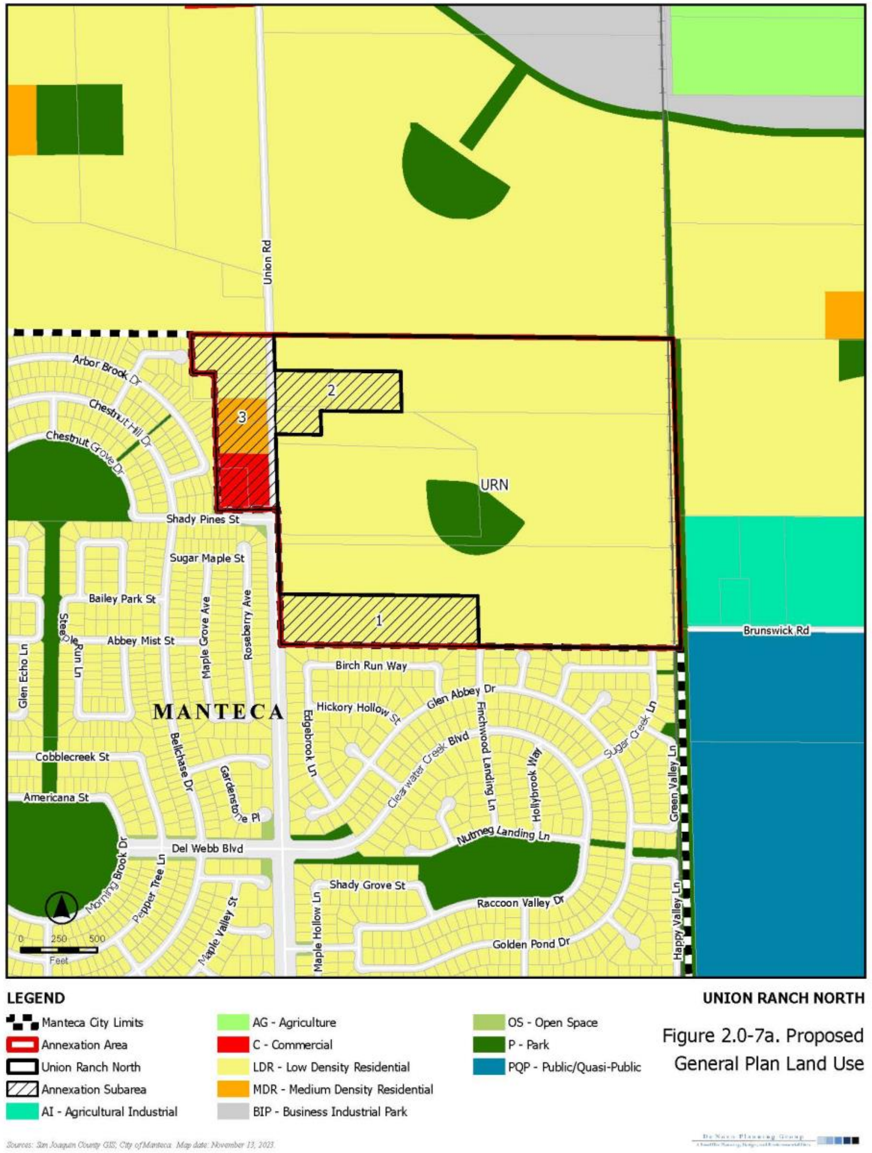
Goals and Objectives

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Manteca.
- Establish a mixture of Low-Density Residential project types that collectively provide for local and regional housing and that take advantage of the area's high level of accessibility.
- Provide infrastructure and park space that meets City standards, is integrated with existing and planned facilities and connections, and increases recreation opportunities for existing and future residents of the City.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.

Goals and Objectives – Cont'd

- Annex the three Annexation SubAreas in order to avoid the creation of islands. Annexation of these areas would establish a logical and orderly city limit line that promotes the efficient extension of municipal services.
- Allow all existing property owners with existing and legal non-conforming uses located in the Non-Development Areas (SubArea 1, 2, and 3) to continue to use and enjoy their properties in perpetuity in the same manner as prior to annexation. Non-conforming uses include the existing agricultural uses (orchards, row crops, livestock/farm animal, fowl/poultry, apiary, etc.), existing residences, existing outbuildings, equipment storage, roadways, irrigation, etc. even if left fallow or not used for such temporarily.

General Plan Amendment



- Development Area **(HDR to LDR)**
- Non-development Area 1 **(None)**
- Non-development Area 2 **(None)**
- Non-development Area 3 **(None)**

Pre-zoning

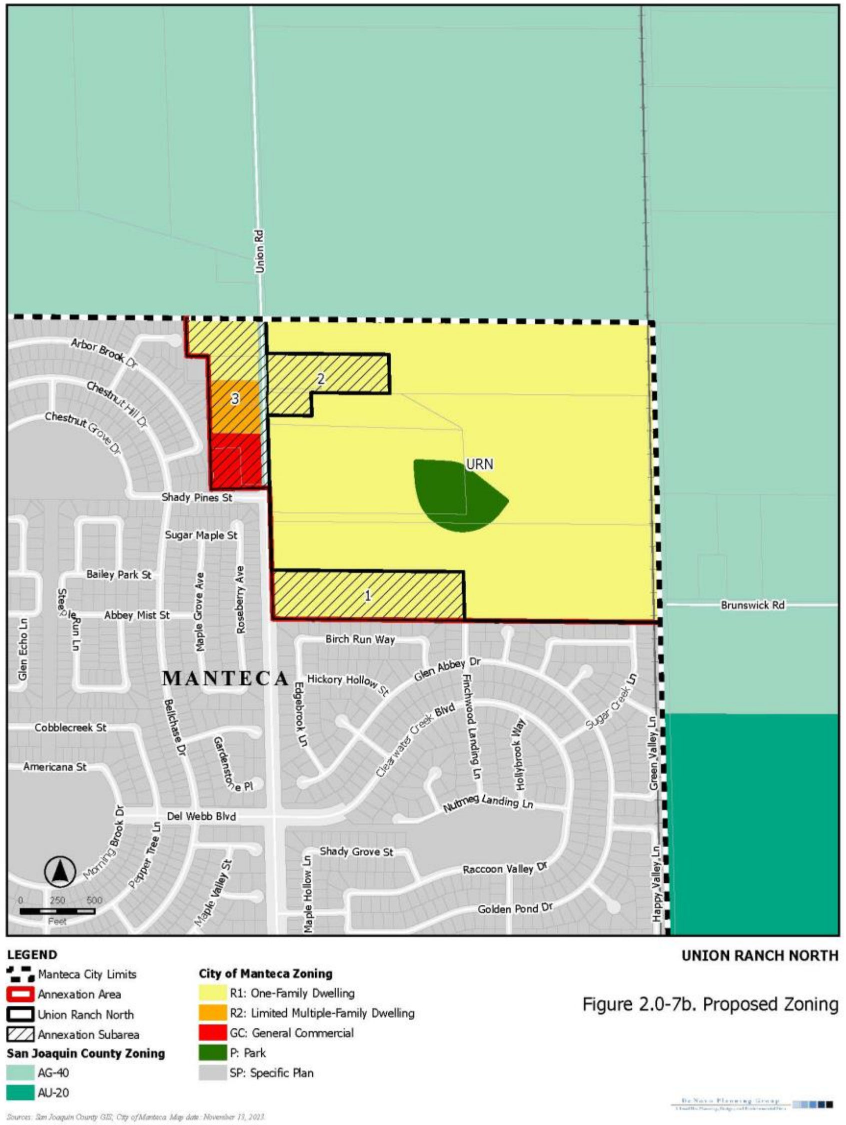
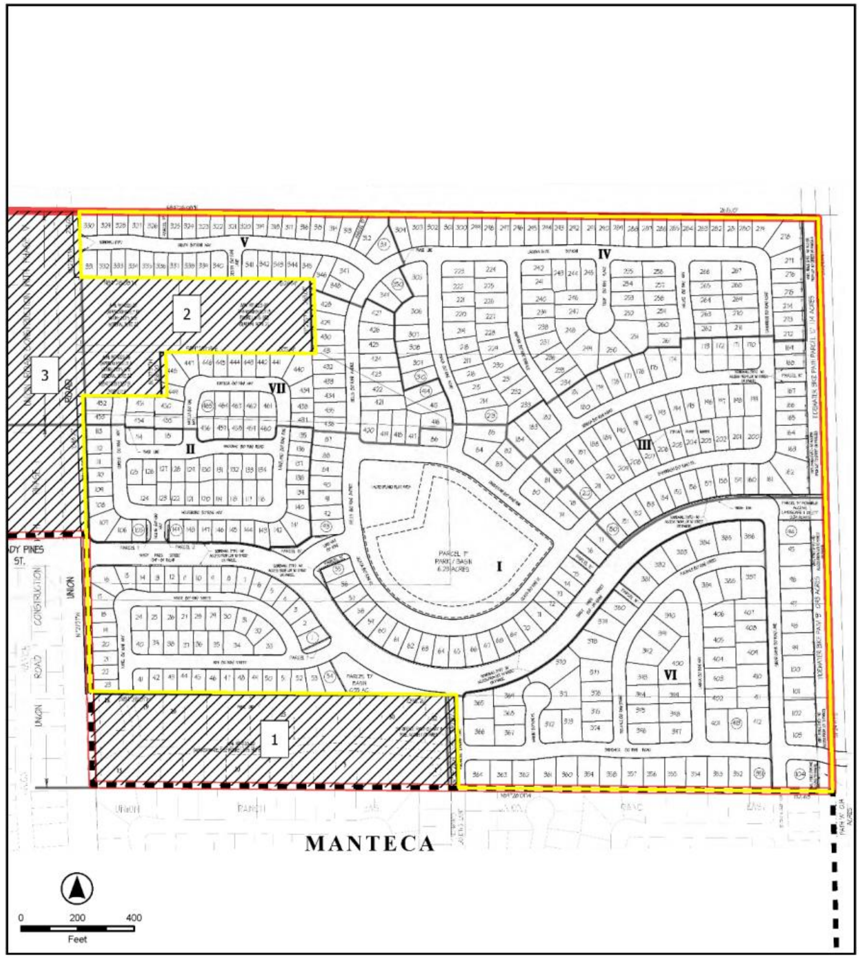


Figure 2.0-7b. Proposed Zoning

- Development Area: R1, Park
- Non-development Area 1: R-1
- Non-development Area 2: R-1
- Non-development Area 3: R-1, R-3, GC

Tentative Map – Union Ranch North



LEGEND

- Manteca City Limits
- Annexation Area
- Annexation Subarea
- Union Ranch North

UNION RANCH NORTH

Figure 2.0-8. Proposed Site Plan

Sources: KLC Associates; San Joaquin County GIS; City of Manteca. Map date: October 24, 2023.

- 106.04 acres
- 465 LDR Units
- Parks and Open Space

Annexation

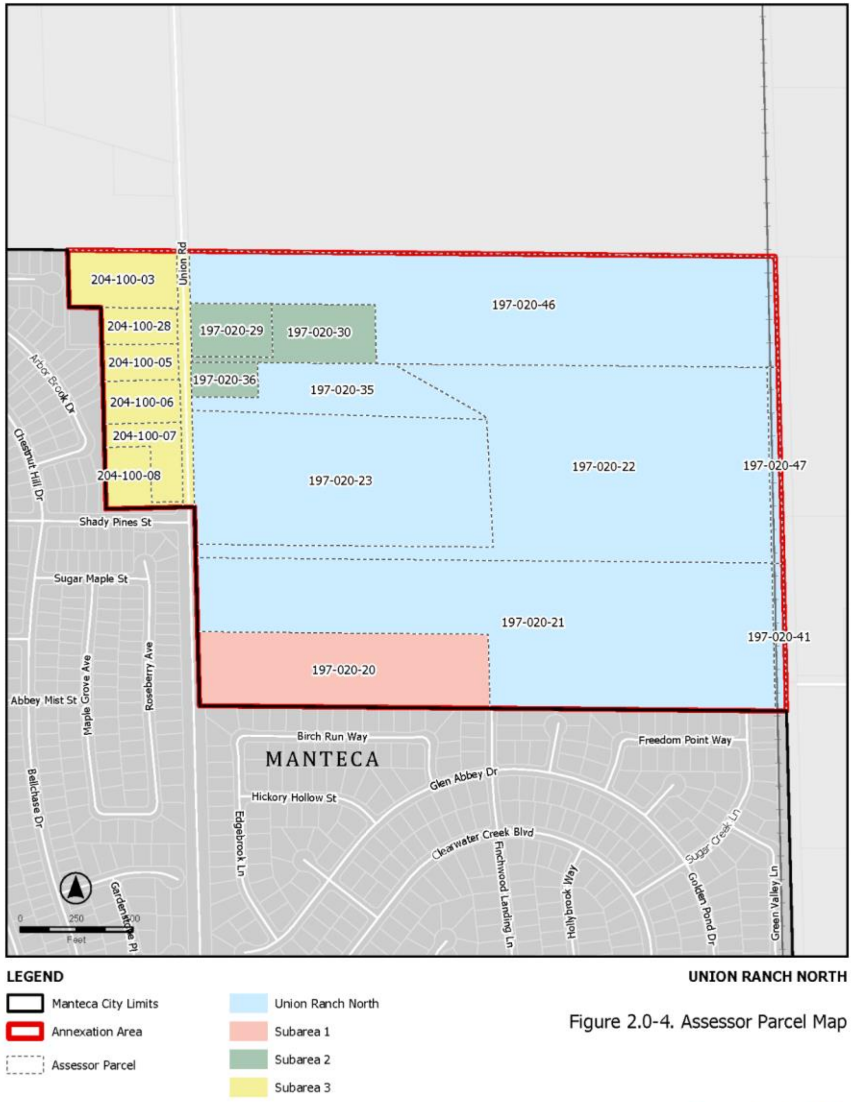


Figure 2.0-4. Assessor Parcel Map

- 133.18 acres
- 17 APNs
- 10 inhabited parcels
- County ROW

Development Agreement

- Negotiated Agreement between City and Developer
- Typical Items Included:
  - Conditions of Approval;
  - Mitigation Requirements;
  - Development Fees;
  - Infrastructure;
  - Project Entitlements; and,
  - Vesting Rights.

Issues to be Addressed in the EIR

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Resources
- Geology/Soils
- Greenhouse Gas Emissions/Energy
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use and Planning/Urban Decay
- Noise
- Population and Housing
- Public Services/Recreation
- Transportation and Traffic
- Utilities and Service Systems

CITY of MANTECA, CALIFORNIA
Manteca
the family city
INCORPORATED MAY 28, 1918

Notice of Preparation

- 30-day public review period ends on December 29, 2023
- Comments can be submitted:
  - Today (orally or in writing);
  - By email; and,
  - By mail.

Next Steps

- Public Draft EIR - 45-day public review and comment period.
- Final EIR - Written responses to comments, and any changes made to the Draft EIR.
- Certify the EIR.
- Planning Commission and City Council Hearings.
- LAFCo Hearings.

Key Information

The NOP is available for review at the City of Manteca. An electronic copy can be emailed to you if requested.

Comments can be sent to Lea Simvoulakis at:

lsimvoulakis@ci.Manteca.ca.us

Or:

Lea Simnvoulakis, Planning Manager
Community Development Department
City of Manteca
1001 West Center Street
Manteca, CA 95337

Appendix B

Air Quality, GHG, and Energy Calcs

APPENDIX B –AIR QUALITY, GREENHOUSES GASES, & ENERGY MODELING

Appendix Contents

1. CalEEMod Modeling Results
2. Energy Consumption Estimates
3. GHG Calculation Methodology

This page left intentionally blank

APPENDIX B.1

CalEEMod Modeling Results

Union Ranch North (Year 2025) Detailed Report

Table of Contents

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Union Ranch North (Year 2025)
Construction Start Date	7/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	9.00
Location	37.83902715346582, -121.23387613852935
County	San Joaquin
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2160
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	465	Dwelling Unit	96.6	906,750	5,446,479	0.00	1,502	—
City Park	96.6	Acre	96.6	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads
Transportation	T-31-B*	Improve Destination Accessibility in Underserved Areas
Transportation	T-32*	Orient Project Toward Transit, Bicycle, or Pedestrian Facility
Energy	E-2	Require Energy Efficient Appliances
Energy	E-7*	Require Higher Efficacy Public Street and Area Lighting
Energy	E-10-B	Establish Onsite Renewable Energy Systems: Solar Power
Energy	E-12-B	Install Electric Space Heater in Place of Natural Gas Heaters in Residences
Water	W-4	Require Low-Flow Water Fixtures
Water	W-5	Design Water-Efficient Landscapes
Natural Lands	N-2	Expand Urban Tree Planting

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.43	57.0	36.0	33.9	0.05	1.60	19.8	21.4	1.47	10.1	11.6	—	5,461	5,461	0.22	0.29	9.63	5,482
Mit.	4.43	57.0	36.0	33.9	0.05	1.60	7.81	9.41	1.47	3.97	5.45	—	5,461	5,461	0.22	0.29	9.63	5,482
% Reduced	—	—	—	—	—	—	61%	56%	—	61%	53%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.42	57.0	36.0	33.7	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	6,769	6,769	0.28	0.30	0.26	6,794
Mit.	4.42	57.0	36.0	33.7	0.06	1.60	7.81	9.41	1.47	3.97	5.45	—	6,769	6,769	0.28	0.30	0.26	6,794
% Reduced	—	—	—	—	—	—	61%	56%	—	61%	53%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.54	11.8	12.4	14.8	0.02	0.54	4.88	5.41	0.49	2.29	2.79	—	3,743	3,743	0.11	0.20	2.97	3,810
Mit.	1.54	11.8	12.4	14.8	0.02	0.54	1.97	2.51	0.49	0.91	1.40	—	3,743	3,743	0.11	0.20	2.97	3,810
% Reduced	—	—	—	—	—	—	60%	54%	—	60%	50%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.28	2.16	2.27	2.70	< 0.005	0.10	0.89	0.99	0.09	0.42	0.51	—	620	620	0.02	0.03	0.49	631
Mit.	0.28	2.16	2.27	2.70	< 0.005	0.10	0.36	0.46	0.09	0.17	0.26	—	620	620	0.02	0.03	0.49	631
% Reduced	—	—	—	—	—	—	60%	54%	—	60%	50%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.43	3.73	36.0	33.9	0.05	1.60	19.8	21.4	1.47	10.1	11.6	—	5,461	5,461	0.22	0.23	3.53	5,482
2025	2.18	1.87	12.7	22.4	0.03	0.45	1.79	2.24	0.42	0.43	0.85	—	5,354	5,354	0.20	0.29	9.63	5,454
2026	2.06	1.77	11.9	21.6	0.03	0.40	1.79	2.18	0.37	0.43	0.80	—	5,295	5,295	0.15	0.28	8.60	5,392
2027	0.27	57.0	0.91	2.62	< 0.005	0.02	0.28	0.30	0.02	0.07	0.08	—	432	432	0.01	0.01	0.94	437
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.42	3.72	36.0	33.7	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	6,769	6,769	0.28	0.30	0.26	6,794
2025	2.12	1.81	12.9	20.6	0.03	0.45	1.79	2.24	0.42	0.43	0.85	—	5,206	5,206	0.16	0.29	0.25	5,295
2026	2.02	57.0	12.2	19.9	0.03	0.40	1.79	2.18	0.37	0.43	0.80	—	5,151	5,151	0.16	0.29	0.22	5,240
2027	0.26	57.0	0.93	2.31	< 0.005	0.02	0.28	0.30	0.02	0.07	0.08	—	403	403	0.01	0.01	0.02	407
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.54	1.29	12.4	11.4	0.02	0.54	4.88	5.41	0.49	2.29	2.79	—	2,169	2,169	0.09	0.03	0.15	2,179
2025	1.52	1.30	9.14	14.8	0.02	0.32	1.27	1.59	0.30	0.31	0.61	—	3,743	3,743	0.11	0.20	2.97	3,810
2026	1.04	4.66	6.54	10.5	0.02	0.24	0.72	0.95	0.22	0.17	0.39	—	2,414	2,414	0.08	0.11	1.47	2,451
2027	0.05	11.8	0.19	0.49	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	85.1	85.1	< 0.005	< 0.005	0.08	86.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.28	0.24	2.27	2.08	< 0.005	0.10	0.89	0.99	0.09	0.42	0.51	—	359	359	0.01	< 0.005	0.03	361
2025	0.28	0.24	1.67	2.70	< 0.005	0.06	0.23	0.29	0.05	0.06	0.11	—	620	620	0.02	0.03	0.49	631
2026	0.19	0.85	1.19	1.92	< 0.005	0.04	0.13	0.17	0.04	0.03	0.07	—	400	400	0.01	0.02	0.24	406
2027	0.01	2.16	0.03	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	14.1	14.1	< 0.005	< 0.005	0.01	14.2

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.43	3.73	36.0	33.9	0.05	1.60	7.81	9.41	1.47	3.97	5.45	—	5,461	5,461	0.22	0.23	3.53	5,482
2025	2.18	1.87	12.7	22.4	0.03	0.45	1.79	2.24	0.42	0.43	0.85	—	5,354	5,354	0.20	0.29	9.63	5,454
2026	2.06	1.77	11.9	21.6	0.03	0.40	1.79	2.18	0.37	0.43	0.80	—	5,295	5,295	0.15	0.28	8.60	5,392
2027	0.27	57.0	0.91	2.62	< 0.005	0.02	0.28	0.30	0.02	0.07	0.08	—	432	432	0.01	0.01	0.94	437
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.42	3.72	36.0	33.7	0.06	1.60	7.81	9.41	1.47	3.97	5.45	—	6,769	6,769	0.28	0.30	0.26	6,794
2025	2.12	1.81	12.9	20.6	0.03	0.45	1.79	2.24	0.42	0.43	0.85	—	5,206	5,206	0.16	0.29	0.25	5,295
2026	2.02	57.0	12.2	19.9	0.03	0.40	1.79	2.18	0.37	0.43	0.80	—	5,151	5,151	0.16	0.29	0.22	5,240
2027	0.26	57.0	0.93	2.31	< 0.005	0.02	0.28	0.30	0.02	0.07	0.08	—	403	403	0.01	0.01	0.02	407
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.54	1.29	12.4	11.4	0.02	0.54	1.97	2.51	0.49	0.91	1.40	—	2,169	2,169	0.09	0.03	0.15	2,179
2025	1.52	1.30	9.14	14.8	0.02	0.32	1.27	1.59	0.30	0.31	0.61	—	3,743	3,743	0.11	0.20	2.97	3,810
2026	1.04	4.66	6.54	10.5	0.02	0.24	0.72	0.95	0.22	0.17	0.39	—	2,414	2,414	0.08	0.11	1.47	2,451
2027	0.05	11.8	0.19	0.49	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	85.1	85.1	< 0.005	< 0.005	0.08	86.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.28	0.24	2.27	2.08	< 0.005	0.10	0.36	0.46	0.09	0.17	0.26	—	359	359	0.01	< 0.005	0.03	361
2025	0.28	0.24	1.67	2.70	< 0.005	0.06	0.23	0.29	0.05	0.06	0.11	—	620	620	0.02	0.03	0.49	631
2026	0.19	0.85	1.19	1.92	< 0.005	0.04	0.13	0.17	0.04	0.03	0.07	—	400	400	0.01	0.02	0.24	406
2027	0.01	2.16	0.03	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	14.1	14.1	< 0.005	< 0.005	0.01	14.2

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.8	25.0	10.4	168	0.35	0.45	32.4	32.8	0.44	8.18	8.61	262	39,527	39,789	28.0	0.90	132	40,889
Mit.	14.8	24.9	10.2	168	0.28	0.32	32.2	32.5	0.40	8.14	8.54	256	38,356	38,612	27.2	0.87	132	39,682
% Reduced	—	< 0.5%	1%	< 0.5%	19%	29%	< 0.5%	1%	8%	< 0.5%	1%	2%	3%	3%	3%	4%	—	3%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.5	21.8	11.9	114	0.31	0.44	32.4	32.8	0.42	8.18	8.60	262	36,201	36,463	28.1	1.04	9.75	37,486
Mit.	11.5	21.7	11.8	114	0.25	0.31	32.2	32.5	0.39	8.14	8.53	256	35,030	35,286	27.3	1.00	9.75	36,279
% Reduced	—	< 0.5%	1%	< 0.5%	21%	30%	< 0.5%	1%	9%	< 0.5%	1%	2%	3%	3%	3%	3%	—	3%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.7	22.9	11.2	129	0.32	0.44	32.2	32.6	0.43	8.13	8.56	262	37,002	37,265	28.0	0.97	60.7	38,317
Mit.	12.7	22.8	11.1	129	0.26	0.31	32.0	32.3	0.39	8.10	8.49	256	35,831	36,088	27.3	0.94	60.7	37,110
% Reduced	—	< 0.5%	1%	< 0.5%	20%	30%	< 0.5%	1%	8%	< 0.5%	1%	2%	3%	3%	3%	3%	—	3%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.32	4.18	2.04	23.6	0.06	0.08	5.87	5.95	0.08	1.48	1.56	43.4	6,126	6,170	4.64	0.16	10.1	6,344
Mit.	2.32	4.17	2.02	23.6	0.05	0.06	5.85	5.90	0.07	1.48	1.55	42.4	5,932	5,975	4.51	0.16	10.1	6,144
% Reduced	< 0.5%	< 0.5%	1%	< 0.5%	20%	30%	< 0.5%	1%	8%	< 0.5%	1%	2%	3%	3%	3%	3%	—	3%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.9	11.2	6.69	140	0.32	0.16	32.4	32.5	0.15	8.18	8.33	—	32,780	32,780	0.88	0.76	126	33,154
Area	2.50	13.6	0.26	26.3	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Energy	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	6,551	6,551	0.74	0.05	—	6,585
Water	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Total	14.8	25.0	10.4	168	0.35	0.45	32.4	32.8	0.44	8.18	8.61	262	39,527	39,789	28.0	0.90	132	40,889
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.1	10.3	8.50	113	0.29	0.16	32.4	32.5	0.15	8.18	8.33	—	29,525	29,525	1.06	0.90	3.26	29,822
Area	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	6,551	6,551	0.74	0.05	—	6,585
Water	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Total	11.5	21.8	11.9	114	0.31	0.44	32.4	32.8	0.42	8.18	8.60	262	36,201	36,463	28.1	1.04	9.75	37,486
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.1	10.3	7.64	115	0.30	0.16	32.2	32.3	0.15	8.13	8.28	—	30,291	30,291	0.97	0.83	54.2	30,618
Area	1.23	12.4	0.13	13.0	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	34.8	34.8	< 0.005	< 0.005	—	34.9
Energy	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	6,551	6,551	0.74	0.05	—	6,585
Water	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Total	12.7	22.9	11.2	129	0.32	0.44	32.2	32.6	0.43	8.13	8.56	262	37,002	37,265	28.0	0.97	60.7	38,317

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.02	1.88	1.39	20.9	0.05	0.03	5.87	5.90	0.03	1.48	1.51	—	5,015	5,015	0.16	0.14	8.98	5,069
Area	0.23	2.27	0.02	2.37	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78
Energy	0.07	0.04	0.62	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	1,085	1,085	0.12	0.01	—	1,090
Water	—	—	—	—	—	—	—	—	—	—	—	6.00	20.8	26.8	0.62	0.02	—	46.7
Waste	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
Total	2.32	4.18	2.04	23.6	0.06	0.08	5.87	5.95	0.08	1.48	1.56	43.4	6,126	6,170	4.64	0.16	10.1	6,344

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.9	11.2	6.69	140	0.32	0.16	32.4	32.5	0.15	8.18	8.33	—	32,780	32,780	0.88	0.76	126	33,154
Area	2.50	13.6	0.26	26.3	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Energy	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	5,660	5,660	0.60	0.03	—	5,685
Water	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Vegetation	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Total	14.8	24.9	10.2	168	0.28	0.32	32.2	32.5	0.40	8.14	8.54	256	38,356	38,612	27.2	0.87	132	39,682
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.1	10.3	8.50	113	0.29	0.16	32.4	32.5	0.15	8.18	8.33	—	29,525	29,525	1.06	0.90	3.26	29,822
Area	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Energy	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	5,660	5,660	0.60	0.03	—	5,685
Water	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Vegetation	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Total	11.5	21.7	11.8	114	0.25	0.31	32.2	32.5	0.39	8.14	8.53	256	35,030	35,286	27.3	1.00	9.75	36,279
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.1	10.3	7.64	115	0.30	0.16	32.2	32.3	0.15	8.13	8.28	—	30,291	30,291	0.97	0.83	54.2	30,618
Area	1.23	12.4	0.13	13.0	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	34.8	34.8	< 0.005	< 0.005	—	34.9
Energy	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	5,660	5,660	0.60	0.03	—	5,685
Water	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Vegetation	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Total	12.7	22.8	11.1	129	0.26	0.31	32.0	32.3	0.39	8.10	8.49	256	35,831	36,088	27.3	0.94	60.7	37,110
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.02	1.88	1.39	20.9	0.05	0.03	5.87	5.90	0.03	1.48	1.51	—	5,015	5,015	0.16	0.14	8.98	5,069
Area	0.23	2.27	0.02	2.37	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78
Energy	0.07	0.04	0.62	0.26	< 0.005	0.05	—	0.05	0.05	—	0.05	—	937	937	0.10	0.01	—	941
Water	—	—	—	—	—	—	—	—	—	—	—	4.97	12.2	17.2	0.51	0.01	—	33.7
Waste	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
Vegetation	—	-0.02	-0.02	—	-0.01	-0.02	-0.02	-0.05	-0.01	-0.01	-0.01	—	-37.8	-37.8	—	—	—	-37.8
Total	2.32	4.17	2.02	23.6	0.05	0.06	5.85	5.90	0.07	1.48	1.55	42.4	5,932	5,975	4.51	0.16	10.1	6,144

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	1.53	1.53	—	0.23	0.23	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.68	0.60	< 0.005	0.03	—	0.03	0.03	—	0.03	—	93.8	93.8	< 0.005	< 0.005	—	94.2
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.11	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.5	15.5	< 0.005	< 0.005	—	15.6
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.85	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	142	142	0.01	0.01	0.57	144
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.03	1.50	0.36	0.01	0.02	0.32	0.34	0.02	0.09	0.11	—	1,235	1,235	0.03	0.20	2.97	1,297
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.60	3.60	< 0.005	< 0.005	0.01	3.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.8	33.8	< 0.005	0.01	0.03	35.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.60	5.60	< 0.005	< 0.005	0.01	5.88

3.2. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	1.53	1.53	—	0.23	0.23	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.68	0.60	< 0.005	0.03	—	0.03	0.03	—	0.03	—	93.8	93.8	< 0.005	< 0.005	—	94.2
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.11	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.5	15.5	< 0.005	< 0.005	—	15.6
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.85	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	142	142	0.01	0.01	0.57	144
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.03	1.50	0.36	0.01	0.02	0.32	0.34	0.02	0.09	0.11	—	1,235	1,235	0.03	0.20	2.97	1,297

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.60	3.60	< 0.005	< 0.005	0.01	3.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.8	33.8	< 0.005	0.01	0.03	35.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.60	5.60	< 0.005	< 0.005	0.01	5.88

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.60	5.91	5.41	0.01	0.26	—	0.26	0.24	—	0.24	—	871	871	0.04	0.01	—	874
Dust From Material Movement	—	—	—	—	—	—	3.23	3.23	—	1.66	1.66	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.08	0.99	< 0.005	0.05	—	0.05	0.04	—	0.04	—	144	144	0.01	< 0.005	—	145
Dust From Material Movement	—	—	—	—	—	—	0.59	0.59	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.05	1.00	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	165	165	0.01	0.01	0.66	168
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.79	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	149	149	0.01	0.01	0.02	152
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.2	25.2	< 0.005	< 0.005	0.05	25.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.17	4.17	< 0.005	< 0.005	0.01	4.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.60	5.91	5.41	0.01	0.26	—	0.26	0.24	—	0.24	—	871	871	0.04	0.01	—	874
Dust From Material Movement	—	—	—	—	—	—	1.26	1.26	—	0.65	0.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.08	0.99	< 0.005	0.05	—	0.05	0.04	—	0.04	—	144	144	0.01	< 0.005	—	145
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.05	1.00	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	165	165	0.01	0.01	0.66	168

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.79	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	149	149	0.01	0.01	0.02	152
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.2	25.2	< 0.005	< 0.005	0.05	25.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.17	4.17	< 0.005	< 0.005	0.01	4.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.59	5.73	5.04	0.01	0.24	—	0.24	0.22	—	0.22	—	1,103	1,103	0.04	0.01	—	1,106
Dust From Material Movement	—	—	—	—	—	—	1.54	1.54	—	0.61	0.61	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.05	0.92	< 0.005	0.04	—	0.04	0.04	—	0.04	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	—	0.28	0.28	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	171	171	0.01	0.01	0.02	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.3	29.3	< 0.005	< 0.005	0.05	29.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.84	4.84	< 0.005	< 0.005	0.01	4.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.59	5.73	5.04	0.01	0.24	—	0.24	0.22	—	0.22	—	1,103	1,103	0.04	0.01	—	1,106

Dust From Material Movement	—	—	—	—	—	—	0.60	0.60	—	0.24	0.24	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.05	0.92	< 0.005	0.04	—	0.04	0.04	—	0.04	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	171	171	0.01	0.01	0.02	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.3	29.3	< 0.005	< 0.005	0.05	29.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.84	4.84	< 0.005	< 0.005	0.01	4.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.74	0.68	0.69	7.53	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,429	1,429	0.09	0.06	0.16	1,449
Vendor	0.08	0.05	1.95	0.64	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,432	1,432	0.03	0.22	0.10	1,498
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.87	2.87	< 0.005	< 0.005	0.01	2.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.80	2.80	< 0.005	< 0.005	< 0.005	2.93
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.74	0.68	0.69	7.53	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,429	1,429	0.09	0.06	0.16	1,449
Vendor	0.08	0.05	1.95	0.64	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,432	1,432	0.03	0.22	0.10	1,498
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.87	2.87	< 0.005	< 0.005	0.01	2.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.80	2.80	< 0.005	< 0.005	< 0.005	2.93
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.76	0.70	0.47	8.73	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,549	1,549	0.07	0.06	5.76	1,574
Vendor	0.07	0.05	1.75	0.60	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,407	1,407	0.03	0.21	3.86	1,474
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.64	0.63	6.93	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,399	1,399	0.04	0.06	0.15	1,418
Vendor	0.07	0.04	1.87	0.61	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,409	1,409	0.03	0.21	0.10	1,471
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.51	0.46	0.38	5.07	0.00	0.00	1.00	1.00	0.00	0.23	0.23	—	1,025	1,025	0.03	0.04	1.77	1,039
Vendor	0.05	0.03	1.30	0.43	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	1,006	1,006	0.02	0.15	1.19	1,052
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.92	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	170	170	< 0.005	0.01	0.29	172
Vendor	0.01	0.01	0.24	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	166	166	< 0.005	0.02	0.20	174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.76	0.70	0.47	8.73	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,549	1,549	0.07	0.06	5.76	1,574
Vendor	0.07	0.05	1.75	0.60	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,407	1,407	0.03	0.21	3.86	1,474
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.64	0.63	6.93	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,399	1,399	0.04	0.06	0.15	1,418

Vendor	0.07	0.04	1.87	0.61	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,409	1,409	0.03	0.21	0.10	1,471
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.51	0.46	0.38	5.07	0.00	0.00	1.00	1.00	0.00	0.23	0.23	—	1,025	1,025	0.03	0.04	1.77	1,039
Vendor	0.05	0.03	1.30	0.43	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	1,006	1,006	0.02	0.15	1.19	1,052
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.92	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	170	170	< 0.005	0.01	0.29	172
Vendor	0.01	0.01	0.24	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	166	166	< 0.005	0.02	0.20	174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.40	3.68	4.85	0.01	0.14	—	0.14	0.13	—	0.13	—	896	896	0.04	0.01	—	899
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.67	0.88	< 0.005	0.03	—	0.03	0.02	—	0.02	—	148	148	0.01	< 0.005	—	149
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.66	0.42	8.06	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,516	1,516	0.03	0.05	5.20	1,538
Vendor	0.07	0.04	1.67	0.56	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,382	1,382	0.03	0.21	3.39	1,448
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.61	0.53	6.38	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,370	1,370	0.04	0.06	0.13	1,389
Vendor	0.07	0.04	1.78	0.58	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,383	1,383	0.03	0.21	0.09	1,446
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.23	0.18	2.44	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	525	525	0.01	0.02	0.84	533
Vendor	0.03	0.02	0.65	0.21	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	517	517	0.01	0.08	0.55	541
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.45	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	86.9	86.9	< 0.005	< 0.005	0.14	88.2

Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	85.5	85.5	< 0.005	0.01	0.09	89.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.40	3.68	4.85	0.01	0.14	—	0.14	0.13	—	0.13	—	896	896	0.04	0.01	—	899
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.67	0.88	< 0.005	0.03	—	0.03	0.02	—	0.02	—	148	148	0.01	< 0.005	—	149
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.66	0.42	8.06	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,516	1,516	0.03	0.05	5.20	1,538
Vendor	0.07	0.04	1.67	0.56	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,382	1,382	0.03	0.21	3.39	1,448
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.61	0.53	6.38	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,370	1,370	0.04	0.06	0.13	1,389
Vendor	0.07	0.04	1.78	0.58	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,383	1,383	0.03	0.21	0.09	1,446
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.23	0.18	2.44	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	525	525	0.01	0.02	0.84	533
Vendor	0.03	0.02	0.65	0.21	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	517	517	0.01	0.08	0.55	541
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.45	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	86.9	86.9	< 0.005	< 0.005	0.14	88.2
Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	85.5	85.5	< 0.005	0.01	0.09	89.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.95	2.72	< 0.005	0.09	—	0.09	0.08	—	0.08	—	414	414	0.02	< 0.005	—	415
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.50	< 0.005	0.02	—	0.02	0.01	—	0.01	—	68.5	68.5	< 0.005	< 0.005	—	68.8
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.72	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	136	136	< 0.005	< 0.005	0.47	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.57	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	123	123	< 0.005	0.01	0.01	124
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.5	34.5	< 0.005	< 0.005	0.06	35.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.71	5.71	< 0.005	< 0.005	0.01	5.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.95	2.72	< 0.005	0.09	—	0.09	0.08	—	0.08	—	414	414	0.02	< 0.005	—	415
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.50	< 0.005	0.02	—	0.02	0.01	—	0.01	—	68.5	68.5	< 0.005	< 0.005	—	68.8
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.72	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	136	136	< 0.005	< 0.005	0.47	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.57	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	123	123	< 0.005	0.01	0.01	124

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.5	34.5	< 0.005	< 0.005	0.06	35.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.71	5.71	< 0.005	< 0.005	0.01	5.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.88	8.88	< 0.005	< 0.005	—	8.91
Architectural Coatings	—	3.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.47	1.47	< 0.005	< 0.005	—	1.48
Architectural Coatings	—	0.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.11	1.28	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	274	274	0.01	0.01	0.03	278
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.7	18.7	< 0.005	< 0.005	0.03	19.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.09	3.09	< 0.005	< 0.005	< 0.005	3.14

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.88	8.88	< 0.005	< 0.005	—	8.91
Architectural Coatings	—	3.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.47	1.47	< 0.005	< 0.005	—	1.48

Architect Coatings	—	0.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.11	1.28	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	274	274	0.01	0.01	0.03	278
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.7	18.7	< 0.005	< 0.005	0.03	19.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.09	3.09	< 0.005	< 0.005	< 0.005	3.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.17	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.7	27.7	< 0.005	< 0.005	—	27.8
Architectural Coatings	—	11.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.59	4.59	< 0.005	< 0.005	—	4.60
Architectural Coatings	—	2.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.12	0.07	1.50	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	298	298	0.01	0.01	0.94	303
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.18	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	270	270	0.01	0.01	0.02	274
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.4	57.4	< 0.005	< 0.005	0.08	58.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.50	9.50	< 0.005	< 0.005	0.01	9.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.17	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.7	27.7	< 0.005	< 0.005	—	27.8
Architectural Coatings	—	11.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.59	4.59	< 0.005	< 0.005	—	4.60
Architectural Coatings	—	2.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.12	0.07	1.50	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	298	298	0.01	0.01	0.94	303
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.18	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	270	270	0.01	0.01	0.02	274
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.4	57.4	< 0.005	< 0.005	0.08	58.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.50	9.50	< 0.005	< 0.005	0.01	9.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	367	367	0.06	0.01	—	370
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	367	367	0.06	0.01	—	370

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	220	220	0.04	< 0.005	—	222
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	220	220	0.04	< 0.005	—	222

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.07	0.04	0.62	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	718	718	0.06	< 0.005	—	720
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.07	0.04	0.62	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	718	718	0.06	< 0.005	—	720

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343

City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.07	0.04	0.62	0.26	< 0.005	0.05	—	0.05	0.05	—	0.05	—	717	717	0.06	< 0.005	—	719
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.07	0.04	0.62	0.26	< 0.005	0.05	—	0.05	0.05	—	0.05	—	717	717	0.06	< 0.005	—	719

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipment	2.50	2.37	0.26	26.3	< 0.005	0.01	—	0.01	0.01	—	0.01	—	70.5	70.5	< 0.005	< 0.005	—	70.8
Total	2.50	13.6	0.26	26.3	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.23	0.21	0.02	2.37	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.76	5.76	< 0.005	< 0.005	—	5.78
Total	0.23	2.27	0.02	2.37	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.50	2.37	0.26	26.3	< 0.005	0.01	—	0.01	0.01	—	0.01	—	70.5	70.5	< 0.005	< 0.005	—	70.8
Total	2.50	13.6	0.26	26.3	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	0.23	0.21	0.02	2.37	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.76	5.76	< 0.005	< 0.005	—	5.78
Total	0.23	2.27	0.02	2.37	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6.00	20.8	26.8	0.62	0.02	—	46.7
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.00	20.8	26.8	0.62	0.02	—	46.7

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	4.97	12.2	17.2	0.51	0.01	—	33.7
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.97	12.2	17.2	0.51	0.01	—	33.7

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.7	0.00	36.7	3.67	0.00	—	128
City Park	—	—	—	—	—	—	—	—	—	—	—	0.74	0.00	0.74	0.07	0.00	—	2.59
Total	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.7	0.00	36.7	3.67	0.00	—	128
City Park	—	—	—	—	—	—	—	—	—	—	—	0.74	0.00	0.74	0.07	0.00	—	2.59
Total	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49

City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5
Subtotal	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
Subtotal	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5

Subtotal	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
Subtotal	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	-0.02	> -0.005	—	-0.01	-0.02	-0.02	-0.04	-0.01	-0.01	-0.01	—	-11.3	-11.3	—	—	—	-11.3
Subtotal	—	-0.02	> -0.005	—	-0.01	-0.02	-0.02	-0.04	-0.01	-0.01	-0.01	—	-11.3	-11.3	—	—	—	-11.3
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	—	—	—	—	—	—	—	—	—	—	-26.5	-26.5	—	—	—	-26.5
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	-26.5	-26.5	—	—	—	-26.5
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

California Black Oak	—	—	-0.02	—	-0.01	-0.01	-0.01	-0.01	> -0.005	> -0.005	> -0.005	—	—	—	—	—	—	—
Subtotal	—	—	-0.02	—	-0.01	-0.01	-0.01	-0.01	> -0.005	> -0.005	> -0.005	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	-0.02	-0.02	—	-0.01	-0.02	-0.02	-0.05	-0.01	-0.01	-0.01	—	-37.8	-37.8	—	—	—	-37.8

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	7/1/2024	7/12/2024	5.00	10.0	—
Site Preparation	Site Preparation	7/13/2024	10/4/2024	5.00	60.0	—
Grading	Grading	10/5/2024	12/30/2024	5.00	61.0	—
Building Construction	Building Construction	12/31/2024	7/10/2026	5.00	399	—
Paving	Paving	7/11/2026	11/27/2026	5.00	100	—
Architectural Coating	Architectural Coating	11/28/2026	4/16/2027	5.00	100	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40

Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	11.9	LDA,LDT1,LDT2
Demolition	Vendor	—	9.10	HHDT,MHDT
Demolition	Hauling	17.3	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	9.10	HHDT,MHDT

Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	11.9	LDA,LDT1,LDT2
Grading	Vendor	—	9.10	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	167	11.9	LDA,LDT1,LDT2
Building Construction	Vendor	49.7	9.10	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.9	LDA,LDT1,LDT2
Paving	Vendor	—	9.10	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	33.5	11.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	9.10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	11.9	LDA,LDT1,LDT2

Demolition	Vendor	—	9.10	HHDT,MHDT
Demolition	Hauling	17.3	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	9.10	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	11.9	LDA,LDT1,LDT2
Grading	Vendor	—	9.10	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	167	11.9	LDA,LDT1,LDT2
Building Construction	Vendor	49.7	9.10	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.9	LDA,LDT1,LDT2
Paving	Vendor	—	9.10	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	33.5	11.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	9.10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,836,169	612,056	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	15,000	—
Site Preparation	0.00	0.00	90.0	0.00	—
Grading	0.00	0.00	183	0.00	—
Paving	0.00	0.00	0.00	0.00	5.12

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	5.12	0%
City Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	4,385	4,385	4,385	1,600,525	46,221	46,221	46,221	16,870,665

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	4,385	4,385	4,385	1,600,525	46,221	46,221	46,221	16,870,665

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	465
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	465
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1836168.75	612,056	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	3,964,455	204	0.0330	0.0040	13,526,862
City Park	0.00	204	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	2,377,483	204	0.0330	0.0040	13,514,018
City Park	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)

Single Family Housing	18,913,305	93,435,321
City Park	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	15,656,434	46,690,321
City Park	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	411	—
City Park	8.31	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	411	—
City Park	8.31	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
California Black Oak	915	2,536,544	3,480

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	17.9	annual days of extreme heat
Extreme Precipitation	2.90	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	—
AQ-PM	—
AQ-DPM	—
Drinking Water	—
Lead Risk Housing	—
Pesticides	—
Toxic Releases	—
Traffic	—
Effect Indicators	—
CleanUp Sites	—
Groundwater	—
Haz Waste Facilities/Generators	—
Impaired Water Bodies	—
Solid Waste	—

Sensitive Population	—
Asthma	—
Cardio-vascular	—
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	—
Housing	—
Linguistic	—
Poverty	—
Unemployment	—

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	—
Employed	—
Median HI	—
Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—

Voting	—
Neighborhood	—
Alcohol availability	—
Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—
Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—
Uncrowded housing	—
Health Outcomes	—
Insured adults	—
Arthritis	—
Asthma ER Admissions	—
High Blood Pressure	—
Cancer (excluding skin)	—
Asthma	—
Coronary Heart Disease	—
Chronic Obstructive Pulmonary Disease	—
Diagnosed Diabetes	—
Life Expectancy at Birth	—
Cognitively Disabled	—
Physically Disabled	—
Heart Attack ER Admissions	—

Mental Health Not Good	—
Chronic Kidney Disease	—
Obesity	—
Pedestrian Injuries	—
Physical Health Not Good	—
Stroke	—
Health Risk Behaviors	—
Binge Drinking	—
Current Smoker	—
No Leisure Time for Physical Activity	—
Climate Change Exposures	—
Wildfire Risk	—
SLR Inundation Area	—
Children	—
Elderly	—
English Speaking	—
Foreign-born	—
Outdoor Workers	—
Climate Change Adaptive Capacity	—
Impervious Surface Cover	—
Traffic Density	—
Traffic Access	—
Other Indices	—
Hardship	—
Other Decision Support	—
2016 Voting	—

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	—
Healthy Places Index Score for Project Location (b)	—
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Land Use - Total development lot acreage = 106.04 acres (see Chapter 2.0 Project Description, for more detail).
Construction: Construction Phases	Buildout assumed to occur by 2025 operational year.
Operations: Fleet Mix	Revised Fleet mix to reflect that only home-based trips would occur (therefore, only LDA, LDT1, and LDT2 trips are relevant for this project during project operation). Maintained relative balance between LDA, LDT1, and LDT2 (per the CalEEMod defaults), but adjusted to reflect no other fleet vehicles beyond these three classes.
Operations: Hearths	Assumes no hearths.

Operations: Consumer Products	Revised General Category consumer products emissions factor to reflect CARB adjustments applied to their Consumer and Commercial Product Survey Emission data, made after the 2008 consumer products emissions factor. Adjustment made to reflect average adjustment factor. See for further detail: https://ww2.arb.ca.gov/our-work/programs/consumer-products-program/consumer-products-emissions-inventory

Union Ranch North (Year 2028) Detailed Report

Table of Contents

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Union Ranch North (Year 2028)
Construction Start Date	7/1/2024
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	9.00
Location	37.83902715346582, -121.23387613852935
County	San Joaquin
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2160
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	465	Dwelling Unit	96.6	906,750	5,446,479	0.00	1,502	—
City Park	96.6	Acre	96.6	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads
Transportation	T-31-B*	Improve Destination Accessibility in Underserved Areas
Transportation	T-32*	Orient Project Toward Transit, Bicycle, or Pedestrian Facility
Energy	E-2	Require Energy Efficient Appliances
Energy	E-7*	Require Higher Efficacy Public Street and Area Lighting
Energy	E-10-B	Establish Onsite Renewable Energy Systems: Solar Power
Energy	E-12-B	Install Electric Space Heater in Place of Natural Gas Heaters in Residences
Water	W-4	Require Low-Flow Water Fixtures
Water	W-5	Design Water-Efficient Landscapes
Natural Lands	N-2	Expand Urban Tree Planting

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.43	57.0	36.0	33.9	0.05	1.60	19.8	21.4	1.47	10.1	11.6	—	5,461	5,461	0.22	0.29	9.63	5,482
Mit.	4.43	57.0	36.0	33.9	0.05	1.60	7.81	9.41	1.47	3.97	5.45	—	5,461	5,461	0.22	0.29	9.63	5,482
% Reduced	—	—	—	—	—	—	61%	56%	—	61%	53%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.42	57.0	36.0	33.7	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	6,769	6,769	0.28	0.30	0.26	6,794
Mit.	4.42	57.0	36.0	33.7	0.06	1.60	7.81	9.41	1.47	3.97	5.45	—	6,769	6,769	0.28	0.30	0.26	6,794
% Reduced	—	—	—	—	—	—	61%	56%	—	61%	53%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.54	11.8	12.4	14.8	0.02	0.54	4.88	5.41	0.49	2.29	2.79	—	3,743	3,743	0.11	0.20	2.97	3,810
Mit.	1.54	11.8	12.4	14.8	0.02	0.54	1.97	2.51	0.49	0.91	1.40	—	3,743	3,743	0.11	0.20	2.97	3,810
% Reduced	—	—	—	—	—	—	60%	54%	—	60%	50%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.28	2.16	2.27	2.70	< 0.005	0.10	0.89	0.99	0.09	0.42	0.51	—	620	620	0.02	0.03	0.49	631
Mit.	0.28	2.16	2.27	2.70	< 0.005	0.10	0.36	0.46	0.09	0.17	0.26	—	620	620	0.02	0.03	0.49	631
% Reduced	—	—	—	—	—	—	60%	54%	—	60%	50%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.43	3.73	36.0	33.9	0.05	1.60	19.8	21.4	1.47	10.1	11.6	—	5,461	5,461	0.22	0.23	3.53	5,482
2025	2.18	1.87	12.7	22.4	0.03	0.45	1.79	2.24	0.42	0.43	0.85	—	5,354	5,354	0.20	0.29	9.63	5,454
2026	2.06	1.77	11.9	21.6	0.03	0.40	1.79	2.18	0.37	0.43	0.80	—	5,295	5,295	0.15	0.28	8.60	5,392
2027	0.27	57.0	0.91	2.62	< 0.005	0.02	0.28	0.30	0.02	0.07	0.08	—	432	432	0.01	0.01	0.94	437
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.42	3.72	36.0	33.7	0.06	1.60	19.8	21.4	1.47	10.1	11.6	—	6,769	6,769	0.28	0.30	0.26	6,794
2025	2.12	1.81	12.9	20.6	0.03	0.45	1.79	2.24	0.42	0.43	0.85	—	5,206	5,206	0.16	0.29	0.25	5,295
2026	2.02	57.0	12.2	19.9	0.03	0.40	1.79	2.18	0.37	0.43	0.80	—	5,151	5,151	0.16	0.29	0.22	5,240
2027	0.26	57.0	0.93	2.31	< 0.005	0.02	0.28	0.30	0.02	0.07	0.08	—	403	403	0.01	0.01	0.02	407
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.54	1.29	12.4	11.4	0.02	0.54	4.88	5.41	0.49	2.29	2.79	—	2,169	2,169	0.09	0.03	0.15	2,179
2025	1.52	1.30	9.14	14.8	0.02	0.32	1.27	1.59	0.30	0.31	0.61	—	3,743	3,743	0.11	0.20	2.97	3,810
2026	1.04	4.66	6.54	10.5	0.02	0.24	0.72	0.95	0.22	0.17	0.39	—	2,414	2,414	0.08	0.11	1.47	2,451
2027	0.05	11.8	0.19	0.49	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	85.1	85.1	< 0.005	< 0.005	0.08	86.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.28	0.24	2.27	2.08	< 0.005	0.10	0.89	0.99	0.09	0.42	0.51	—	359	359	0.01	< 0.005	0.03	361
2025	0.28	0.24	1.67	2.70	< 0.005	0.06	0.23	0.29	0.05	0.06	0.11	—	620	620	0.02	0.03	0.49	631
2026	0.19	0.85	1.19	1.92	< 0.005	0.04	0.13	0.17	0.04	0.03	0.07	—	400	400	0.01	0.02	0.24	406
2027	0.01	2.16	0.03	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	14.1	14.1	< 0.005	< 0.005	0.01	14.2

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.43	3.73	36.0	33.9	0.05	1.60	7.81	9.41	1.47	3.97	5.45	—	5,461	5,461	0.22	0.23	3.53	5,482
2025	2.18	1.87	12.7	22.4	0.03	0.45	1.79	2.24	0.42	0.43	0.85	—	5,354	5,354	0.20	0.29	9.63	5,454
2026	2.06	1.77	11.9	21.6	0.03	0.40	1.79	2.18	0.37	0.43	0.80	—	5,295	5,295	0.15	0.28	8.60	5,392
2027	0.27	57.0	0.91	2.62	< 0.005	0.02	0.28	0.30	0.02	0.07	0.08	—	432	432	0.01	0.01	0.94	437
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.42	3.72	36.0	33.7	0.06	1.60	7.81	9.41	1.47	3.97	5.45	—	6,769	6,769	0.28	0.30	0.26	6,794
2025	2.12	1.81	12.9	20.6	0.03	0.45	1.79	2.24	0.42	0.43	0.85	—	5,206	5,206	0.16	0.29	0.25	5,295
2026	2.02	57.0	12.2	19.9	0.03	0.40	1.79	2.18	0.37	0.43	0.80	—	5,151	5,151	0.16	0.29	0.22	5,240
2027	0.26	57.0	0.93	2.31	< 0.005	0.02	0.28	0.30	0.02	0.07	0.08	—	403	403	0.01	0.01	0.02	407
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.54	1.29	12.4	11.4	0.02	0.54	1.97	2.51	0.49	0.91	1.40	—	2,169	2,169	0.09	0.03	0.15	2,179
2025	1.52	1.30	9.14	14.8	0.02	0.32	1.27	1.59	0.30	0.31	0.61	—	3,743	3,743	0.11	0.20	2.97	3,810
2026	1.04	4.66	6.54	10.5	0.02	0.24	0.72	0.95	0.22	0.17	0.39	—	2,414	2,414	0.08	0.11	1.47	2,451
2027	0.05	11.8	0.19	0.49	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	85.1	85.1	< 0.005	< 0.005	0.08	86.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.28	0.24	2.27	2.08	< 0.005	0.10	0.36	0.46	0.09	0.17	0.26	—	359	359	0.01	< 0.005	0.03	361
2025	0.28	0.24	1.67	2.70	< 0.005	0.06	0.23	0.29	0.05	0.06	0.11	—	620	620	0.02	0.03	0.49	631
2026	0.19	0.85	1.19	1.92	< 0.005	0.04	0.13	0.17	0.04	0.03	0.07	—	400	400	0.01	0.02	0.24	406
2027	0.01	2.16	0.03	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	14.1	14.1	< 0.005	< 0.005	0.01	14.2

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.8	23.2	8.88	146	0.33	0.43	32.4	32.8	0.42	8.18	8.60	262	37,535	37,797	27.8	0.80	93.5	38,825
Mit.	12.8	23.1	8.75	146	0.26	0.30	32.2	32.5	0.38	8.15	8.52	256	36,364	36,620	27.0	0.77	93.5	37,618
% Reduced	—	< 0.5%	1%	< 0.5%	20%	31%	< 0.5%	1%	9%	< 0.5%	1%	2%	3%	3%	3%	4%	—	3%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.83	20.3	10.0	96.5	0.30	0.42	32.4	32.8	0.41	8.18	8.59	262	34,417	34,679	27.9	0.92	8.75	35,660
Mit.	9.83	20.2	9.90	96.5	0.23	0.28	32.2	32.5	0.37	8.15	8.51	256	33,246	33,502	27.1	0.89	8.75	34,454
% Reduced	—	< 0.5%	1%	< 0.5%	22%	32%	< 0.5%	1%	9%	< 0.5%	1%	2%	3%	3%	3%	4%	—	3%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.0	21.4	9.48	111	0.30	0.42	32.2	32.6	0.41	8.13	8.54	262	35,170	35,432	27.9	0.87	44.1	36,431
Mit.	11.0	21.3	9.35	111	0.24	0.29	32.0	32.3	0.37	8.10	8.47	256	33,999	34,255	27.1	0.83	44.1	35,224
% Reduced	—	< 0.5%	1%	< 0.5%	22%	31%	< 0.5%	1%	9%	< 0.5%	1%	2%	3%	3%	3%	4%	—	3%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.00	3.90	1.73	20.3	0.06	0.08	5.87	5.95	0.07	1.48	1.56	43.4	5,823	5,866	4.61	0.14	7.30	6,032
Mit.	2.00	3.88	1.71	20.3	0.04	0.05	5.85	5.90	0.07	1.48	1.55	42.4	5,629	5,671	4.48	0.14	7.30	5,832
% Reduced	< 0.5%	< 0.5%	1%	< 0.5%	22%	31%	< 0.5%	1%	9%	< 0.5%	1%	2%	3%	3%	3%	4%	—	3%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.0	9.44	5.21	118	0.30	0.14	32.4	32.5	0.13	8.18	8.31	—	30,788	30,788	0.71	0.66	87.0	31,090
Area	2.43	13.6	0.25	26.4	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Energy	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	6,551	6,551	0.74	0.05	—	6,585
Water	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Total	12.8	23.2	8.88	146	0.33	0.43	32.4	32.8	0.42	8.18	8.60	262	37,535	37,797	27.8	0.80	93.5	38,825
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.43	8.80	6.61	95.1	0.27	0.14	32.4	32.5	0.13	8.18	8.31	—	27,741	27,741	0.86	0.78	2.26	27,996
Area	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	6,551	6,551	0.74	0.05	—	6,585
Water	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Total	9.83	20.3	10.0	96.5	0.30	0.42	32.4	32.8	0.41	8.18	8.59	262	34,417	34,679	27.9	0.92	8.75	35,660
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.37	8.77	5.94	96.8	0.28	0.14	32.2	32.3	0.13	8.13	8.26	—	28,459	28,459	0.79	0.72	37.6	28,732
Area	1.20	12.4	0.12	13.0	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	34.8	34.8	< 0.005	< 0.005	—	34.9
Energy	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	6,551	6,551	0.74	0.05	—	6,585
Water	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Total	11.0	21.4	9.48	111	0.30	0.42	32.2	32.6	0.41	8.13	8.54	262	35,170	35,432	27.9	0.87	44.1	36,431

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.71	1.60	1.08	17.7	0.05	0.03	5.87	5.90	0.02	1.48	1.51	—	4,712	4,712	0.13	0.12	6.22	4,757
Area	0.22	2.26	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78
Energy	0.07	0.04	0.62	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	1,085	1,085	0.12	0.01	—	1,090
Water	—	—	—	—	—	—	—	—	—	—	—	6.00	20.8	26.8	0.62	0.02	—	46.7
Waste	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
Total	2.00	3.90	1.73	20.3	0.06	0.08	5.87	5.95	0.07	1.48	1.56	43.4	5,823	5,866	4.61	0.14	7.30	6,032

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.0	9.44	5.21	118	0.30	0.14	32.4	32.5	0.13	8.18	8.31	—	30,788	30,788	0.71	0.66	87.0	31,090
Area	2.43	13.6	0.25	26.4	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Energy	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	5,660	5,660	0.60	0.03	—	5,685
Water	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Vegetation	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Total	12.8	23.1	8.75	146	0.26	0.30	32.2	32.5	0.38	8.15	8.52	256	36,364	36,620	27.0	0.77	93.5	37,618
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.43	8.80	6.61	95.1	0.27	0.14	32.4	32.5	0.13	8.18	8.31	—	27,741	27,741	0.86	0.78	2.26	27,996
Area	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Energy	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	5,660	5,660	0.60	0.03	—	5,685
Water	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Vegetation	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Total	9.83	20.2	9.90	96.5	0.23	0.28	32.2	32.5	0.37	8.15	8.51	256	33,246	33,502	27.1	0.89	8.75	34,454
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.37	8.77	5.94	96.8	0.28	0.14	32.2	32.3	0.13	8.13	8.26	—	28,459	28,459	0.79	0.72	37.6	28,732
Area	1.20	12.4	0.12	13.0	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	34.8	34.8	< 0.005	< 0.005	—	34.9
Energy	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	5,660	5,660	0.60	0.03	—	5,685
Water	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Vegetation	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Total	11.0	21.3	9.35	111	0.24	0.29	32.0	32.3	0.37	8.10	8.47	256	33,999	34,255	27.1	0.83	44.1	35,224
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.71	1.60	1.08	17.7	0.05	0.03	5.87	5.90	0.02	1.48	1.51	—	4,712	4,712	0.13	0.12	6.22	4,757
Area	0.22	2.26	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78
Energy	0.07	0.04	0.62	0.26	< 0.005	0.05	—	0.05	0.05	—	0.05	—	937	937	0.10	0.01	—	941
Water	—	—	—	—	—	—	—	—	—	—	—	4.97	12.2	17.2	0.51	0.01	—	33.7
Waste	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
Vegetation	—	-0.02	-0.02	—	-0.01	-0.02	-0.02	-0.05	-0.01	-0.01	-0.01	—	-37.8	-37.8	—	—	—	-37.8
Total	2.00	3.88	1.71	20.3	0.04	0.05	5.85	5.90	0.07	1.48	1.55	42.4	5,629	5,671	4.48	0.14	7.30	5,832

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	1.53	1.53	—	0.23	0.23	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.68	0.60	< 0.005	0.03	—	0.03	0.03	—	0.03	—	93.8	93.8	< 0.005	< 0.005	—	94.2
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.11	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.5	15.5	< 0.005	< 0.005	—	15.6
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.85	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	142	142	0.01	0.01	0.57	144
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.03	1.50	0.36	0.01	0.02	0.32	0.34	0.02	0.09	0.11	—	1,235	1,235	0.03	0.20	2.97	1,297
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.60	3.60	< 0.005	< 0.005	0.01	3.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.8	33.8	< 0.005	0.01	0.03	35.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.60	5.60	< 0.005	< 0.005	0.01	5.88

3.2. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	1.53	1.53	—	0.23	0.23	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.68	0.60	< 0.005	0.03	—	0.03	0.03	—	0.03	—	93.8	93.8	< 0.005	< 0.005	—	94.2
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.11	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.5	15.5	< 0.005	< 0.005	—	15.6
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.85	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	142	142	0.01	0.01	0.57	144
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.03	1.50	0.36	0.01	0.02	0.32	0.34	0.02	0.09	0.11	—	1,235	1,235	0.03	0.20	2.97	1,297

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.60	3.60	< 0.005	< 0.005	0.01	3.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.8	33.8	< 0.005	0.01	0.03	35.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.60	5.60	< 0.005	< 0.005	0.01	5.88

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.60	5.91	5.41	0.01	0.26	—	0.26	0.24	—	0.24	—	871	871	0.04	0.01	—	874
Dust From Material Movement	—	—	—	—	—	—	3.23	3.23	—	1.66	1.66	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.08	0.99	< 0.005	0.05	—	0.05	0.04	—	0.04	—	144	144	0.01	< 0.005	—	145
Dust From Material Movement	—	—	—	—	—	—	0.59	0.59	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.05	1.00	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	165	165	0.01	0.01	0.66	168
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.79	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	149	149	0.01	0.01	0.02	152
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.2	25.2	< 0.005	< 0.005	0.05	25.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.17	4.17	< 0.005	< 0.005	0.01	4.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.60	5.91	5.41	0.01	0.26	—	0.26	0.24	—	0.24	—	871	871	0.04	0.01	—	874
Dust From Material Movement	—	—	—	—	—	—	1.26	1.26	—	0.65	0.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.08	0.99	< 0.005	0.05	—	0.05	0.04	—	0.04	—	144	144	0.01	< 0.005	—	145
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.05	1.00	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	165	165	0.01	0.01	0.66	168

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.79	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	149	149	0.01	0.01	0.02	152
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.2	25.2	< 0.005	< 0.005	0.05	25.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.17	4.17	< 0.005	< 0.005	0.01	4.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.59	5.73	5.04	0.01	0.24	—	0.24	0.22	—	0.22	—	1,103	1,103	0.04	0.01	—	1,106
Dust From Material Movement	—	—	—	—	—	—	1.54	1.54	—	0.61	0.61	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.05	0.92	< 0.005	0.04	—	0.04	0.04	—	0.04	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	—	0.28	0.28	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	171	171	0.01	0.01	0.02	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.3	29.3	< 0.005	< 0.005	0.05	29.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.84	4.84	< 0.005	< 0.005	0.01	4.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.59	5.73	5.04	0.01	0.24	—	0.24	0.22	—	0.22	—	1,103	1,103	0.04	0.01	—	1,106

Dust From Material Movement	—	—	—	—	—	—	0.60	0.60	—	0.24	0.24	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.05	0.92	< 0.005	0.04	—	0.04	0.04	—	0.04	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	171	171	0.01	0.01	0.02	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.3	29.3	< 0.005	< 0.005	0.05	29.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.84	4.84	< 0.005	< 0.005	0.01	4.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.74	0.68	0.69	7.53	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,429	1,429	0.09	0.06	0.16	1,449
Vendor	0.08	0.05	1.95	0.64	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,432	1,432	0.03	0.22	0.10	1,498
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.87	2.87	< 0.005	< 0.005	0.01	2.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.80	2.80	< 0.005	< 0.005	< 0.005	2.93
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.74	0.68	0.69	7.53	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,429	1,429	0.09	0.06	0.16	1,449
Vendor	0.08	0.05	1.95	0.64	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,432	1,432	0.03	0.22	0.10	1,498
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.87	2.87	< 0.005	< 0.005	0.01	2.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.80	2.80	< 0.005	< 0.005	< 0.005	2.93
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.76	0.70	0.47	8.73	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,549	1,549	0.07	0.06	5.76	1,574
Vendor	0.07	0.05	1.75	0.60	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,407	1,407	0.03	0.21	3.86	1,474
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.64	0.63	6.93	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,399	1,399	0.04	0.06	0.15	1,418
Vendor	0.07	0.04	1.87	0.61	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,409	1,409	0.03	0.21	0.10	1,471
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.51	0.46	0.38	5.07	0.00	0.00	1.00	1.00	0.00	0.23	0.23	—	1,025	1,025	0.03	0.04	1.77	1,039
Vendor	0.05	0.03	1.30	0.43	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	1,006	1,006	0.02	0.15	1.19	1,052
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.92	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	170	170	< 0.005	0.01	0.29	172
Vendor	0.01	0.01	0.24	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	166	166	< 0.005	0.02	0.20	174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.76	0.70	0.47	8.73	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,549	1,549	0.07	0.06	5.76	1,574
Vendor	0.07	0.05	1.75	0.60	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,407	1,407	0.03	0.21	3.86	1,474
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.64	0.63	6.93	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,399	1,399	0.04	0.06	0.15	1,418

Vendor	0.07	0.04	1.87	0.61	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,409	1,409	0.03	0.21	0.10	1,471
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.51	0.46	0.38	5.07	0.00	0.00	1.00	1.00	0.00	0.23	0.23	—	1,025	1,025	0.03	0.04	1.77	1,039
Vendor	0.05	0.03	1.30	0.43	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	1,006	1,006	0.02	0.15	1.19	1,052
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.92	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	170	170	< 0.005	0.01	0.29	172
Vendor	0.01	0.01	0.24	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	166	166	< 0.005	0.02	0.20	174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.40	3.68	4.85	0.01	0.14	—	0.14	0.13	—	0.13	—	896	896	0.04	0.01	—	899
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.67	0.88	< 0.005	0.03	—	0.03	0.02	—	0.02	—	148	148	0.01	< 0.005	—	149
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.66	0.42	8.06	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,516	1,516	0.03	0.05	5.20	1,538
Vendor	0.07	0.04	1.67	0.56	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,382	1,382	0.03	0.21	3.39	1,448
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.61	0.53	6.38	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,370	1,370	0.04	0.06	0.13	1,389
Vendor	0.07	0.04	1.78	0.58	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,383	1,383	0.03	0.21	0.09	1,446
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.23	0.18	2.44	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	525	525	0.01	0.02	0.84	533
Vendor	0.03	0.02	0.65	0.21	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	517	517	0.01	0.08	0.55	541
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.45	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	86.9	86.9	< 0.005	< 0.005	0.14	88.2

Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	85.5	85.5	< 0.005	0.01	0.09	89.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.40	3.68	4.85	0.01	0.14	—	0.14	0.13	—	0.13	—	896	896	0.04	0.01	—	899
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.67	0.88	< 0.005	0.03	—	0.03	0.02	—	0.02	—	148	148	0.01	< 0.005	—	149
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.66	0.42	8.06	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,516	1,516	0.03	0.05	5.20	1,538
Vendor	0.07	0.04	1.67	0.56	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,382	1,382	0.03	0.21	3.39	1,448
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.61	0.53	6.38	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,370	1,370	0.04	0.06	0.13	1,389
Vendor	0.07	0.04	1.78	0.58	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,383	1,383	0.03	0.21	0.09	1,446
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.23	0.18	2.44	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	525	525	0.01	0.02	0.84	533
Vendor	0.03	0.02	0.65	0.21	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	517	517	0.01	0.08	0.55	541
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.45	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	86.9	86.9	< 0.005	< 0.005	0.14	88.2
Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	85.5	85.5	< 0.005	0.01	0.09	89.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.95	2.72	< 0.005	0.09	—	0.09	0.08	—	0.08	—	414	414	0.02	< 0.005	—	415
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.50	< 0.005	0.02	—	0.02	0.01	—	0.01	—	68.5	68.5	< 0.005	< 0.005	—	68.8
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.72	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	136	136	< 0.005	< 0.005	0.47	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.57	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	123	123	< 0.005	0.01	0.01	124
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.5	34.5	< 0.005	< 0.005	0.06	35.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.71	5.71	< 0.005	< 0.005	0.01	5.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.95	2.72	< 0.005	0.09	—	0.09	0.08	—	0.08	—	414	414	0.02	< 0.005	—	415
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.50	< 0.005	0.02	—	0.02	0.01	—	0.01	—	68.5	68.5	< 0.005	< 0.005	—	68.8
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.72	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	136	136	< 0.005	< 0.005	0.47	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.57	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	123	123	< 0.005	0.01	0.01	124

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.5	34.5	< 0.005	< 0.005	0.06	35.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.71	5.71	< 0.005	< 0.005	0.01	5.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.88	8.88	< 0.005	< 0.005	—	8.91
Architectural Coatings	—	3.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.47	1.47	< 0.005	< 0.005	—	1.48
Architectural Coatings	—	0.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.11	1.28	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	274	274	0.01	0.01	0.03	278
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.7	18.7	< 0.005	< 0.005	0.03	19.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.09	3.09	< 0.005	< 0.005	< 0.005	3.14

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.88	8.88	< 0.005	< 0.005	—	8.91
Architectural Coatings	—	3.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.47	1.47	< 0.005	< 0.005	—	1.48

Architect Coatings	—	0.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.11	1.28	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	274	274	0.01	0.01	0.03	278
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.7	18.7	< 0.005	< 0.005	0.03	19.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.09	3.09	< 0.005	< 0.005	< 0.005	3.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.17	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.7	27.7	< 0.005	< 0.005	—	27.8
Architectural Coatings	—	11.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.59	4.59	< 0.005	< 0.005	—	4.60
Architectural Coatings	—	2.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.12	0.07	1.50	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	298	298	0.01	0.01	0.94	303
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.18	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	270	270	0.01	0.01	0.02	274
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.4	57.4	< 0.005	< 0.005	0.08	58.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.50	9.50	< 0.005	< 0.005	0.01	9.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.17	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.7	27.7	< 0.005	< 0.005	—	27.8
Architectural Coatings	—	11.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.59	4.59	< 0.005	< 0.005	—	4.60
Architectural Coatings	—	2.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.12	0.07	1.50	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	298	298	0.01	0.01	0.94	303
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.18	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	270	270	0.01	0.01	0.02	274
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.4	57.4	< 0.005	< 0.005	0.08	58.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.50	9.50	< 0.005	< 0.005	0.01	9.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	367	367	0.06	0.01	—	370
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	367	367	0.06	0.01	—	370

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	220	220	0.04	< 0.005	—	222
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	220	220	0.04	< 0.005	—	222

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.07	0.04	0.62	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	718	718	0.06	< 0.005	—	720
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.07	0.04	0.62	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	718	718	0.06	< 0.005	—	720

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343

City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.07	0.04	0.62	0.26	< 0.005	0.05	—	0.05	0.05	—	0.05	—	717	717	0.06	< 0.005	—	719
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.07	0.04	0.62	0.26	< 0.005	0.05	—	0.05	0.05	—	0.05	—	717	717	0.06	< 0.005	—	719

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipment	2.43	2.30	0.25	26.4	< 0.005	0.01	—	0.01	0.01	—	0.01	—	70.5	70.5	< 0.005	< 0.005	—	70.8
Total	2.43	13.6	0.25	26.4	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.22	0.21	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.76	5.76	< 0.005	< 0.005	—	5.78
Total	0.22	2.26	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.43	2.30	0.25	26.4	< 0.005	0.01	—	0.01	0.01	—	0.01	—	70.5	70.5	< 0.005	< 0.005	—	70.8
Total	2.43	13.6	0.25	26.4	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	0.22	0.21	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.76	5.76	< 0.005	< 0.005	—	5.78
Total	0.22	2.26	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6.00	20.8	26.8	0.62	0.02	—	46.7
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.00	20.8	26.8	0.62	0.02	—	46.7

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	4.97	12.2	17.2	0.51	0.01	—	33.7
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.97	12.2	17.2	0.51	0.01	—	33.7

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.7	0.00	36.7	3.67	0.00	—	128
City Park	—	—	—	—	—	—	—	—	—	—	—	0.74	0.00	0.74	0.07	0.00	—	2.59
Total	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.7	0.00	36.7	3.67	0.00	—	128
City Park	—	—	—	—	—	—	—	—	—	—	—	0.74	0.00	0.74	0.07	0.00	—	2.59
Total	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49

City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5
Subtotal	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
California Black Oak	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
Subtotal	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5

Subtotal	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
Subtotal	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	-0.02	> -0.005	—	-0.01	-0.02	-0.02	-0.04	-0.01	-0.01	-0.01	—	-11.3	-11.3	—	—	—	-11.3
Subtotal	—	-0.02	> -0.005	—	-0.01	-0.02	-0.02	-0.04	-0.01	-0.01	-0.01	—	-11.3	-11.3	—	—	—	-11.3
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	—	—	—	—	—	—	—	—	—	—	-26.5	-26.5	—	—	—	-26.5
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	-26.5	-26.5	—	—	—	-26.5
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

California Black Oak	—	—	-0.02	—	-0.01	-0.01	-0.01	-0.01	> -0.005	> -0.005	> -0.005	—	—	—	—	—	—	—
Subtotal	—	—	-0.02	—	-0.01	-0.01	-0.01	-0.01	> -0.005	> -0.005	> -0.005	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	-0.02	-0.02	—	-0.01	-0.02	-0.02	-0.05	-0.01	-0.01	-0.01	—	-37.8	-37.8	—	—	—	-37.8

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	7/1/2024	7/12/2024	5.00	10.0	—
Site Preparation	Site Preparation	7/13/2024	10/4/2024	5.00	60.0	—
Grading	Grading	10/5/2024	12/30/2024	5.00	61.0	—
Building Construction	Building Construction	12/31/2024	7/10/2026	5.00	399	—
Paving	Paving	7/11/2026	11/27/2026	5.00	100	—
Architectural Coating	Architectural Coating	11/28/2026	4/16/2027	5.00	100	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40

Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	11.9	LDA,LDT1,LDT2
Demolition	Vendor	—	9.10	HHDT,MHDT
Demolition	Hauling	17.3	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	9.10	HHDT,MHDT

Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	11.9	LDA,LDT1,LDT2
Grading	Vendor	—	9.10	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	167	11.9	LDA,LDT1,LDT2
Building Construction	Vendor	49.7	9.10	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.9	LDA,LDT1,LDT2
Paving	Vendor	—	9.10	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	33.5	11.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	9.10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	11.9	LDA,LDT1,LDT2

Demolition	Vendor	—	9.10	HHDT,MHDT
Demolition	Hauling	17.3	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	9.10	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	11.9	LDA,LDT1,LDT2
Grading	Vendor	—	9.10	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	167	11.9	LDA,LDT1,LDT2
Building Construction	Vendor	49.7	9.10	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.9	LDA,LDT1,LDT2
Paving	Vendor	—	9.10	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	33.5	11.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	9.10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,836,169	612,056	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	15,000	—
Site Preparation	0.00	0.00	90.0	0.00	—
Grading	0.00	0.00	183	0.00	—
Paving	0.00	0.00	0.00	0.00	5.12

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	5.12	0%
City Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	4,385	4,385	4,385	1,600,525	46,221	46,221	46,221	16,870,665

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	4,385	4,385	4,385	1,600,525	46,221	46,221	46,221	16,870,665

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	465
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	465
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1836168.75	612,056	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	3,964,455	204	0.0330	0.0040	13,526,862
City Park	0.00	204	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	2,377,483	204	0.0330	0.0040	13,514,018
City Park	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)

Single Family Housing	18,913,305	93,435,321
City Park	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	15,656,434	46,690,321
City Park	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	411	—
City Park	8.31	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	411	—
City Park	8.31	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
California Black Oak	915	2,536,544	3,480

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	17.9	annual days of extreme heat
Extreme Precipitation	2.90	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	55.4
AQ-PM	53.4
AQ-DPM	42.7
Drinking Water	98.8
Lead Risk Housing	6.19
Pesticides	83.8
Toxic Releases	49.9
Traffic	36.1
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	57.2
Haz Waste Facilities/Generators	50.1
Impaired Water Bodies	58.7
Solid Waste	88.9

Sensitive Population	—
Asthma	89.7
Cardio-vascular	92.6
Low Birth Weights	27.6
Socioeconomic Factor Indicators	—
Education	41.6
Housing	7.69
Linguistic	13.3
Poverty	22.9
Unemployment	66.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	62.8127807
Employed	49.30065443
Median HI	67.57346336
Education	—
Bachelor's or higher	43.80854613
High school enrollment	100
Preschool enrollment	4.478378032
Transportation	—
Auto Access	67.17567047
Active commuting	20.54407802
Social	—
2-parent households	79.73822661

Voting	83.58783524
Neighborhood	—
Alcohol availability	91.6078532
Park access	39.76645708
Retail density	9.534197357
Supermarket access	30.77120493
Tree canopy	56.25561401
Housing	—
Homeownership	89.79853715
Housing habitability	88.99011934
Low-inc homeowner severe housing cost burden	87.11664314
Low-inc renter severe housing cost burden	80.39266008
Uncrowded housing	80.21301168
Health Outcomes	—
Insured adults	73.18105993
Arthritis	11.5
Asthma ER Admissions	7.7
High Blood Pressure	9.1
Cancer (excluding skin)	12.2
Asthma	51.9
Coronary Heart Disease	19.3
Chronic Obstructive Pulmonary Disease	35.3
Diagnosed Diabetes	55.5
Life Expectancy at Birth	42.2
Cognitively Disabled	60.3
Physically Disabled	27.7
Heart Attack ER Admissions	16.8

Mental Health Not Good	66.0
Chronic Kidney Disease	35.4
Obesity	44.4
Pedestrian Injuries	70.8
Physical Health Not Good	60.5
Stroke	39.4
Health Risk Behaviors	—
Binge Drinking	36.9
Current Smoker	60.5
No Leisure Time for Physical Activity	58.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	58.1
Elderly	12.9
English Speaking	65.9
Foreign-born	19.5
Outdoor Workers	75.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	54.3
Traffic Density	60.0
Traffic Access	0.0
Other Indices	—
Hardship	40.3
Other Decision Support	—
2016 Voting	83.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	57.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Land Use - Total development lot acreage = 106.04 acres (see Chapter 2.0 Project Description, for more detail).
Construction: Construction Phases	Buildout assumed to occur by 2028 operational year.
Operations: Fleet Mix	Revised Fleet mix to reflect that only home-based trips would occur (therefore, only LDA, LDT1, and LDT2 trips are relevant for this project during project operation). Maintained relative balance between LDA, LDT1, and LDT2 (per the CalEEMod defaults), but adjusted to reflect no other fleet vehicles beyond these three classes.
Operations: Hearths	Assumes no hearths.

Operations: Consumer Products	Revised General Category consumer products emissions factor to reflect CARB adjustments applied to their Consumer and Commercial Product Survey Emission data, made after the 2008 consumer products emissions factor. Adjustment made to reflect average adjustment factor. See for further detail: https://ww2.arb.ca.gov/our-work/programs/consumer-products-program/consumer-products-emissions-inventory

Union Ranch North (Year 2030) Detailed Report

Table of Contents

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Union Ranch North (Year 2030)
Construction Start Date	7/1/2026
Operational Year	2030
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	9.00
Location	37.83902715346582, -121.23387613852935
County	San Joaquin
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2160
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	465	Dwelling Unit	96.6	906,750	5,446,479	0.00	1,502	—
City Park	96.6	Acre	96.6	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads
Transportation	T-31-B*	Improve Destination Accessibility in Underserved Areas
Transportation	T-32*	Orient Project Toward Transit, Bicycle, or Pedestrian Facility
Energy	E-2	Require Energy Efficient Appliances
Energy	E-7*	Require Higher Efficacy Public Street and Area Lighting
Energy	E-10-B	Establish Onsite Renewable Energy Systems: Solar Power
Energy	E-12-B	Install Electric Space Heater in Place of Natural Gas Heaters in Residences
Water	W-4	Require Low-Flow Water Fixtures
Water	W-5	Design Water-Efficient Landscapes
Natural Lands	N-2	Expand Urban Tree Planting

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.82	57.0	29.2	29.7	0.05	1.24	19.8	21.0	1.14	10.1	11.3	—	5,456	5,456	0.22	0.28	7.66	5,477
Mit.	3.82	57.0	29.2	29.7	0.05	1.24	7.81	9.06	1.14	3.97	5.12	—	5,456	5,456	0.22	0.28	7.66	5,477
% Reduced	—	—	—	—	—	—	61%	57%	—	61%	55%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.81	57.0	29.2	29.5	0.06	1.24	19.8	21.0	1.14	10.1	11.3	—	6,762	6,762	0.27	0.29	0.22	6,787
Mit.	3.81	57.0	29.2	29.5	0.06	1.24	7.81	9.06	1.14	3.97	5.12	—	6,762	6,762	0.27	0.29	0.22	6,787
% Reduced	—	—	—	—	—	—	61%	57%	—	61%	55%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.35	11.9	9.99	14.0	0.02	0.42	4.88	5.30	0.38	2.29	2.68	—	3,667	3,667	0.11	0.20	2.36	3,733
Mit.	1.35	11.9	9.99	14.0	0.02	0.42	1.97	2.39	0.38	0.91	1.29	—	3,667	3,667	0.11	0.20	2.36	3,733
% Reduced	—	—	—	—	—	—	60%	55%	—	60%	52%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.25	2.18	1.82	2.55	< 0.005	0.08	0.89	0.97	0.07	0.42	0.49	—	607	607	0.02	0.03	0.39	618
Mit.	0.25	2.18	1.82	2.55	< 0.005	0.08	0.36	0.44	0.07	0.17	0.24	—	607	607	0.02	0.03	0.39	618
% Reduced	—	—	—	—	—	—	60%	55%	—	60%	52%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.82	3.21	29.2	29.7	0.05	1.24	19.8	21.0	1.14	10.1	11.3	—	5,456	5,456	0.22	0.22	3.24	5,477
2027	1.98	1.70	11.4	21.0	0.03	0.36	1.79	2.14	0.33	0.43	0.76	—	5,242	5,242	0.15	0.28	7.66	5,338
2028	1.85	1.63	10.8	20.4	0.03	0.32	1.79	2.11	0.30	0.43	0.73	—	5,181	5,181	0.15	0.27	6.78	5,272
2029	0.24	57.0	0.86	2.41	< 0.005	0.01	0.28	0.29	0.01	0.07	0.08	—	421	421	0.01	< 0.005	0.75	423
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.81	3.21	29.2	29.5	0.06	1.24	19.8	21.0	1.14	10.1	11.3	—	6,762	6,762	0.27	0.29	0.22	6,787
2027	1.89	1.65	11.6	19.4	0.03	0.36	1.79	2.14	0.33	0.43	0.76	—	5,100	5,100	0.16	0.29	0.20	5,190
2028	1.81	57.0	11.0	19.0	0.03	0.32	1.79	2.11	0.30	0.43	0.73	—	5,042	5,042	0.16	0.28	0.18	5,129
2029	0.23	57.0	0.88	2.14	< 0.005	0.01	0.28	0.29	0.01	0.07	0.08	—	393	393	0.01	0.01	0.02	397
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.33	1.12	9.99	10.2	0.02	0.42	4.88	5.30	0.38	2.29	2.68	—	2,166	2,166	0.09	0.02	0.13	2,176
2027	1.35	1.18	8.20	14.0	0.02	0.25	1.27	1.52	0.24	0.31	0.54	—	3,667	3,667	0.11	0.20	2.36	3,733
2028	0.94	4.46	6.02	10.2	0.02	0.19	0.72	0.91	0.18	0.18	0.35	—	2,390	2,390	0.08	0.11	1.17	2,425
2029	0.05	11.9	0.18	0.45	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	83.7	83.7	< 0.005	< 0.005	0.07	84.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.24	0.20	1.82	1.86	< 0.005	0.08	0.89	0.97	0.07	0.42	0.49	—	359	359	0.01	< 0.005	0.02	360
2027	0.25	0.21	1.50	2.55	< 0.005	0.05	0.23	0.28	0.04	0.06	0.10	—	607	607	0.02	0.03	0.39	618
2028	0.17	0.81	1.10	1.86	< 0.005	0.04	0.13	0.17	0.03	0.03	0.06	—	396	396	0.01	0.02	0.19	402
2029	0.01	2.18	0.03	0.08	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	0.01	14.0

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.82	3.21	29.2	29.7	0.05	1.24	7.81	9.06	1.14	3.97	5.12	—	5,456	5,456	0.22	0.22	3.24	5,477
2027	1.98	1.70	11.4	21.0	0.03	0.36	1.79	2.14	0.33	0.43	0.76	—	5,242	5,242	0.15	0.28	7.66	5,338
2028	1.85	1.63	10.8	20.4	0.03	0.32	1.79	2.11	0.30	0.43	0.73	—	5,181	5,181	0.15	0.27	6.78	5,272
2029	0.24	57.0	0.86	2.41	< 0.005	0.01	0.28	0.29	0.01	0.07	0.08	—	421	421	0.01	< 0.005	0.75	423
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.81	3.21	29.2	29.5	0.06	1.24	7.81	9.06	1.14	3.97	5.12	—	6,762	6,762	0.27	0.29	0.22	6,787
2027	1.89	1.65	11.6	19.4	0.03	0.36	1.79	2.14	0.33	0.43	0.76	—	5,100	5,100	0.16	0.29	0.20	5,190
2028	1.81	57.0	11.0	19.0	0.03	0.32	1.79	2.11	0.30	0.43	0.73	—	5,042	5,042	0.16	0.28	0.18	5,129
2029	0.23	57.0	0.88	2.14	< 0.005	0.01	0.28	0.29	0.01	0.07	0.08	—	393	393	0.01	0.01	0.02	397
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.33	1.12	9.99	10.2	0.02	0.42	1.97	2.39	0.38	0.91	1.29	—	2,166	2,166	0.09	0.02	0.13	2,176
2027	1.35	1.18	8.20	14.0	0.02	0.25	1.27	1.52	0.24	0.31	0.54	—	3,667	3,667	0.11	0.20	2.36	3,733
2028	0.94	4.46	6.02	10.2	0.02	0.19	0.72	0.91	0.18	0.18	0.35	—	2,390	2,390	0.08	0.11	1.17	2,425
2029	0.05	11.9	0.18	0.45	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	83.7	83.7	< 0.005	< 0.005	0.07	84.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.24	0.20	1.82	1.86	< 0.005	0.08	0.36	0.44	0.07	0.17	0.24	—	359	359	0.01	< 0.005	0.02	360
2027	0.25	0.21	1.50	2.55	< 0.005	0.05	0.23	0.28	0.04	0.06	0.10	—	607	607	0.02	0.03	0.39	618
2028	0.17	0.81	1.10	1.86	< 0.005	0.04	0.13	0.17	0.03	0.03	0.06	—	396	396	0.01	0.02	0.19	402
2029	0.01	2.18	0.03	0.08	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	0.01	14.0

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.8	22.2	8.25	137	0.32	0.41	32.4	32.8	0.40	8.18	8.58	262	36,422	36,684	27.7	0.76	72.6	37,676
Mit.	11.8	22.1	8.12	137	0.25	0.28	32.2	32.5	0.36	8.15	8.51	256	35,251	35,507	26.9	0.73	72.6	36,469
% Reduced	—	< 0.5%	2%	< 0.5%	21%	32%	< 0.5%	1%	9%	< 0.5%	1%	2%	3%	3%	3%	4%	—	3%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.85	19.4	9.23	88.5	0.29	0.40	32.4	32.8	0.39	8.18	8.57	262	33,419	33,681	27.8	0.87	8.21	34,644
Mit.	8.85	19.3	9.10	88.5	0.22	0.27	32.2	32.5	0.35	8.15	8.50	256	32,248	32,504	27.1	0.83	8.21	33,437
% Reduced	—	< 0.5%	1%	< 0.5%	23%	33%	< 0.5%	1%	9%	< 0.5%	1%	2%	4%	3%	3%	4%	—	3%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.98	20.5	8.76	103	0.29	0.41	32.2	32.6	0.40	8.13	8.53	262	34,145	34,408	27.8	0.82	35.0	35,380
Mit.	9.98	20.4	8.63	103	0.23	0.27	32.0	32.3	0.36	8.10	8.46	256	32,974	33,231	27.0	0.78	35.0	34,174
% Reduced	—	< 0.5%	1%	< 0.5%	22%	32%	< 0.5%	1%	9%	< 0.5%	1%	2%	3%	3%	3%	4%	—	3%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.82	3.73	1.60	18.8	0.05	0.07	5.87	5.94	0.07	1.48	1.56	43.4	5,653	5,697	4.60	0.14	5.80	5,858
Mit.	1.82	3.72	1.58	18.8	0.04	0.05	5.85	5.90	0.07	1.48	1.54	42.4	5,459	5,502	4.47	0.13	5.80	5,658
% Reduced	< 0.5%	< 0.5%	1%	< 0.5%	22%	32%	< 0.5%	1%	9%	< 0.5%	1%	2%	3%	3%	3%	4%	—	3%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.94	8.45	4.59	109	0.29	0.12	32.4	32.5	0.11	8.18	8.30	—	29,676	29,676	0.63	0.62	66.1	29,941
Area	2.41	13.5	0.25	26.5	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Energy	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	6,551	6,551	0.74	0.05	—	6,585
Water	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Total	11.8	22.2	8.25	137	0.32	0.41	32.4	32.8	0.40	8.18	8.58	262	36,422	36,684	27.7	0.76	72.6	37,676
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.45	7.91	5.81	87.0	0.26	0.12	32.4	32.5	0.11	8.18	8.30	—	26,743	26,743	0.77	0.73	1.71	26,980
Area	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	6,551	6,551	0.74	0.05	—	6,585
Water	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Total	8.85	19.4	9.23	88.5	0.29	0.40	32.4	32.8	0.39	8.18	8.57	262	33,419	33,681	27.8	0.87	8.21	34,644
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.39	7.88	5.23	88.8	0.27	0.12	32.2	32.3	0.11	8.13	8.25	—	27,434	27,434	0.70	0.67	28.5	27,681
Area	1.19	12.4	0.12	13.1	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	34.8	34.8	< 0.005	< 0.005	—	34.9
Energy	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	6,551	6,551	0.74	0.05	—	6,585
Water	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Total	9.98	20.5	8.76	103	0.29	0.41	32.2	32.6	0.40	8.13	8.53	262	34,145	34,408	27.8	0.82	35.0	35,380

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.53	1.44	0.95	16.2	0.05	0.02	5.87	5.89	0.02	1.48	1.51	—	4,542	4,542	0.12	0.11	4.72	4,583
Area	0.22	2.26	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78
Energy	0.07	0.04	0.62	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	1,085	1,085	0.12	0.01	—	1,090
Water	—	—	—	—	—	—	—	—	—	—	—	6.00	20.8	26.8	0.62	0.02	—	46.7
Waste	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
Total	1.82	3.73	1.60	18.8	0.05	0.07	5.87	5.94	0.07	1.48	1.56	43.4	5,653	5,697	4.60	0.14	5.80	5,858

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.94	8.45	4.59	109	0.29	0.12	32.4	32.5	0.11	8.18	8.30	—	29,676	29,676	0.63	0.62	66.1	29,941
Area	2.41	13.5	0.25	26.5	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Energy	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	5,660	5,660	0.60	0.03	—	5,685
Water	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Vegetation	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Total	11.8	22.1	8.12	137	0.25	0.28	32.2	32.5	0.36	8.15	8.51	256	35,251	35,507	26.9	0.73	72.6	36,469
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.45	7.91	5.81	87.0	0.26	0.12	32.4	32.5	0.11	8.18	8.30	—	26,743	26,743	0.77	0.73	1.71	26,980
Area	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Energy	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	5,660	5,660	0.60	0.03	—	5,685
Water	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Vegetation	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Total	8.85	19.3	9.10	88.5	0.22	0.27	32.2	32.5	0.35	8.15	8.50	256	32,248	32,504	27.1	0.83	8.21	33,437
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.39	7.88	5.23	88.8	0.27	0.12	32.2	32.3	0.11	8.13	8.25	—	27,434	27,434	0.70	0.67	28.5	27,681
Area	1.19	12.4	0.12	13.1	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	34.8	34.8	< 0.005	< 0.005	—	34.9
Energy	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	5,660	5,660	0.60	0.03	—	5,685
Water	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Waste	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Vegetation	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Total	9.98	20.4	8.63	103	0.23	0.27	32.0	32.3	0.36	8.10	8.46	256	32,974	33,231	27.0	0.78	35.0	34,174
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.53	1.44	0.95	16.2	0.05	0.02	5.87	5.89	0.02	1.48	1.51	—	4,542	4,542	0.12	0.11	4.72	4,583
Area	0.22	2.26	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78
Energy	0.07	0.04	0.62	0.26	< 0.005	0.05	—	0.05	0.05	—	0.05	—	937	937	0.10	0.01	—	941
Water	—	—	—	—	—	—	—	—	—	—	—	4.97	12.2	17.2	0.51	0.01	—	33.7
Waste	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
Vegetation	—	-0.02	-0.02	—	-0.01	-0.02	-0.02	-0.05	-0.01	-0.01	-0.01	—	-37.8	-37.8	—	—	—	-37.8
Total	1.82	3.72	1.58	18.8	0.04	0.05	5.85	5.90	0.07	1.48	1.54	42.4	5,459	5,502	4.47	0.13	5.80	5,658

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	1.53	1.53	—	0.23	0.23	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.57	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	93.9	93.9	< 0.005	< 0.005	—	94.2
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.5	15.5	< 0.005	< 0.005	—	15.6
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.72	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	136	136	< 0.005	< 0.005	0.47	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.02	1.41	0.34	0.01	0.02	0.32	0.34	0.02	0.09	0.11	—	1,187	1,187	0.02	0.19	2.77	1,246
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.45	3.45	< 0.005	< 0.005	0.01	3.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.5	32.5	< 0.005	0.01	0.03	34.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.39	5.39	< 0.005	< 0.005	0.01	5.65

3.2. Demolition (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	1.53	1.53	—	0.23	0.23	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.57	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	93.9	93.9	< 0.005	< 0.005	—	94.2
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.5	15.5	< 0.005	< 0.005	—	15.6
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.72	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	136	136	< 0.005	< 0.005	0.47	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.02	1.41	0.34	0.01	0.02	0.32	0.34	0.02	0.09	0.11	—	1,187	1,187	0.02	0.19	2.77	1,246

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.45	3.45	< 0.005	< 0.005	0.01	3.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.5	32.5	< 0.005	0.01	0.03	34.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.39	5.39	< 0.005	< 0.005	0.01	5.65

3.3. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.74	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	3.74	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	4.79	4.74	0.01	0.20	—	0.20	0.19	—	0.19	—	871	871	0.04	0.01	—	874
Dust From Material Movement	—	—	—	—	—	—	3.23	3.23	—	1.66	1.66	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.87	0.86	< 0.005	0.04	—	0.04	0.03	—	0.03	—	144	144	0.01	< 0.005	—	145
Dust From Material Movement	—	—	—	—	—	—	0.59	0.59	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.04	0.84	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	158	158	< 0.005	0.01	0.54	161
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.67	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	143	143	< 0.005	0.01	0.01	145
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.1	24.1	< 0.005	< 0.005	0.04	24.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.00	4.00	< 0.005	< 0.005	0.01	4.05
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.74	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.74	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	4.79	4.74	0.01	0.20	—	0.20	0.19	—	0.19	—	871	871	0.04	0.01	—	874
Dust From Material Movement	—	—	—	—	—	—	1.26	1.26	—	0.65	0.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.87	0.86	< 0.005	0.04	—	0.04	0.03	—	0.03	—	144	144	0.01	< 0.005	—	145
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.04	0.84	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	158	158	< 0.005	0.01	0.54	161

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.67	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	143	143	< 0.005	0.01	0.01	145
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.1	24.1	< 0.005	< 0.005	0.04	24.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.00	4.00	< 0.005	< 0.005	0.01	4.05
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.55	4.61	0.01	0.19	—	0.19	0.17	—	0.17	—	1,103	1,103	0.04	0.01	—	1,107
Dust From Material Movement	—	—	—	—	—	—	1.54	1.54	—	0.61	0.61	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.83	0.84	< 0.005	0.03	—	0.03	0.03	—	0.03	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	—	0.28	0.28	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.76	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	164	164	< 0.005	0.01	0.02	166
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	0.04	28.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.64	4.64	< 0.005	< 0.005	0.01	4.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.55	4.61	0.01	0.19	—	0.19	0.17	—	0.17	—	1,103	1,103	0.04	0.01	—	1,107

Dust From Material Movement	—	—	—	—	—	—	0.60	0.60	—	0.24	0.24	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.83	0.84	< 0.005	0.03	—	0.03	0.03	—	0.03	—	183	183	0.01	< 0.005	—	183
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.76	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	164	164	< 0.005	0.01	0.02	166
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	0.04	28.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.64	4.64	< 0.005	< 0.005	0.01	4.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.61	0.53	6.38	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,370	1,370	0.04	0.06	0.13	1,389
Vendor	0.07	0.04	1.78	0.58	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,383	1,383	0.03	0.21	0.09	1,446
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.75	2.75	< 0.005	< 0.005	< 0.005	2.79
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.71	2.71	< 0.005	< 0.005	< 0.005	2.83
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.46
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.47
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.61	0.53	6.38	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,370	1,370	0.04	0.06	0.13	1,389
Vendor	0.07	0.04	1.78	0.58	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,383	1,383	0.03	0.21	0.09	1,446
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.75	2.75	< 0.005	< 0.005	< 0.005	2.79
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.71	2.71	< 0.005	< 0.005	< 0.005	2.83
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.46
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.47
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.68	0.62	0.37	7.49	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,492	1,492	0.03	0.05	4.68	1,514
Vendor	0.07	0.04	1.60	0.54	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,353	1,353	0.03	0.21	2.98	1,419
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.59	0.57	0.48	5.90	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,349	1,349	0.04	0.06	0.12	1,368
Vendor	0.07	0.04	1.71	0.56	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,354	1,354	0.03	0.21	0.08	1,417
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.41	0.30	4.34	0.00	0.00	1.00	1.00	0.00	0.23	0.23	—	988	988	0.02	0.04	1.44	1,002
Vendor	0.05	0.03	1.19	0.39	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	967	967	0.02	0.15	0.92	1,013
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.79	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	164	164	< 0.005	0.01	0.24	166
Vendor	0.01	0.01	0.22	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	160	160	< 0.005	0.02	0.15	168
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.68	0.62	0.37	7.49	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,492	1,492	0.03	0.05	4.68	1,514
Vendor	0.07	0.04	1.60	0.54	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,353	1,353	0.03	0.21	2.98	1,419
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.59	0.57	0.48	5.90	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,349	1,349	0.04	0.06	0.12	1,368

Vendor	0.07	0.04	1.71	0.56	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,354	1,354	0.03	0.21	0.08	1,417
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.41	0.30	4.34	0.00	0.00	1.00	1.00	0.00	0.23	0.23	—	988	988	0.02	0.04	1.44	1,002
Vendor	0.05	0.03	1.19	0.39	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	967	967	0.02	0.15	0.92	1,013
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.79	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	164	164	< 0.005	0.01	0.24	166
Vendor	0.01	0.01	0.22	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	160	160	< 0.005	0.02	0.15	168
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.37	3.37	4.89	0.01	0.11	—	0.11	0.10	—	0.10	—	905	905	0.04	0.01	—	909
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.62	0.89	< 0.005	0.02	—	0.02	0.02	—	0.02	—	150	150	0.01	< 0.005	—	150
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.59	0.36	6.98	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,463	1,463	0.03	0.05	4.19	1,484
Vendor	0.06	0.04	1.54	0.52	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,320	1,320	0.03	0.20	2.60	1,382
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.56	0.50	0.43	5.51	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,323	1,323	0.03	0.06	0.11	1,342
Vendor	0.06	0.04	1.64	0.53	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,322	1,322	0.03	0.20	0.07	1,381
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.19	0.16	2.12	0.00	0.00	0.53	0.53	0.00	0.12	0.12	—	512	512	0.01	0.02	0.68	519
Vendor	0.02	0.02	0.61	0.20	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	499	499	0.01	0.07	0.42	522
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.39	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	84.8	84.8	< 0.005	< 0.005	0.11	86.0

Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	82.6	82.6	< 0.005	0.01	0.07	86.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.37	3.37	4.89	0.01	0.11	—	0.11	0.10	—	0.10	—	905	905	0.04	0.01	—	909
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.62	0.89	< 0.005	0.02	—	0.02	0.02	—	0.02	—	150	150	0.01	< 0.005	—	150
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.59	0.36	6.98	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,463	1,463	0.03	0.05	4.19	1,484
Vendor	0.06	0.04	1.54	0.52	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,320	1,320	0.03	0.20	2.60	1,382
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.56	0.50	0.43	5.51	0.00	0.00	1.41	1.41	0.00	0.33	0.33	—	1,323	1,323	0.03	0.06	0.11	1,342
Vendor	0.06	0.04	1.64	0.53	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,322	1,322	0.03	0.20	0.07	1,381
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.19	0.16	2.12	0.00	0.00	0.53	0.53	0.00	0.12	0.12	—	512	512	0.01	0.02	0.68	519
Vendor	0.02	0.02	0.61	0.20	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	499	499	0.01	0.07	0.42	522
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.39	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	84.8	84.8	< 0.005	< 0.005	0.11	86.0
Vendor	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	82.6	82.6	< 0.005	0.01	0.07	86.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.82	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.19	1.82	2.72	< 0.005	0.07	—	0.07	0.06	—	0.06	—	414	414	0.02	< 0.005	—	415
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.33	0.50	< 0.005	0.01	—	0.01	0.01	—	0.01	—	68.5	68.5	< 0.005	< 0.005	—	68.8
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.63	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	131	131	< 0.005	< 0.005	0.38	133
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.49	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	119	119	< 0.005	0.01	0.01	120
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.3	33.3	< 0.005	< 0.005	0.04	33.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.51	5.51	< 0.005	< 0.005	0.01	5.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Paving (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.19	1.82	2.72	< 0.005	0.07	—	0.07	0.06	—	0.06	—	414	414	0.02	< 0.005	—	415
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.33	0.50	< 0.005	0.01	—	0.01	0.01	—	0.01	—	68.5	68.5	< 0.005	< 0.005	—	68.8
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.63	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	131	131	< 0.005	< 0.005	0.38	133
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.49	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	119	119	< 0.005	0.01	0.01	120

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.3	33.3	< 0.005	< 0.005	0.04	33.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.51	5.51	< 0.005	< 0.005	0.01	5.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.62	8.62	< 0.005	< 0.005	—	8.65
Architectural Coatings	—	3.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.43	1.43	< 0.005	< 0.005	—	1.43
Architectural Coatings	—	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.10	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	265	265	0.01	0.01	0.02	268
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.5	17.5	< 0.005	< 0.005	0.02	17.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.90	2.90	< 0.005	< 0.005	< 0.005	2.94

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Architectural Coating (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.62	8.62	< 0.005	< 0.005	—	8.65
Architectural Coatings	—	3.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.43	1.43	< 0.005	< 0.005	—	1.43

Architect Coatings	—	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.10	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	265	265	0.01	0.01	0.02	268
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.5	17.5	< 0.005	< 0.005	0.02	17.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.90	2.90	< 0.005	< 0.005	< 0.005	2.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.17	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.0	28.0	< 0.005	< 0.005	—	28.1
Architectural Coatings	—	11.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.63	4.63	< 0.005	< 0.005	—	4.64
Architectural Coatings	—	2.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.06	1.30	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	287	287	< 0.005	< 0.005	0.75	289
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	1.03	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	260	260	0.01	0.01	0.02	263
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.22	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	55.8	55.8	< 0.005	< 0.005	0.07	56.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.23	9.23	< 0.005	< 0.005	0.01	9.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.17	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.0	28.0	< 0.005	< 0.005	—	28.1
Architectural Coatings	—	11.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.63	4.63	< 0.005	< 0.005	—	4.64
Architectural Coatings	—	2.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.06	1.30	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	287	287	< 0.005	< 0.005	0.75	289
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	1.03	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	260	260	0.01	0.01	0.02	263
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.22	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	55.8	55.8	< 0.005	< 0.005	0.07	56.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.23	9.23	< 0.005	< 0.005	0.01	9.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,216	2,216	0.36	0.04	—	2,237
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	367	367	0.06	0.01	—	370
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	367	367	0.06	0.01	—	370

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,329	1,329	0.21	0.03	—	1,342
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	220	220	0.04	< 0.005	—	222
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	220	220	0.04	< 0.005	—	222

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.42	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,335	4,335	0.38	0.01	—	4,347
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.07	0.04	0.62	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	718	718	0.06	< 0.005	—	720
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.07	0.04	0.62	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	718	718	0.06	< 0.005	—	720

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343

City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.40	0.20	3.41	1.45	0.02	0.28	—	0.28	0.28	—	0.28	—	4,331	4,331	0.38	0.01	—	4,343
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.07	0.04	0.62	0.26	< 0.005	0.05	—	0.05	0.05	—	0.05	—	717	717	0.06	< 0.005	—	719
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.07	0.04	0.62	0.26	< 0.005	0.05	—	0.05	0.05	—	0.05	—	717	717	0.06	< 0.005	—	719

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	2.41	2.28	0.25	26.5	< 0.005	0.01	—	0.01	0.01	—	0.01	—	70.5	70.5	< 0.005	< 0.005	—	70.8
Total	2.41	13.5	0.25	26.5	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.22	0.21	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.76	5.76	< 0.005	< 0.005	—	5.78
Total	0.22	2.26	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.41	2.28	0.25	26.5	< 0.005	0.01	—	0.01	0.01	—	0.01	—	70.5	70.5	< 0.005	< 0.005	—	70.8
Total	2.41	13.5	0.25	26.5	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.5	70.5	< 0.005	< 0.005	—	70.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	11.3	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	0.22	0.21	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.76	5.76	< 0.005	< 0.005	—	5.78
Total	0.22	2.26	0.02	2.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.76	5.76	< 0.005	< 0.005	—	5.78

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.2	125	162	3.74	0.09	—	282
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6.00	20.8	26.8	0.62	0.02	—	46.7
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.00	20.8	26.8	0.62	0.02	—	46.7

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	30.0	73.9	104	3.09	0.07	—	203
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	4.97	12.2	17.2	0.51	0.01	—	33.7
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.97	12.2	17.2	0.51	0.01	—	33.7

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.7	0.00	36.7	3.67	0.00	—	128
City Park	—	—	—	—	—	—	—	—	—	—	—	0.74	0.00	0.74	0.07	0.00	—	2.59
Total	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.1	0.00	—	775
City Park	—	—	—	—	—	—	—	—	—	—	—	4.48	0.00	4.48	0.45	0.00	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	226	0.00	226	22.6	0.00	—	791
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	36.7	0.00	36.7	3.67	0.00	—	128
City Park	—	—	—	—	—	—	—	—	—	—	—	0.74	0.00	0.74	0.07	0.00	—	2.59
Total	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49

City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.49	6.49
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5
Subtotal	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
Subtotal	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5

Subtotal	—	-0.09	-0.01	—	-0.03	-0.10	-0.10	-0.21	-0.03	-0.03	-0.06	—	-68.5	-68.5	—	—	—	-68.5
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	-160	-160	—	—	—	-160
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
Subtotal	—	—	-0.12	—	-0.03	-0.03	-0.03	-0.06	-0.01	-0.01	-0.02	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	-0.09	-0.13	—	-0.07	-0.13	-0.13	-0.26	-0.04	-0.04	-0.07	—	-228	-228	—	—	—	-228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	-0.02	> -0.005	—	-0.01	-0.02	-0.02	-0.04	-0.01	-0.01	-0.01	—	-11.3	-11.3	—	—	—	-11.3
Subtotal	—	-0.02	> -0.005	—	-0.01	-0.02	-0.02	-0.04	-0.01	-0.01	-0.01	—	-11.3	-11.3	—	—	—	-11.3
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California Black Oak	—	—	—	—	—	—	—	—	—	—	—	—	-26.5	-26.5	—	—	—	-26.5
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	-26.5	-26.5	—	—	—	-26.5
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Californi Black Oak	—	—	-0.02	—	-0.01	-0.01	-0.01	-0.01	> -0.005	> -0.005	> -0.005	—	—	—	—	—	—	—
Subtotal	—	—	-0.02	—	-0.01	-0.01	-0.01	-0.01	> -0.005	> -0.005	> -0.005	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	-0.02	-0.02	—	-0.01	-0.02	-0.02	-0.05	-0.01	-0.01	-0.01	—	-37.8	-37.8	—	—	—	-37.8

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	7/1/2026	7/14/2026	5.00	10.0	—
Site Preparation	Site Preparation	7/15/2026	10/6/2026	5.00	60.0	—
Grading	Grading	10/7/2026	12/30/2026	5.00	61.0	—
Building Construction	Building Construction	12/31/2026	7/11/2028	5.00	399	—
Paving	Paving	7/12/2028	11/28/2028	5.00	100	—
Architectural Coating	Architectural Coating	11/29/2028	4/17/2029	5.00	100	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40

Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	11.9	LDA,LDT1,LDT2
Demolition	Vendor	—	9.10	HHDT,MHDT
Demolition	Hauling	17.3	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	9.10	HHDT,MHDT

Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	11.9	LDA,LDT1,LDT2
Grading	Vendor	—	9.10	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	167	11.9	LDA,LDT1,LDT2
Building Construction	Vendor	49.7	9.10	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.9	LDA,LDT1,LDT2
Paving	Vendor	—	9.10	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	33.5	11.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	9.10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	11.9	LDA,LDT1,LDT2

Demolition	Vendor	—	9.10	HHDT,MHDT
Demolition	Hauling	17.3	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	9.10	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	11.9	LDA,LDT1,LDT2
Grading	Vendor	—	9.10	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	167	11.9	LDA,LDT1,LDT2
Building Construction	Vendor	49.7	9.10	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.9	LDA,LDT1,LDT2
Paving	Vendor	—	9.10	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	33.5	11.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	9.10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,836,169	612,056	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	15,000	—
Site Preparation	0.00	0.00	90.0	0.00	—
Grading	0.00	0.00	183	0.00	—
Paving	0.00	0.00	0.00	0.00	5.12

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	5.12	0%
City Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005
2029	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	4,385	4,385	4,385	1,600,525	46,221	46,221	46,221	16,870,665

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	4,385	4,385	4,385	1,600,525	46,221	46,221	46,221	16,870,665

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	465
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	465
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1836168.75	612,056	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	3,964,455	204	0.0330	0.0040	13,526,862
City Park	0.00	204	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	2,377,483	204	0.0330	0.0040	13,514,018
City Park	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)

Single Family Housing	18,913,305	93,435,321
City Park	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	15,656,434	46,690,321
City Park	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	411	—
City Park	8.31	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	411	—
City Park	8.31	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
California Black Oak	915	2,536,544	3,480

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	17.9	annual days of extreme heat
Extreme Precipitation	2.90	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	55.4
AQ-PM	53.4
AQ-DPM	42.7
Drinking Water	98.8
Lead Risk Housing	6.19
Pesticides	83.8
Toxic Releases	49.9
Traffic	36.1
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	57.2
Haz Waste Facilities/Generators	50.1
Impaired Water Bodies	58.7
Solid Waste	88.9

Sensitive Population	—
Asthma	89.7
Cardio-vascular	92.6
Low Birth Weights	27.6
Socioeconomic Factor Indicators	—
Education	41.6
Housing	7.69
Linguistic	13.3
Poverty	22.9
Unemployment	66.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	62.8127807
Employed	49.30065443
Median HI	67.57346336
Education	—
Bachelor's or higher	43.80854613
High school enrollment	100
Preschool enrollment	4.478378032
Transportation	—
Auto Access	67.17567047
Active commuting	20.54407802
Social	—
2-parent households	79.73822661

Voting	83.58783524
Neighborhood	—
Alcohol availability	91.6078532
Park access	39.76645708
Retail density	9.534197357
Supermarket access	30.77120493
Tree canopy	56.25561401
Housing	—
Homeownership	89.79853715
Housing habitability	88.99011934
Low-inc homeowner severe housing cost burden	87.11664314
Low-inc renter severe housing cost burden	80.39266008
Uncrowded housing	80.21301168
Health Outcomes	—
Insured adults	73.18105993
Arthritis	11.5
Asthma ER Admissions	7.7
High Blood Pressure	9.1
Cancer (excluding skin)	12.2
Asthma	51.9
Coronary Heart Disease	19.3
Chronic Obstructive Pulmonary Disease	35.3
Diagnosed Diabetes	55.5
Life Expectancy at Birth	42.2
Cognitively Disabled	60.3
Physically Disabled	27.7
Heart Attack ER Admissions	16.8

Mental Health Not Good	66.0
Chronic Kidney Disease	35.4
Obesity	44.4
Pedestrian Injuries	70.8
Physical Health Not Good	60.5
Stroke	39.4
Health Risk Behaviors	—
Binge Drinking	36.9
Current Smoker	60.5
No Leisure Time for Physical Activity	58.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	58.1
Elderly	12.9
English Speaking	65.9
Foreign-born	19.5
Outdoor Workers	75.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	54.3
Traffic Density	60.0
Traffic Access	0.0
Other Indices	—
Hardship	40.3
Other Decision Support	—
2016 Voting	83.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	57.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	As provided in Chapter 2.0: Project Description.
Construction: Construction Phases	Operational year of 2030.
Operations: Fleet Mix	Revised Fleet mix to reflect that only home-based trips would occur (therefore, only LDA, LDT1, and LDT2 trips are relevant for this project during project operation). Maintained relative balance between LDA, LDT1, and LDT2 (per the CalEEMod defaults), but adjusted to reflect no other fleet vehicles beyond these three classes.
Operations: Hearths	Assumes no hearths.

Operations: Consumer Products	Revised General Category consumer products emissions factor to reflect CARB adjustments applied to their Consumer and Commercial Product Survey Emission data, made after the 2008 consumer products emissions factor. Adjustment made to reflect average adjustment factor. See for further detail: https://ww2.arb.ca.gov/our-work/programs/consumer-products-program/consumer-products-emissions-inv

Project Report - i-Tree Planting Calculator

Location: Manteca, California 95336
Electricity Emissions Factor: 216.05 pounds CO2 equivalent/MWh
Fuel Emissions Factor: 52.00 kilograms CO2 equivalent/MMBtu
Lifetime: 40 years
Project Lifetime Tree Mortality: 70%

All amounts in the tables are for the full lifetime of the project.

Location		CO_2 (Carbon Dioxide) Benefits			
Group Identifier	**Tree Group Characteristics**	**CO_2 (Carbon Dioxide) Avoided (pounds)**	**CO_2 Avoided ($)**	**CO_2 Sequestered (pounds)**	**CO_2 Sequestered ($)**
1	• (915.0) California black oak(Quercus kelloggii) at 4.0 inches DBH (Diameter at Breast Height). • Planted 20-39 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	1,000,271.2	$23,263.22	2,334,678.3	$54,297.42
Total		**1,000,271.2**	**$23,263.22**	**2,334,678.3**	**$54,297.42**

Location		Energy Benefits			
Group Identifier	**Tree Group Characteristics**	**Electricity Saved (kWh) (Kilowatt-Hours)**	**Electricity Saved ($)**	**Fuel Saved (MMBtu) (Millions of British Thermal Units)**	**Fuel Saved ($)**
1	• (915.0) California black oak(Quercus kelloggii) at 4.0 inches DBH (Diameter at Breast Height). • Planted 20-39 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	2,536,543.9	$519,230.54	3,479.6	$45,024.80
Total		**2,536,543.9**	**$519,230.54**	**3,479.6**	**$45,024.80**

Location		Ecological Benefits			
Group Identifier	Tree Group Characteristics	Tree Biomass (short ton)	Rainfall Interception (gallons)	Runoff Avoided (gallons)	Runoff Avoided ($)
1	• (915.0) California black oak(Quercus kelloggii) at 4.0 inches DBH (Diameter at Breast Height). • Planted 20-39 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	372.8	12,114,760.3	3,373,934.9	$30,149.49
Total		**372.8**	**12,114,760.3**	**3,373,934.9**	**$30,149.49**

Location		**Air Benefits**									
Group Identifier	**Tree Group Characteristics**	**O_3 (Ozone) Removed (pounds)**	**NO_2 (Nitrogen Dioxide) Avoided (pounds)**	**NO_2 (Nitrogen Dioxide) Removed (pounds)**	**SO_2 (Sulfur Dioxide) Avoided (pounds)**	**SO_2 (Sulfur Dioxide) Removed (pounds)**	**VOC (Volatile Organic Compound) Avoided (pounds)**	**$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)**	**$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)**	**Avoided Value (Values for avoided pollutants) ($)**	**Removal Value (Values for removed pollutants) ($)**
1	• (915.0) California black oak(Quercus kelloggii) at 4.0 inches DBH (Diameter at Breast Height). • Planted 20-39 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	13,290.24	140.12	1,716.25	493.09	469.73	1,289.31	825.29	223.93	$3,914.68	$66,174.46
Total		**13,290.24**	**140.12**	**1,716.25**	**493.09**	**469.73**	**1,289.31**	**825.29**	**223.93**	**$3,914.68**	**$66,174.46**

Sequestration and biomass are gross values that exclude losses to mortality.

Application v2.6.0, powered by engine v0.13.0 (APIv2) and database v12.0.49.

www.fs.fed.us
www.davey.com
www.arborday.org
www.urban-forestry.com
www.isa-arbor.com
www.caseytrees.org
www.esf.edu
www.northeasternforests.org

Version 2.6.0

Calculations to Estimate Natural Gas Usage of Union Ranch North
Note: The applicant stated that the only features of the Project that would utilize natural gas are: 1) cook stovetops, and 2) BBQs

1. Gas Stovetops
Notes: According to the spec sheet for the Whirlpool 5.0 cu. ft. Gas Range (WFG550S0H) (provided by the applicant), the gas burner power is between 5000 and 15,000 BTU (depending on the burner). The average of these values would be 10,000 BTU.
In the average home, cooktops are used in the average home approximately 8 times per week: https://www.eia.gov/todayinenergy/detail.php?id=53439#:~:text=The%20majority%20of%20U.S.%20households,averaged%20three%20times%20a%20week.
Assuming a conservative time per cook of 30 minutes per cook, this would equate to approximately four hours per week of cooktop usage, or 0.5714285714 hours per day.

Table 1: Factors for Natural Gas Stovetops:

Metric	Value	Source:
Average hours of usage per day	0.571428571	United States Energy Information Administration, "Today in Energy", August 15 2022. See: https://www.eia.gov/todayinenergy/detail.php?id=53439#:~:text=The%20majority%20of%20U.S.%20households,averaged%20three%20times%20a%20week.
Estimated BTU specification	10,000	Average value for the model identified by the applicant in the Whirlpool 5.0 cu. ft. Gas Range (WFG550S0H) specification sheet.
Days per Year	365	
BTU per kBTU	1000	

Table 2: Estimated Natural Gas Emissions from Natural Gas Stovetops

Natural Gas Consumption Per Home	Unit	# of Homes	Natural Gas Consumption of All Project Homes	Units
2,086	kBTU/year	465	969,857	kBTU/year

2. Gas BBQs
Notes: According to Barbecues Galore, the average BBQ gas burner would be 10,000 BTU. See: https://www.bbqgalore.com/what-is-a-good-btu-for-gas-grills
According to Traeger, the most common weekly frequency of using BBQs is once per week: https://www.traeger.com/learn/grill-bbq-stats
Assuming a conservative average time per cook of 1.5 hours total, this would equate to approximately 1.5 hours per week, or

Table 3: Factors for Natural Gas BBQs:

Metric	Value	Source:
Average hours of usage per day	0.214285714	Traeger, "BBQ AND GRILL STATISTICS FOR 2022". See: https://www.traeger.com/learn/grill-bbq-stats
Estimated BTU specification	10,000	Barbecues Galore, "What Is A Good BTU When Choosing A Gas Grill?", 2023. See: https://www.bbqgalore.com/what-is-a-good-btu-for-gas-grills
Days per Year	365	
BTU per kBTU	1000	

Table 4: Estimated Natural Gas Emissions from Natural Gas BBQs

Natural Gas Consumption Per Home	Unit	# of Homes	Natural Gas Consumption of All Project Homes	Units
782	kBTU/year	465	363,696	kBTU/year

Sum:

1,333,554 kbtu/year

Calculations to Estimate the Demonstrate the Same Level of GHG Reductions As SMAQMD's GHG Thresholds for BMP 1

Note: SMAQMD GHG Threshold BMP 1 calls for either no natural gas, or (as an alternative), GHG reductions equivalent to offset the GHG emissions generated by natural gas.
Note: "Example alternative reductions are described in Section 5.3. As described in Section 6, at a minimum, for purposes of evaluating consistency with 2045 statewide carbon neutrality, a project would need to mitigate any natural gas emissions and require all prewiringnecessary so that the building is ready for a future retrofit to all-electric (e.g., suchthat electric space heating, water heating, drying, and cooking appliances could be installed)."

Therefore, what is needed to meet BMP 1, even if natural gas is allowed:

1 Require all prewiringnecessary so that the building is ready for a future retrofit to all-electric (e.g., suchthat electric space heating, water heating, drying, and cooking appliances could be installed)
2 Mitigation of any natural gas emissions (the equivalent of).

For informational purposes:

Table 1: Project Mitigated Operational Natural Gas Consumption and GHG Emissions

Year	Natural Gas Consumption	Unit	Natural Gas Emissions	Unit	Source
N/A	1,333,553.6	kBTU/year	71	MT CO2e/year	CalEEMod

For informational purposes:

Table 2: Project Mitigated Electricity Consumption and GHG Emissions

Year	Electricity Consumption	Unit	Electricity Emissions	Unit	Source
N/A	3,964,455	kWh/year	204	MT CO2e/year	CalEEMod

Derived Electricity GHG (i.e. CO2e) Emissions Factor:

Table 3: Electricity GHG Emissions Factor

Year	Electricity GHG Emissions Factor	Unit
N/A	**19,434**	**kWh/MT CO2e**

Electricity Needed to Fully Offset the Project's Operational Natural Gas Emissions:

Table 4: Electricity Needed to Fully Offset the Project's Operational Natural Gas GHG Emissions

Electricitity	Unit
1,379,135	**kWh/year**
1,379	**Mwh/year**

APPENDIX B.2

Energy Consumption Estimates

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: San Joaquin
Calendar Year: 2023, 2028
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	Trips	Fuel Consumption	**MPG**		
San Joaquin	2023	All Other Buses	Aggregate	Aggregate	Diesel	63.39460475	3393.939224	564.2119822	0.391421545	**8.670803**		
San Joaquin	2023	LDA	Aggregate	Aggregate	Gasoline	246367.0682	9973102.473	1138235.391	348.1182228	**28.64861**		
San Joaquin	2023	LDA	Aggregate	Aggregate	Diesel	705.734891	23139.82538	3023.214022	0.54355344	**42.57139**		
San Joaquin	2023	LDT1	Aggregate	Aggregate	Gasoline	22016.87719	727225.7141	95173.38769	30.44231189	**23.88865**		
San Joaquin	2023	LDT1	Aggregate	Aggregate	Diesel	6.309776167	72.3140659	18.53577151	0.002953059	**24.48785**		
San Joaquin	2023	LDT2	Aggregate	Aggregate	Gasoline	99986.64004	4006976.314	463638.6569	173.0007864	**23.16161**		
San Joaquin	2023	LDT2	Aggregate	Aggregate	Diesel	269.0353638	11767.77307	1277.639106	0.365455308	**32.20031**		
San Joaquin	2023	LHD1	Aggregate	Aggregate	Gasoline	9831.305478	343356.5628	146471.803	37.0137846	**9.276451**		
San Joaquin	2023	LHD1	Aggregate	Aggregate	Diesel	8858.793592	311287.7804	111432.479	19.67413691	**15.82218**		
San Joaquin	2023	LHD2	Aggregate	Aggregate	Gasoline	1172.202392	40932.81227	17464.06906	4.90823024	**8.339628**		
San Joaquin	2023	LHD2	Aggregate	Aggregate	Diesel	3130.564849	115648.0857	39378.56755	8.863291415	**13.04798**		
San Joaquin	2023	MCY	Aggregate	Aggregate	Gasoline	12111.77426	65765.94827	24223.54852	1.643730409	**40.01018**		
San Joaquin	2023	MDV	Aggregate	Aggregate	Gasoline	94539.47242	3309649.733	427287.8869	177.5777061	**18.63775**		
San Joaquin	2023	MDV	Aggregate	Aggregate	Diesel	1386.649679	54072.49461	6485.715736	2.259668708	**23.92939**		
San Joaquin	2023	MH	Aggregate	Aggregate	Gasoline	1507.494843	13134.1796	150.8097841	2.977418428	**4.411264**		
San Joaquin	2023	MH	Aggregate	Aggregate	Diesel	642.7961913	5646.642802	64.27961913	0.600452961	**9.403972**		
San Joaquin	2023	Motor Coach	Aggregate	Aggregate	Diesel	17.50069597	2493.475909	402.1659934	0.455354651	**5.475899**		
San Joaquin	2023	OBUS	Aggregate	Aggregate	Gasoline	184.2186442	8143.534601	3685.846633	1.733278965	**4.69834**		
San Joaquin	2023	PTO	Aggregate	Aggregate	Diesel	0	19769.51749	0	4.013121008	**4.92622**		
San Joaquin	2023	SBUS	Aggregate	Aggregate	Gasoline	127.6658449	7011.404807	510.6633795	0.69096273	**10.1473**		
San Joaquin	2023	SBUS	Aggregate	Aggregate	Diesel	488.0661519	10999.75707	7067.197879	1.346323697	**8.170217**		
San Joaquin	2023	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	10.21525791	684.7798757	234.7466267	0.077405114	**8.846701**		
San Joaquin	2023	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	13.70885779	939.4917808	315.0295519	0.106056052	**8.858446**		
San Joaquin	2023	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	43.24157557	2453.394351	993.6914066	0.273109788	**8.98318**		
San Joaquin	2023	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	74.64743229	15398.81974	1715.397994	1.609252898	**9.568925**	**MHD**	
San Joaquin	2023	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	243.75384	8276.651944	3478.367297	1.005561316	**8.230877**		**8.428594**
San Joaquin	2023	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	156.2432876	5383.859112	2229.591714	0.657027122	**8.194272**		
San Joaquin	2023	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	682.6025228	23363.94113	9740.738001	2.839033489	**8.229541**		
San Joaquin	2023	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	122.4768589	6703.210552	1747.744776	0.802391793	**8.354037**		
San Joaquin	2023	T6 Instate Other Class	Aggregate	Aggregate	Diesel	449.8451938	18399.42888	5200.21044	2.166542487	**8.492531**		
San Joaquin	2023	T6 Instate Other Class	Aggregate	Aggregate	Diesel	1174.570894	51943.62259	13578.03953	6.096265009	**8.520565**		
San Joaquin	2023	T6 Instate Other Class	Aggregate	Aggregate	Diesel	912.5417949	38573.64285	10548.98315	4.50612298	**8.560273**		
San Joaquin	2023	T6 Instate Other Class	Aggregate	Aggregate	Diesel	553.092214	25667.20124	6393.745994	2.950154535	**8.70029**		
San Joaquin	2023	T6 Instate Tractor Cla	Aggregate	Aggregate	Diesel	10.69132111	510.9258436	123.591672	0.060247854	**8.480399**		
San Joaquin	2023	T6 Instate Tractor Cla	Aggregate	Aggregate	Diesel	696.5366058	42802.49244	8051.963163	4.748833943	**9.013264**		
San Joaquin	2023	T6 OOS Class 4	Aggregate	Aggregate	Diesel	5.905142679	392.3346549	135.7001788	0.044317954	**8.852725**		
San Joaquin	2023	T6 OOS Class 5	Aggregate	Aggregate	Diesel	7.890998517	538.2125954	181.3351459	0.060737656	**8.861267**		
San Joaquin	2023	T6 OOS Class 6	Aggregate	Aggregate	Diesel	24.97157764	1406.36491	573.8468541	0.156409596	**8.991551**		
San Joaquin	2023	T6 OOS Class 7	Aggregate	Aggregate	Diesel	40.57354344	10226.0217	932.3800283	1.062980063	**9.620144**		
San Joaquin	2023	T6 Public Class 4	Aggregate	Aggregate	Diesel	32.09216486	1056.604858	164.6328057	0.140824099	**7.503012**		
San Joaquin	2023	T6 Public Class 5	Aggregate	Aggregate	Diesel	76.27568061	2776.64108	391.2942415	0.361173048	**7.687841**		
San Joaquin	2023	T6 Public Class 6	Aggregate	Aggregate	Diesel	126.4582156	4446.297004	648.7306462	0.576020372	**7.718993**		
San Joaquin	2023	T6 Public Class 7	Aggregate	Aggregate	Diesel	152.7305258	6768.069365	783.5075973	0.883776286	**7.658125**		
San Joaquin	2023	T6 Utility Class 5	Aggregate	Aggregate	Diesel	33.47606031	1364.933068	428.493572	0.154770907	**8.819055**		
San Joaquin	2023	T6 Utility Class 6	Aggregate	Aggregate	Diesel	6.356456131	257.430851	81.36263848	0.029104667	**8.845002**		
San Joaquin	2023	T6 Utility Class 7	Aggregate	Aggregate	Diesel	7.230830053	358.5000918	92.55462468	0.040337535	**8.887506**		
San Joaquin	2023	T6TS	Aggregate	Aggregate	Gasoline	560.525111	27400.6685	11214.98642	5.873758607	**4.664929**		
San Joaquin	2023	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	1500.771839	308143.8719	34487.73687	51.00604804	**6.04132**	**HHD**	
San Joaquin	2023	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	1343.474448	364734.0356	30873.04281	59.83110996	**6.09606**		**5.424995**
San Joaquin	2023	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	562.3598205	132501.3964	12923.02868	21.97566159	**6.029461**		
San Joaquin	2023	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	28.6781176	5381.657637	469.174004	0.90785985	**5.927851**		
San Joaquin	2023	T7 POAK Class 8	Aggregate	Aggregate	Diesel	131.1211785	13188.01731	2145.142481	2.26470624	**5.823279**		
San Joaquin	2023	T7 POLA Class 8	Aggregate	Aggregate	Diesel	139.588006	18353.08998	2283.659779	3.154875131	**5.817374**		
San Joaquin	2023	T7 Public Class 8	Aggregate	Aggregate	Diesel	387.066761	16533.94109	1985.652484	3.205449572	**5.158072**		
San Joaquin	2023	T7 Single Concrete/Tr	Aggregate	Aggregate	Diesel	118.1878034	8595.904532	1113.329108	1.467125303	**5.859012**		
San Joaquin	2023	T7 Single Dump Class	Aggregate	Aggregate	Diesel	486.5561857	30707.03937	4583.359269	5.327318734	**5.76407**		
San Joaquin	2023	T7 Single Other Class	Aggregate	Aggregate	Diesel	1040.735731	57042.4876	9803.730584	9.736964144	**5.858344**		
San Joaquin	2023	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	175.044521	11346.95226	805.2047965	4.507153801	**2.517543**		
San Joaquin	2023	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	2638.276559	211937.8172	38334.1584	34.91925222	**6.069369**		
San Joaquin	2023	T7 Utility Class 8	Aggregate	Aggregate	Diesel	23.22093261	1080.673222	297.2279374	0.186573576	**5.792209**		
San Joaquin	2023	T7IS	Aggregate	Aggregate	Gasoline	2.419215607	60.00819344	48.40366587	0.018776223	**3.195967**		
San Joaquin	2023	UBUS	Aggregate	Aggregate	Gasoline	49.369827	3719.55506	197.479308	0.791708132	**4.698139**		
San Joaquin	2023	UBUS	Aggregate	Aggregate	Diesel	78.33872382	5427.523002	313.3548953	0.602229331	**9.012386**		
San Joaquin	2028	All Other Buses	Aggregate	Aggregate	Diesel	75.087673	3534.95197	668.2802897	0.39552054	**8.937468**		
San Joaquin	2028	LDA	Aggregate	Aggregate	Gasoline	251648.0756	10160923.28	1159543.809	322.2820081	**31.52805**		
San Joaquin	2028	LDA	Aggregate	Aggregate	Diesel	476.6687725	15258.03162	2047.815575	0.340487129	**44.81236**		
San Joaquin	2028	LDT1	Aggregate	Aggregate	Gasoline	19853.11201	676003.0721	86363.10093	25.74141902	**26.2613**		
San Joaquin	2028	LDT1	Aggregate	Aggregate	Diesel	1.514132086	18.01588449	4.323023256	0.00068461	**26.31556**		
San Joaquin	2028	LDT2	Aggregate	Aggregate	Gasoline	115346.5637	4664145.407	535551.9379	178.7797124	**26.08878**		
San Joaquin	2028	LDT2	Aggregate	Aggregate	Diesel	365.4008573	15804.92743	1741.137467	0.444389463	**35.56549**		
San Joaquin	2028	LHD1	Aggregate	Aggregate	Gasoline	8967.418734	320263.476	133601.1777	31.82571277	**10.06304**		
San Joaquin	2028	LHD1	Aggregate	Aggregate	Diesel	7749.679194	261137.0731	97481.21517	16.31989837	**16.00115**		
San Joaquin	2028	LHD2	Aggregate	Aggregate	Gasoline	1060.430108	36804.35456	15798.82857	4.128261301	**8.915219**		
San Joaquin	2028	LHD2	Aggregate	Aggregate	Diesel	3004.917923	104795.3214	37798.08728	7.815673005	**13.40836**		
San Joaquin	2028	MCY	Aggregate	Aggregate	Gasoline	11864.94521	63005.06134	23729.89043	1.547365458	**40.71763**		
San Joaquin	2028	MDV	Aggregate	Aggregate	Gasoline	90241.20671	3172076.247	406705.1186	152.8689427	**20.7503**		
San Joaquin	2028	MDV	Aggregate	Aggregate	Diesel	1343.990793	47501.07779	6119.732501	1.869609896	**25.40695**		
San Joaquin	2028	MH	Aggregate	Aggregate	Gasoline	1150.701442	10130.11857	115.1161722	2.294700863	**4.41457**		
San Joaquin	2028	MH	Aggregate	Aggregate	Diesel	609.6553626	5150.21088	60.96553626	0.548641656	**9.387204**		
San Joaquin	2028	Motor Coach	Aggregate	Aggregate	Diesel	21.01557182	2557.945821	482.9378404	0.446341555	**5.730916**		
San Joaquin	2028	OBUS	Aggregate	Aggregate	Gasoline	152.7075179	6276.985048	3055.372019	1.265329381	**4.960752**	**MHD**	
San Joaquin	2028	PTO	Aggregate	Aggregate	Diesel	0	20126.03007	0	3.847950714	**5.230324**		**8.770862**
San Joaquin	2028	SBUS	Aggregate	Aggregate	Gasoline	136.2534926	7509.127762	545.0139705	0.732722623	**10.24825**		
San Joaquin	2028	SBUS	Aggregate	Aggregate	Diesel	485.381611	10497.26178	7028.325728	1.266080089	**8.291151**		
San Joaquin	2028	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	10.57242221	696.4017171	242.9542623	0.075767114	**9.191345**		
San Joaquin	2028	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	13.75143446	959.7465616	316.0079639	0.104666155	**9.169598**		
San Joaquin	2028	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	50.39797087	2465.212151	1158.145371	0.264779483	**9.310435**		
San Joaquin	2028	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	80.86768562	16016.21475	1858.339415	1.567382798	**10.21844**		
San Joaquin	2028	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	258.5402309	8583.496608	3689.369095	1.014139998	**8.463818**		
San Joaquin	2028	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	167.6313304	5590.915462	2392.099084	0.663269993	**8.429321**		
San Joaquin	2028	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	728.3601315	24251.26081	10393.69908	2.866377891	**8.460594**		
San Joaquin	2028	T6 Instate Delivery Cl	Aggregate	Aggregate	Diesel	138.9169803	7193.829131	1982.345309	0.853371383	**8.429893**		
San Joaquin	2028	T6 Instate Other Class	Aggregate	Aggregate	Diesel	468.1734225	18991.22317	5412.084764	2.177857116	**8.720142**		
San Joaquin	2028	T6 Instate Other Class	Aggregate	Aggregate	Diesel	1300.433611	53845.12932	15033.01255	6.178315729	**8.715179**		
San Joaquin	2028	T6 Instate Other Class	Aggregate	Aggregate	Diesel	972.2660699	39941.62631	11239.39577	4.558219035	**8.762551**		
San Joaquin	2028	T6 Instate Other Class	Aggregate	Aggregate	Diesel	669.5613644	26880.60719	7740.129373	3.041639388	**8.837539**		
San Joaquin	2028	T6 Instate Tractor Cla	Aggregate	Aggregate	Diesel	11.36503677	521.142021	131.379825	0.059303654	**8.787688**		
San Joaquin	2028	T6 Instate Tractor Cla	Aggregate	Aggregate	Diesel	833.9141659	45702.23499	9640.047758	4.948035561	**9.23644**		
San Joaquin	2028	T6 OOS Class 4	Aggregate	Aggregate	Diesel	6.459130712	426.1216479	148.4308238	0.044746218	**9.523076**		
San Joaquin	2028	T6 OOS Class 5	Aggregate	Aggregate	Diesel	8.338125424	584.562274	191.6101223	0.06166981	**9.478905**		
San Joaquin	2028	T6 OOS Class 6	Aggregate	Aggregate	Diesel	31.11493345	1527.477947	715.0211706	0.157329262	**9.708798**		
San Joaquin	2028	T6 OOS Class 7	Aggregate	Aggregate	Diesel	43.70181097	11106.66407	1004.267616	1.06659513	**10.4132**		
San Joaquin	2028	T6 Public Class 4	Aggregate	Aggregate	Diesel	29.17247273	1030.679648	149.6547851	0.130645497	**7.889133**		
San Joaquin	2028	T6 Public Class 5	Aggregate	Aggregate	Diesel	77.18700743	2763.01347	395.9693481	0.348049418	**7.938567**		
San Joaquin	2028	T6 Public Class 6	Aggregate	Aggregate	Diesel	120.7410735	4384.934966	619.4017071	0.546459542	**8.024263**		
San Joaquin	2028	T6 Public Class 7	Aggregate	Aggregate	Diesel	145.3344528	6631.619952	745.5657428	0.817346735	**8.113594**		
San Joaquin	2028	T6 Utility Class 5	Aggregate	Aggregate	Diesel	33.22251128	1336.802543	425.2481444	0.147836241	**9.042455**		
San Joaquin	2028	T6 Utility Class 6	Aggregate	Aggregate	Diesel	6.28366525	252.2880933	80.4309152	0.027829407	**9.065522**		
San Joaquin	2028	T6 Utility Class 7	Aggregate	Aggregate	Diesel	6.985419898	348.0048751	89.4133747	0.038057878	**9.144096**		
San Joaquin	2028	T6TS	Aggregate	Aggregate	Gasoline	498.3566684	26843.99395	9971.120221	5.403565597	**4.96783**		
San Joaquin	2028	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	1603.851333	325292.5068	36856.50363	49.92458236	**6.515678**	**HHD**	
San Joaquin	2028	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	1473.453847	403551.226	33859.96941	58.69026473	**6.875948**		**5.777529**
San Joaquin	2028	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	634.608223	146602.9921	14583.29697	22.07107519	**6.642313**		
San Joaquin	2028	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	30.10548681	6271.23511	492.5257642	1.009812387	**6.210297**		
San Joaquin	2028	T7 POAK Class 8	Aggregate	Aggregate	Diesel	134.3128419	14062.90952	2197.358093	2.331482989	**6.031744**		
San Joaquin	2028	T7 POLA Class 8	Aggregate	Aggregate	Diesel	162.8751624	22143.1218	2664.637656	3.776328215	**5.863665**		
San Joaquin	2028	T7 Public Class 8	Aggregate	Aggregate	Diesel	384.8437184	16483.53659	1974.248275	3.053496939	**5.398249**		
San Joaquin	2028	T7 Single Concrete/Tr	Aggregate	Aggregate	Diesel	119.0680932	8120.724396	1121.621438	1.319872954	**6.152656**		
San Joaquin	2028	T7 Single Dump Class	Aggregate	Aggregate	Diesel	547.6650019	30112.15526	5159.004318	5.112500645	**5.889907**		
San Joaquin	2028	T7 Single Other Class	Aggregate	Aggregate	Diesel	1323.663519	59769.04221	12468.91035	9.938108288	**6.014127**		
San Joaquin	2028	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	153.9129916	9980.392242	707.9997616	3.767293883	**2.649221**		
San Joaquin	2028	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	3333.434446	229217.9302	48434.8025	36.33949221	**6.307681**		
San Joaquin	2028	T7 Utility Class 8	Aggregate	Aggregate	Diesel	25.42665346	1096.871469	325.4611643	0.184594119	**5.942072**		
San Joaquin	2028	T7IS	Aggregate	Aggregate	Gasoline	0.458753371	55.08382365	9.17873744	0.012542307	**4.391841**		
San Joaquin	2028	UBUS	Aggregate	Aggregate	Gasoline	39.79810813	2881.956137	159.1924325	0.613507912	**4.697504**		
San Joaquin	2028	UBUS	Aggregate	Aggregate	Diesel	44.25006523	3252.046713	177.0002609	0.350793501	**9.270544**		

On-road Mobile (Operational) Energy Usage

Step 1:

Therefore:

Average Daily VMT:

46,221 Source: Fehr & Peers

Step 2:

Given:

Fleet Mix (CalEEMod Output)

LDA	LDT1	LDT2	Check
66.7352%	4.8027%	28.4621%	100.0%

And:

Gasoline MPG Factors for each Vehicle Class - Year 2028 (EMFAC2021 Output)

LDA	LDT1	LDT2
31.52805004	26.2613	26.08878

Therefore:

Weighted Average MPG Factors

Gasoline: **29.7** Diesel: **N/A**

Step 3:

Therefore:

1,555 daily gallons of gasoline **- daily gallons of diesel**

or

567,520 annual gallons of gasoline **- annual gallons of diesel**

Off-road Mobile (Construction) Energy Usage

Note: For the sake of simplicity, and as a conservative estimation, it was assumed that all off-road vehicles use diesel fuel as an energy source.
Demolition (if applicable), Site preparation and grading off-road mobile vehicle on-site gallons of fuel are calculated below.

Given Factor:	**343.6**	**metric tons**	**CO2**	**(provided in CalEEMod Output File)**	
Conversion Factor:	2204.6262	pounds	per metric ton		
Intermediate Result:	**757,510**	**pounds**	**CO2**		
Conversion Factor:	22.38	pounds	CO2 per 1 gallon of diesel fuel	Source: U.S. EIA, 2016	
Final Result:	**33,848**	**gallons**	**diesel fuel**	http://www.eia.gov/tools/faqs/faq.cfm?id=307&t=11	

Mitigated Onsite Scenario	Total CO2 (MT/yr) (provided in CalEEMod Output File)
Demolition -	15.6
Site Preparation - 2024	145.0
Grading - 2024	183.0

On-road Mobile (Construction) Energy Usage - Demolition

Note: Year 2021 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1: **Total Daily Worker Trips (CalEEMod output)**

15

Worker Trip Length (miles) (CalEEMod output)

11.9

Therefore:

Average Worker Daily VMT:

179

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	**LDT1**	**LDT2**
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

LDA	**LDT1**	**LDT2**
28.648608	23.888649	23.161608

Therefore:

Weighted Average Worker MPG Factor

26.09

Step 3: **Therefore:**

7 Worker daily gallons of gasoline (all workers)

Step 4: 10 **# of Days (CalEEMod ouput)**

Therefore:

Result: **68** **Total gallons of gasoline (all workers)**

Total Hauler Trips (CalEEMod Output)

17

Note: Hauler trips are total values (not daily).

Hauler Trip Length (miles) (CalEEMod Output)

20

Average Hauler Daily VMT:

346

Fleet Mix for Workers (CalEEMod Output)

MHD	**HHD**
0%	100%

Diesel MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

MHD	**HHD**
8.428594	5.424995

Therefore:

Weighted Average Hauler (Diesel) MPG Factor

5.42

Therefore:

64 Worker daily gallons of gasoline (all workers)

Therefore:

Result: **64** **Hauler gallons of diesel**

On-road Mobile (Construction) Energy Usage - Site Preparation

Note: Year 2021 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

18

Worker Trip Length (miles) (CalEEMod Output)

11.9

Therefore:

Average Worker Daily VMT:

214

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

LDA	LDT1	LDT2
28.648608	23.88865	23.16161

Therefore:

Weighted Average Worker MPG Factor

26.1

Step 3: **Therefore:**

8.2 Worker daily gallons of gasoline

Step 4: 60 **# of Days (CalEEMod Output)**

Therefore:

Result: **493** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Grading

Note: Year 2021 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

20

Worker Trip Length (miles) (CalEEMod Output)

11.9

Therefore:

Average Worker Daily VMT:

238

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

LDA	LDT1	LDT2
28.648608	23.888649	23.161608

Therefore:

Weighted Average Worker MPG Factor

26.1

Step 3: **Therefore:**

9.1 Worker daily gallons of gasoline

Step 4: 61 **# of Days (CalEEMod Output)**

Therefore:

Result: **557** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Building Construction

Note: Year 2021 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1:

Total Daily Worker Trips (CalEEMod Output)
167

Total Daily Vendor Trips (CalEEMod Output)
50

Note: Assumes 5% of Plan Area under construction at given point in time (on average) until buildout.

Worker Trip Length (miles) (CalEEMod Output)
11.9

Vendor Trip Length (miles) (CalEEMod Output)
9.1

Therefore:

Average Worker Daily VMT:
1,987

Average Vendor Daily VMT:
452

Step 2:

Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	**LDT1**	**LDT2**
0.5	0.25	0.25

Assumed Fleet Mix for Vendors

Fleet Mix for Workers (CalEEMod Output)

MHD	**HHD**
0%	100%

And:

MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

<u>Gasoline:</u>

LDA	**LDT1**	**LDT2**
28.6486079	23.888649	23.161608

<u>Diesel:</u>

MHD	**HHD**
8.428594268	5.4249952

Therefore:

Weighted Average Worker (Gasoline) MPG Factor
26.1

Weighted Average Vendor (Diesel) MPG Factor
5.4

Step 3:

Therefore:
76 Worker daily gallons of gasoline

Therefore:
83 Vendor daily gallons of diesel

Step 4:

399 **# of Days (CalEEMod Output)**

Therefore:
30,396 Total gallons of gasoline

Therefore:
33,264 Total gallons of diesel

On-road Mobile (Construction) Energy Usage - Paving

Note: Year 2021 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

15

Worker Trip Length (miles) (CalEEMod Output)

11.9

Therefore:

Average Worker Daily VMT:

179

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

LDA	LDT1	LDT2
28.648608	23.88865	23.16161

Therefore:

Weighted Average Worker MPG Factor

26.1

Step 3: **Therefore:**

6.8 Worker daily gallons of gasoline

Step 4: 100 **# of Days (CalEEMod Output)**

Therefore:

Result: **684** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Architectural Coating

Note: Year 2021 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

34

Worker Trip Length (miles) (CalEEMod Output)

11.9

Therefore:

Average Worker Daily VMT:

399

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

LDA	LDT1	LDT2
28.648608	23.88865	23.16161

Therefore:

Weighted Average Worker MPG Factor

26.1

Step 3: **Therefore:**

15.3 Worker daily gallons of gasoline

Step 4: 100 **# of Days (CalEEMod Output)**

Therefore:

Result: **1,528** **Total gallons of gasoline**

APPENDIX B.3

GHG Calculation Methodology

Greenhouse Gas Efficiency Metric Calculation Methodology – Union Ranch North Project

The methodology used for assessing the proposed project's consistency with GHG targets established in AB 32 is the use of GHG efficiency metrics to assess the GHG efficiency of the project on a "service population (SP)" basis (the sum of the number of jobs and the number of residents provided by a project). These metrics represent the rate of emissions needed to achieve a fair share of the state's emissions mandate embodied in AB 32. The use of "fair share" in this instance indicates the GHG efficiency level that, if applied statewide, would meet the AB 32 emissions target and support efforts to reduce emissions beyond 2020.

GHG efficiency metrics for the project were developed based on emissions rates for the land use-driven emission sectors in the CARB's GHG inventory. The GHG efficiency metric is only based on sectors that would accommodate projected growth (as indicated by population and employment growth) while allowing for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020). The per service population efficiency target is based on the AB 32 GHG reduction target and GHG emissions inventory prepared for the CARB's 2008 Scoping Plan.

To develop the efficiency metric for 2020, land-use driven sectors in the CARB's 1990 GHG inventory were identified and separated to tailor the inventory to land use projects. This process removes emission sources that would not be applicable to the project area. For example, emissions associated with ships and commercial boats, aviation, rail, industrial sources, agriculture and forestry, and unspecified sectors were removed from the CARB's 1990 inventory in order to exclude non-land use sectors. The exceptions for the industrial sector are the landfill and domestic wastewater sub-sectors which were included in development of the GHG efficiency metric because emissions from these sectors are included in the project's emissions profile. Isolating the land use-driven sectors from the CARB's overall inventory ensures that the threshold is directly applicable to land use projects, whereby emission sectors included in the inventory used for developing the GHG efficiency metric can be mapped to a project's emissions data. For example, emissions associated with on-road transportation, electricity, natural gas, wastewater treatment, and solid waste are included in both the inventory used to develop the GHG efficiency metric and the project's operational emissions. The CARB's complete 1990 inventory and the adjusted land use-driven emissions inventory are shown on the following pages.

The land-use sector driven inventory for 1990 was divided by the population and employment projections for California in 2020. Detailed calculations showing derivation of the efficiency metrics are shown on the following pages. The efficiency metric allows the threshold to be applied evenly to all project types (residential, commercial/retail and mixed use) and uses an emissions inventory comprised only of sources from land-use related sectors. The efficiency approach allows lead agencies to assess whether any given project or plan would accommodate population and employment growth in a way that is consistent with the emissions limit established under AB 32. The resultant GHG efficiency metric would be (approximately) 4.84 MT CO_2e/SP/year for 2020 (as provided below).

The proposed project is anticipated to be built out in year 2025 or year 2028. The CARB has indicated that an average statewide GHG reduction of 5.2 percent per year would be necessary to achieve the 2030 target[1,2]. Therefore, a GHG efficiency target in terms of metric tons per service population, similar to the one developed for 2020, were estimated for year 2025 and year 2028, to allow evaluation of the project's GHG emissions in the post-2020 landscape. In addition, based on a request by the applicant, a GHG efficiency target for year 2030 is also provided, following the same methodology. The equivalent target for year 2025 computes to 3.56 MT CO_2e/SP/year; the equivalent target for year 2028 computes to approximately 2.96 MT CO_2e/SP/year; the equivalent target for year 2030 computes to approximately 2.62 MT CO_2e/SP/year. These targets were estimated by applying a uniform reduction from the CARB's 1990 emissions inventory and dividing the resultant value by the projected population and employment in these future years.

These GHG efficiency metrics were derived based on the reduction trajectory the state needs to maintain to achieve its 2030 goals (an approximately 5.2 percent reduction per year) (CARB, 2016). All calculations are based on the IPCC Second Assessment Report's Global Warming Potentials to allow consistent comparison between the ARB 1990 inventory and the California Emissions Estimator Model (CalEEMod; used to estimate project emissions).

---

[1] California Air Resources Board. 2016. California Climate Strategy. January 29, 2016. Available at: http://docketpublic.energy.ca.gov/PublicDocuments/15-RETI-02/TN210091_20160129T154626_California_Climate_Strategy_CARB_for_RETI_20_Plenary_Meeting_on.pdf

[2] California Air Resources Board. 2015. 2030 Target Scoping Plan Workshop Slides. (October 1, 2015). Available at: http://www.arb.ca.gov/cc/scopingplan/meetings/10_1_15slides/2015slides.pdf

California Greenhouse Gas Inventory for 1990 – by Sector and Activity (Land Use-driven sectors only)
Million metric tons of CO_2-equiavlent (CO_2e) – (based on IPCC Second Assessment Report's Global Warming Potentials) (CARB, 2007).

Year 1990

Transportation	
On Road	
Passenger Cars	63.77
Light Duty Trucks	44.75
Motorcycles	0.43
Heavy Duty Trucks	29.03
Freight	0.02
Electricity Generation In-State	
CHP: Commercial	***0.70***
Merchant Owned	***2.33***
Transmission and Distribution	***1.56***
Utility Owned	***29.92***
Electricity Generation In-State	
Specified Imports	***29.61***
Transmission and Distribution	***1.02***
Unspecified Imports	***30.96***
Commercial	
CHP: Commercial	***0.40***
Communication	***0.07***
Domestic Utilities	***0.34***
Education	***1.42***
Food Services	***1.89***
Healthcare	***1.32***
Hotels	***0.67***
Not Specified Commercial	***5.58***
Offices	***1.46***
Retail & Wholesale	***0.68***
Transportation Services	***0.03***
Residential	
Household Use	***29.66***
Industrial	
Landfills	***6.26***
Wastewater Treatment	
Domestic Wastewater	2.83
Total Emissions	**286.70**

Future Year Service Population Thresholds

	2020	2025	2028	2030
Population	40,719,999	42,369,923	43,359,877	44,019,846
Employment	18,511,200	19,261,251	19,711,281	20,011,301
Service Population	59,231,199	61,631,173	63,071,158	64,031,147
Emissions (Million Metric Tons)	286.70	196.17	186.66	167.67
MT/SP	**4.84**	**3.18**	**2.96**	**2.62**

Notes:

SP = service population.

*Assumes proportion of employed persons to the overall population remains equal to that as was applicable in 2020.

Post-2020 Emissions are based on an annual 5.2% reduction from 2020 (CARB, 2016).

Sources:

California Air Resources Board (CARB). 2007. Staff Report: California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit. Public Release Date: November 16, 2007. Available: https://www.arb.ca.gov/cc/inventory/1990level/1990level.htm

California Air Resources Board (CARB). 2015. 2030 Target Scoping Plan Workshop Slides. (October 1, 2015). Available: http://www.arb.ca.gov/cc/scopingplan/meetings/10_1_15slides/2015slides.pdf

California Air Resources Board (CARB). 2016. California Climate Strategy. January 29, 2016. Available at: http://docketpublic.energy.ca.gov/PublicDocuments/15-RETI-02/TN210091_20160129T154626_California_Climate_Strategy_CARB_for_RETI_20_Plenary_Meeting_on.pdf

California Department of Finance, Demographics Research Unit (Total Estimated and Projected Population for California and Counties: July 1, 2010 to July 1, 2060 in 5-year Increments. Published February, 2017.

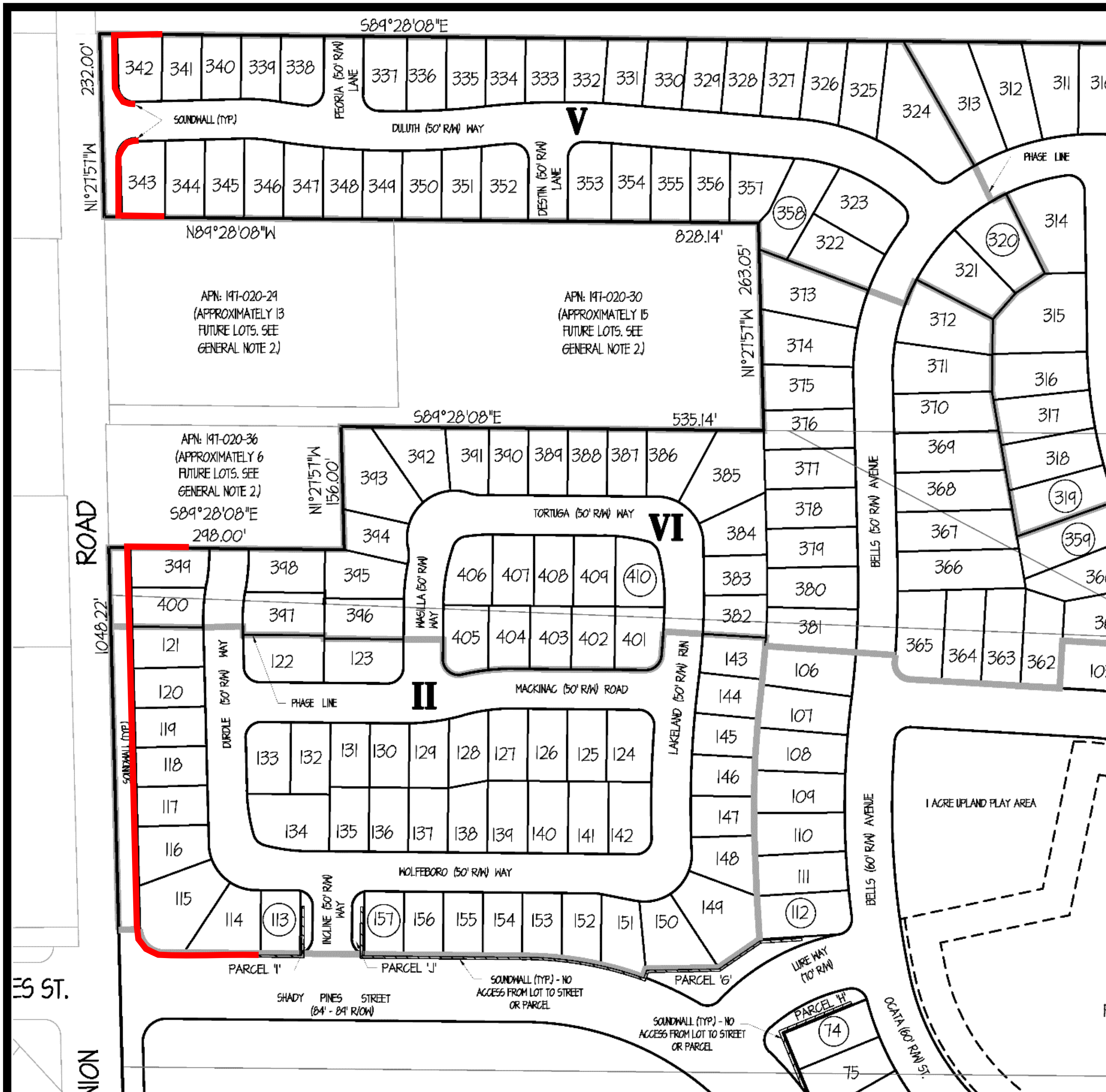
California Department of Finance Employment Development Department. Industry Employment Projections Labor Market Information Division 2010-2020. Published 5/23/2012.

Appendix C

Cultural Resources Investigation
(Confidential)

Appendix D

Noise Study



N. Manteca Annexation 1

City of Manteca, California

Figure 3.10-2

Required Wall Locations - Union Ranch North

Legend

Required 8-Foot Barrier

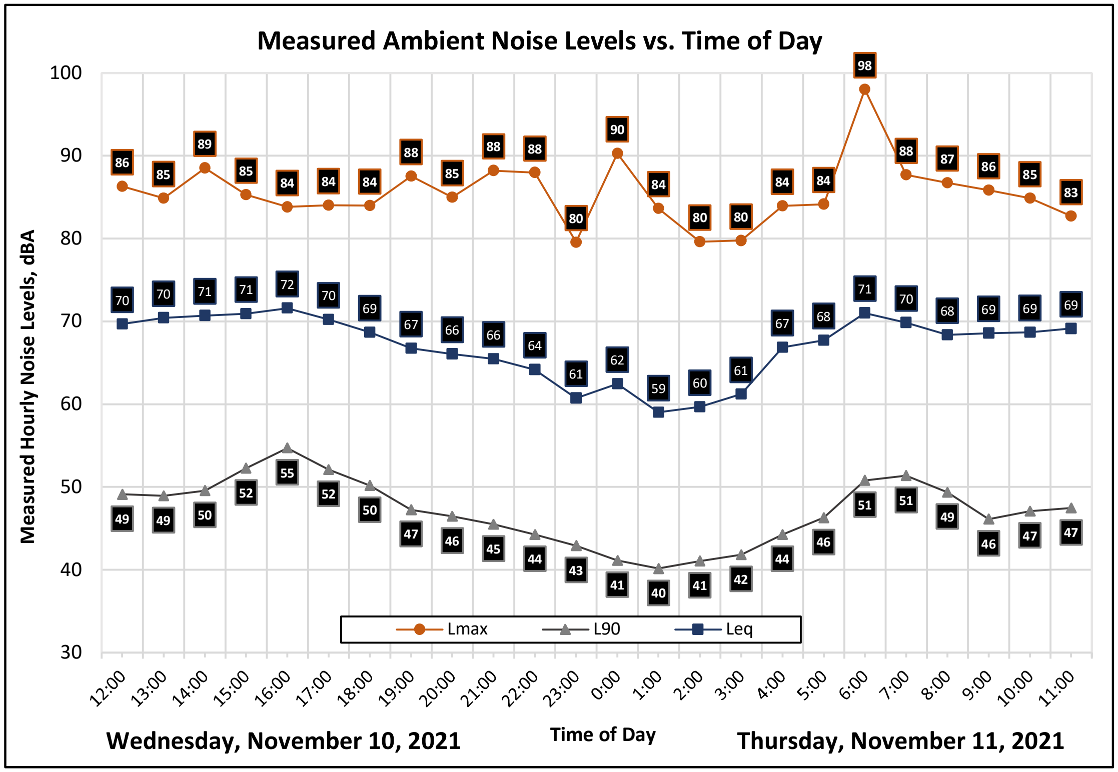
SAXELBY ACOUSTICS
Acoustics · Noise · Vibration

Appendix B3: Continuous Noise Monitoring Results

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, November 10, 2021	12:00	70	86	62	49
Wednesday, November 10, 2021	13:00	70	85	64	49
Wednesday, November 10, 2021	14:00	71	89	64	50
Wednesday, November 10, 2021	15:00	71	85	66	52
Wednesday, November 10, 2021	16:00	72	84	69	55
Wednesday, November 10, 2021	17:00	70	84	65	52
Wednesday, November 10, 2021	18:00	69	84	59	50
Wednesday, November 10, 2021	19:00	67	88	52	47
Wednesday, November 10, 2021	20:00	66	85	52	46
Wednesday, November 10, 2021	21:00	66	88	50	45
Wednesday, November 10, 2021	22:00	64	88	48	44
Wednesday, November 10, 2021	23:00	61	80	46	43
Thursday, November 11, 2021	0:00	62	90	45	41
Thursday, November 11, 2021	1:00	59	84	42	40
Thursday, November 11, 2021	2:00	60	80	43	41
Thursday, November 11, 2021	3:00	61	80	45	42
Thursday, November 11, 2021	4:00	67	84	51	44
Thursday, November 11, 2021	5:00	68	84	55	46
Thursday, November 11, 2021	6:00	71	98	60	51
Thursday, November 11, 2021	7:00	70	88	60	51
Thursday, November 11, 2021	8:00	68	87	56	49
Thursday, November 11, 2021	9:00	69	86	56	46
Thursday, November 11, 2021	10:00	69	85	58	47
Thursday, November 11, 2021	11:00	69	83	61	47

Statistics	Leq	Lmax	L50	L90
Day Average	69	86	59	49
Night Average	66	85	48	44
Day Low	66	83	50	45
Day High	72	89	69	55
Night Low	59	80	42	40
Night High	71	98	60	51
Ldn	73	Day %		80
CNEL	73	Night %		20

Site: LT-3
Project: Manteca Annexation 1
Location: Western Project Boundary
Coordinates: 37.8388131°, -121.2363249°
Meter: LDL 820-3
Calibrator: CAL200



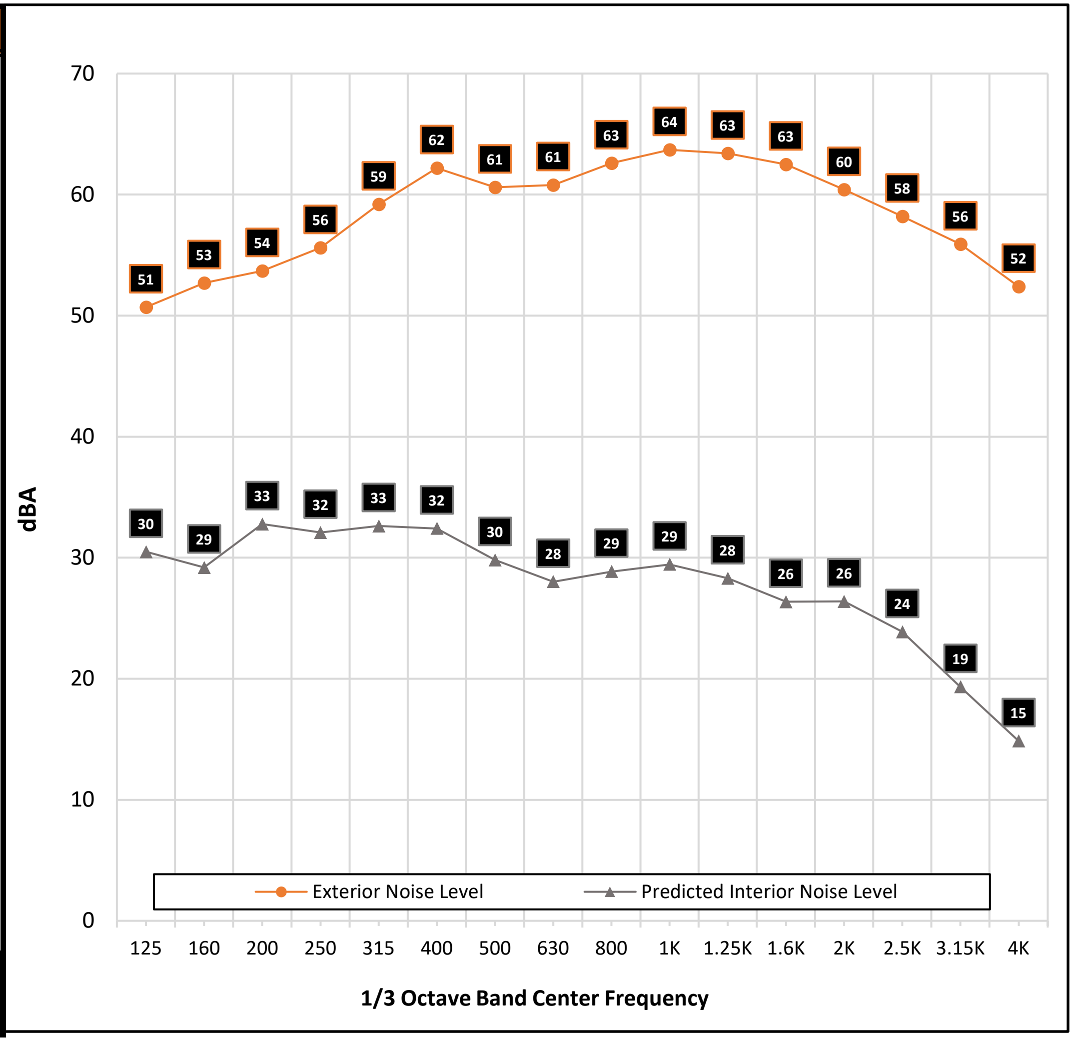
Appendix E1 : Interior Noise Calculation Sheet

Project: 211002 North Manteca Annexation 1
Room Description: Bedroom (Union Ranch North)

Inputs

Parallel Exterior level, dBA:	72.0	**Ldn**
Correction Factor, dBA:	5	
Noise Source:	Arterial Traffic	
Room Perimeter, ft:	44	
Room Area, ft:	120	
Room Height, ft:	9	
Transmitting Panel Length, ft:	22	
Window Area, ft:	24	
Ceiling Finish:	**Gyp Board**	
Ceiling, sf:	120	
Wall Finish 1:	**Gyp Board**	
Wall Finish 1, sf:	372	
Wall Finish 2:	**Glass**	
Wall Finish 2, sf:	24	
Floor:	**Carpet, on foam rubber pad**	
Floor, sf:	120	
Misc. Finish:	**Soft Furnishings**	
Misc. Finish, sf:	25	
Transmitting Element 1:	**Wall - 1-Coat Stucco, 5/8" gyp INSUL**	
Element 1, sf:	174	
Transmitting Element 2:	**Window - Quiet Home STC 34**	
Element 2, sf:	24	
Transmitting Element 3:		
Element 3, sf:		
Transmitting Element 4:		
Element 4, sf:		

Predicted Interior Noise Level, dBA: 42
Noise Reduction, dBA: -30



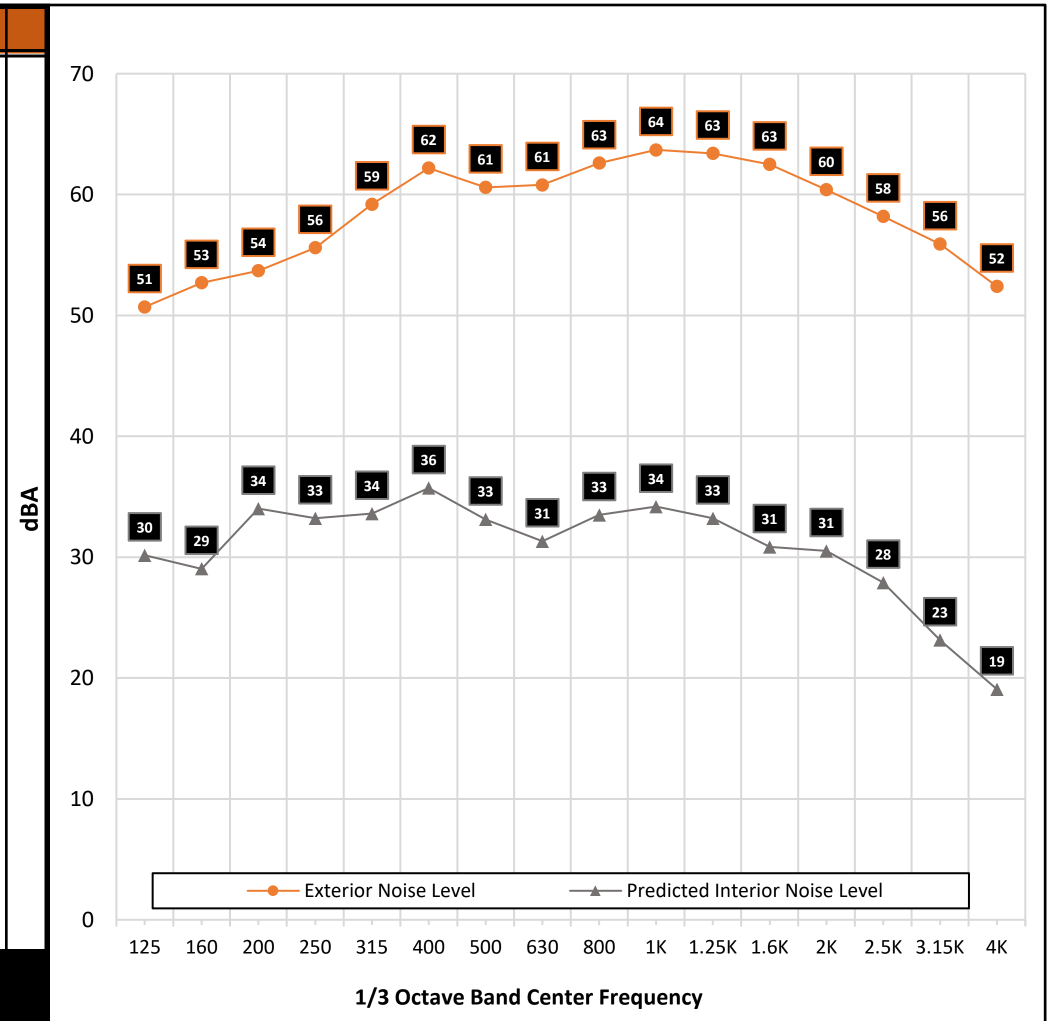
Appendix E2 : Interior Noise Calculation Sheet

Project: 211002 North Manteca Annexation 1
Room Description: Living Room (Union Ranch North)

Inputs

Parallel Exterior level, dBA:	72.0	**Ldn**
Correction Factor, dBA:	5	
Noise Source:	Arterial Traffic	
Room Perimeter, ft:	64	
Room Area, ft:	240	
Room Height, ft:	9	
Transmitting Panel Length, ft:	32	
Window Area, ft:	48	
Ceiling Finish:	**Gyp Board**	
Ceiling, sf:	240	
Wall Finish 1:	**Gyp Board**	
Wall Finish 1, sf:	528	
Wall Finish 2:	**Glass**	
Wall Finish 2, sf:	48	
Floor:	**Wood**	
Floor, sf:	240	
Misc. Finish:	**Soft Furnishings**	
Misc. Finish, sf:	25	
Transmitting Element 1:	**Wall - 1-Coat Stucco, 5/8" gyp INSUL**	
Element 1, sf:	240	
Transmitting Element 2:	**Window - Quiet Home STC 34**	
Element 2, sf:	48	
Transmitting Element 3:		
Element 3, sf:		
Transmitting Element 4:		
Element 4, sf:		

Predicted Interior Noise Level, dBA: 44
Noise Reduction, dBA: -28



SAXELBY ACOUSTICS
Acoustics · Noise · Vibration

Appendix B-2
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 211002
Description North Manteca Annexation #1
Roadway Name: Union Road
Location(s): 2

Noise Level Data:

Year: 2021
Auto L_{dn}, dB: 69
Medium Truck L_{dn}, dB: 61
Heavy Truck L_{dn}, dB: 67

Site Geometry:

Receiver Description: Union Ranch North
Centerline to Barrier Distance (C_1): 52
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 0
Medium Truck Elevation: 2
Heavy Truck Elevation: 8
Pad/Ground Elevation at Receiver: 0
Receiver Elevation[1]: 5
Base of Barrier Elevation: 0
Starting Barrier Height 6

Barrier Effectiveness:

		------------------- L_{dn}, dB -------------------				Barrier Breaks Line of Sight to...		
Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
6	6	62	55	62	66	Yes	Yes	Yes
7	7	61	54	61	64	Yes	Yes	Yes
8	8	59	52	60	63	Yes	Yes	Yes
9	9	58	51	58	62	Yes	Yes	Yes
10	10	57	50	57	60	Yes	Yes	Yes
11	11	56	48	56	59	Yes	Yes	Yes
12	12	55	48	55	58	Yes	Yes	Yes
13	13	54	47	54	58	Yes	Yes	Yes
14	14	54	47	53	57	Yes	Yes	Yes

Notes: [1] Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s).

SAXELBY ACOUSTICS
Acoustics · Noise · Vibration

Appendix E

Transportation Analysis

Union Ranch North Project

Transportation Analysis Report

Prepared for:
De Novo Planning Group
City of Manteca

January 26, 2024

RS21-4072

FEHR PEERS

Table of Contents

List of Figures

List of Tables

1. Introduction

This study addresses the potential transportation impacts associated with the proposed Union Ranch North project located in the City of Manteca. Vehicle miles traveled, intersection operations, site access, freeway off-ramp queuing, and access to bicycle, pedestrian and transit facilities are analyzed. This report documents the methodologies, inputs, and results of the analysis.

1.1 Project Description

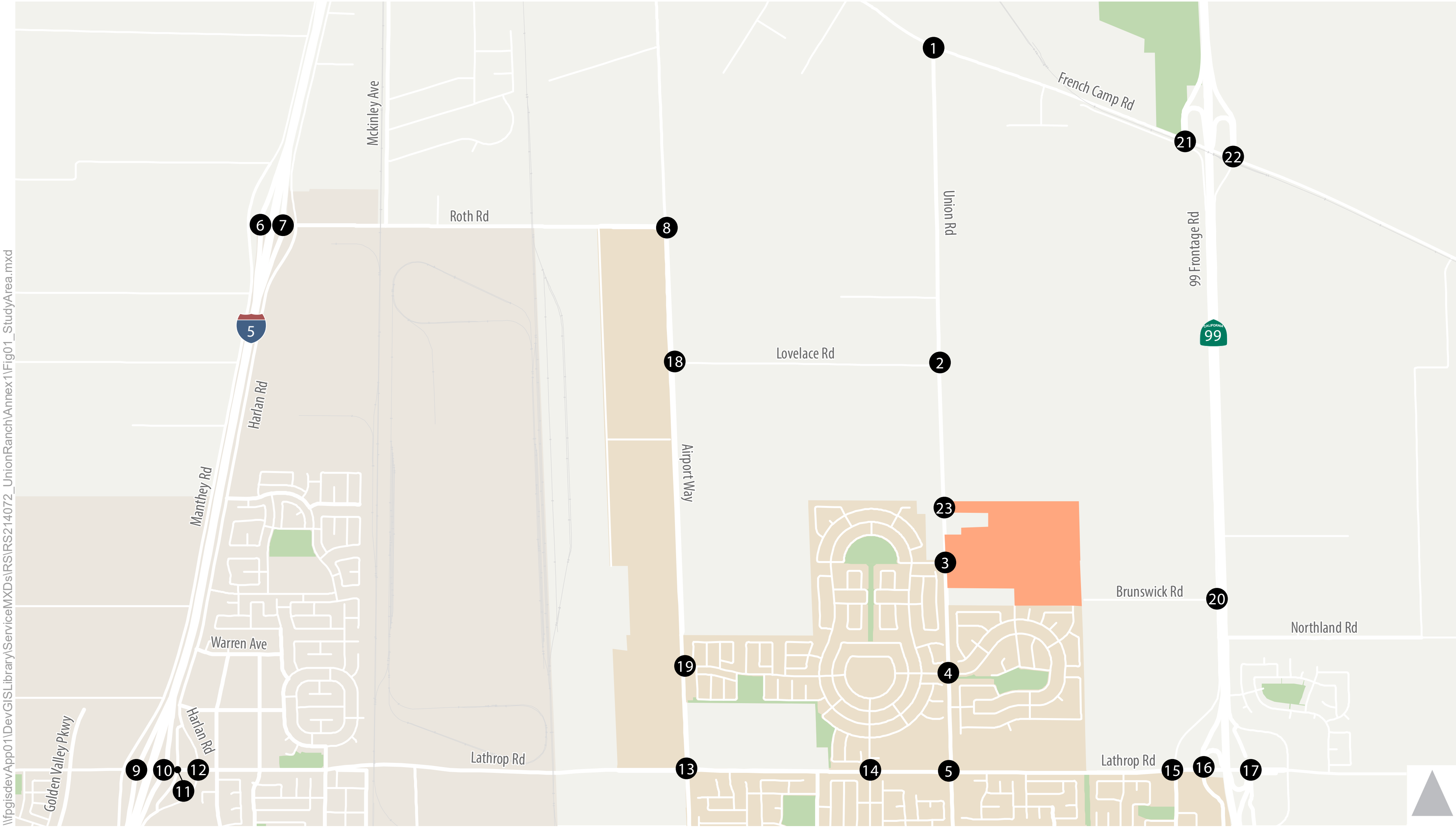
The project site encompasses approximately 106.04 acres north of the City of Manteca city boundary, within the City's Sphere of Influence. The project site is located on the east side of Union Road. **Figure 1** shows the location of the project site. The Union Ranch North project proposes the development of 465 single family residential units and a community park. Primary access to the development would be provided by one full access intersection at Union Road/Shady Pines Street. Secondary access would be provided by one right-in/right-out intersection at Union Road/Duluth Way.

1.2 Study Area

The study area was selected based on the project's location, site access, and expected trip distribution and assignment. The analysis considers traffic operations at the following intersections, which are displayed on Figure 1.

Study Intersections

1. Union Road/French Camp Road
2. Union Road/Lovelace Road
3. Union Road/Shady Pines Street
4. Union Road/Del Webb Boulevard/Clearwater Creek Boulevard
5. Union Road/Lathrop Road
6. Roth Road/I-5 Southbound (SB) Ramps
7. Roth Road/I-5 Northbound (NB) Ramps
8. Roth Road/Airport Way
9. Lathrop Road/I-5 SB Ramps
10. Lathrop Road/I-5 NB Ramps
11. Lathrop Road/Old Harlan Road
12. Lathrop Road/Harlan Road
13. Lathrop Road/Airport Way
14. Lathrop Road/Madison Grove Drive
15. Lathrop Road/SR 99 Frontage Road
16. Lathrop Road/SR 99 SB Ramps/Main Street
17. Lathrop Road/SR 99 NB Ramps



1 Study Intersection

Project Area

Lathrop City Limits

Manteca City Limits

Figure 1

Study Area

18. Airport Way/Lovelace Road
19. Airport Way/Daisywood Drive
20. SR 99 Frontage Road/Brunswick Road
21. French Camp Road/SR 99 SB Ramps/SR 99 Frontage Road
22. French Camp Road/SR 99 NB Ramps/SR 99 Frontage Road
23. Union Road/Duluth Way

1.3 Study Scenarios

The study intersections were evaluated for the following four scenarios:

- **Existing Conditions** – Analyzes operations as they exist today.
- **Existing Plus Project Conditions** – Analyzes existing operations with the addition of trips generated by the Project.
- **Cumulative No Project Conditions** - Analyzes cumulative year (2040) volumes based on the City of Manteca, Lathrop, and Ripon Travel Forecasting Model, assuming the Development Area remains in its current undeveloped state.
- **Cumulative Plus Project Conditions** – Analyzes cumulative year volumes with the addition of trips generated by the Project.

2. Vehicle Miles Traveled Significance Criteria and Analysis Methodology

This section describes the significance criteria used to complete the vehicle miles traveled analysis.

2.1 Applicable Policies and Significance Criteria

Vehicle Miles Traveled

Senate Bill (SB) 743 was signed into law in 2013 and led to the addition of Section 15064.3, Determining the Significance of Transportation Impacts, to the CEQA Guidelines. Per the new section, "Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project."

The City of Manteca adopted an *SB 743 Implementation Policy* in September 2022. The *SB 743 Implementation Policy* includes a list of projects with transportation VMT impacts that are presumed to be less-than-significant, and therefore may be relieved of performing a detailed VMT impact analysis. Consistent with the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (California Office of Planning & Research, December 2018),[1] the Manteca *SB 743 Implementation Policy* includes screening criteria for small projects and local-serving retail, as explained below.

- Small projects – projects consistent with the General Plan and Regional Transportation Plan/Sustainable Communities Strategy and local general plan 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 ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor (i.e., a corridor with fixed route bus services with service intervals no longer than 15 minutes during peak commute hours).
- Redevelopment Projects –redevelopment projects that lead to a net overall decrease in VMT (when compared against the VMT of the existing land uses).
- 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.

[1] http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

The *SB 743 Implementation Policy* also identifies the recommended numeric VMT thresholds for residential projects. Based on the VMT thresholds, a residential project would result in a less-than-significant transportation impact if:

- Under existing (baseline) conditions, the residential development would generate home-based VMT per dwelling unit equal or below 85 percent of the existing (baseline) City of Manteca average for the same housing category (single family, multi-family, or age-restricted); AND
- Under cumulative conditions, the residential development would generate home-based VMT per dwelling equal or below 85 percent of the cumulative City of Manteca average for the same housing category (single family, multi-family, or age-restricted).

Alternatively, the project would result in a less-than-significant transportation impact if:

- The residential development would cause the total VMT in the model area to decrease under baseline AND cumulative conditions.

The Travel Demand Forecasting model developed for the City of Manteca General Plan Update was used to develop baseline (2019) and cumulative (2040) VMT per single family residential household.

2.2 VMT Analysis Methodology

VMT Defined

To help explain the different forms of VMT in **Table 1** a basic lexicon and accompanying visual representation is provided below. These metrics are directly related to how land use and transportation infrastructure influence future vehicle travel.

Table 1: Vehicle Miles Traveled Lexicon		
Home-Based VMT per Resident	• All automobile (i.e., passenger cars and light-duty trucks) vehicle-trips are traced back to the residence of the trip-maker. Non-home-based trips are excluded	
Total VMT in the model area	• All vehicle-trips (i.e., passenger and commercial vehicles) assigned on the network within a specific geographic boundary (i.e., model-wide). Vehicle volume on each link is multiplied by link distance.	

Travel Forecasting Model (TFM)

The City of Manteca, Lathrop, and Ripon Travel Forecasting Model (TFM) was used to estimate the project's home-based VMT and total VMT under base year and cumulative year conditions. The TFM is a modified version of the Three-County RTP/SCS Air Quality Conformity Model, but improved all major components of the model. The development of the TFM is described below.

The Base Year TFM incorporates Base Year land use data for dwelling units (single family and multi-family) and employment (food, retail, office, industrial, medical, government, and school), as well as the roadway network (lanes, speed, capacity class), based on existing (i.e., 2019 pre-COVID 19) data. The TFM Trip generation rates were derived from the Institute of Transportation Engineer's Trip Generation Manual and include appropriate inbound/outbound trip generation rates for residential and employment land uses for AM and PM Peak Hour Conditions. The TFM was calibrated to reflect more accurate trip distribution for Internal-to-Internal Trips, Internal-to-External Trips, External-to-Internal Trips and External-to-External (i.e., Through) Trips based on a combination of the Caltrans Household Travel Survey (CHTS), the American Community Survey (ACS), and California Statewide Model to replicate the majority of vehicle trips to and from the west (San Francisco Bay Area) and a smaller percentage to and from the north (including Stockton and Sacramento) and lastly to and from the south.

The Interim Year 2040 TFM was developed based on expected future land use and transportation network for the City of Manteca and adjacent areas in 2040. Similar to other cities in the Central Valley region, the City of Manteca is projecting large amount of growth for both housing and employment in the next 20 years. The Cumulative Year 2040 model scenario was developed in coordination with both Manteca and Lathrop to ensure that the TFM represents market-based demand for future growth in both housing (population) and employment, and therefore does not underestimate or overestimate traffic demand volumes. The City of Manteca 2040 land use inputs were developed based on the City of Manteca's approved and anticipated projects that will be constructed and occupied by year 2040. The City of Lathrop 2040 land use inputs were developed based on the City's historic rate of growth in households and employment for the past 5 years (2016 to 2020). The location of the growth was allocated across the city where future growth is anticipated, including the area west of I-5 and along the SR 120 corridor.

3. Vehicle Miles Traveled Analysis

3.1 VMT Impact Analysis

The proposed project was evaluated against the screening criteria in the *SB 743 Implementation Policy*. The proposed project does not constitute a small project, is not located within ½ mile of an existing major transit stop, nor is it a redevelopment project. Therefore, the project is not eligible to be screened out based on these criteria. Furthermore, the *SB 743 Implementation Policy* identifies no low VMT areas in Manteca for project screening purposes.

A detailed VMT analysis was conducted using methodology discussed in Chapter 2 of this report. The proposed residential development would result in a significant transportation impact if it would 1). generate vehicle travel exceeding 85 percent of the established baseline VMT under existing (baseline) or cumulative conditions, or 2). result in an increase in total VMT in the model area.

Table 2 presents the established Baseline Citywide VMT and the project generated VMT under existing (baseline) and cumulative conditions.

Table 2: Project Vehicle Miles Traveled Analysis – Project-Generated VMT			
Land Use	**City of Manteca Average VMT**	**Project-Generated VMT**	**Compared to City Average**
Existing (Baseline) Year			
Single Family Households	**103.8** home-based VMT per single family household	**99.4** home-based VMT per single family household	-4.2%
Cumulative Year			
Single Family Households	**100.7** home-based VMT per single family household	**95.0** home-based VMT per single family household	-5.7%
Source: City of Manteca Travel Demand Model - Fehr & Peers, 2024			

As displayed, the proposed project would generate an estimated average of 99.4 home-based VMT per single family household under Existing Conditions, and an estimated average of 95.0 home-based VMT per single family household under Cumulative conditions. The fewer home-based VMT generated per single family household under Cumulative Conditions reflects an improved jobs-housing-commercial land use balance in the City of Manteca, where residents would be able to travel shorter distances to access jobs, goods, and services.

Because the project would generate VMT exceeding 15 percent below the established city-wide average under Existing and Cumulative Conditions, this is a **significant** transportation impact.

Table 3 presents the comparison of Total VMT in the model area before and after project.

Table 3: Project Vehicle Miles Traveled Analysis – Model-wide VMT			
Model-Wide VMT Without Project	**Model-Wide VMT With Project**	**Differences**	**Differences as a percentage**
Existing (Baseline) Year			
13,853,921	13,900,861	+ 46,940	+ 0.3%
Cumulative Year			
20,717,051	20,768,180	+ 51,129	+ 0.2%
Source: City of Manteca Travel Demand Model - Fehr & Peers, 2024			

As displayed, under Existing Conditions, the proposed project would result in a net increase of 46,940 total VMT in the model area, representing a 0.3% increase in total VMT. Under Cumulative Conditions, the proposed project would result in a net increase of 51,129 total VMT in the model area, representing a 0.2% increase in total VMT.

Because the project would cause the total VMT in the model area to increase under Existing and Cumulative Conditions, this is a **significant** transportation impact.

3.2 Mitigation Measures

The VMT generation of a project is largely dictated by the combination of land use proximity and transportation infrastructure. Transportation Demand Management (TDM) strategies are designed to increase the transportation system efficiency and reduce vehicle demand on the multi-modal transportation system. Common TDM strategies are based on discouraging single-occupancy vehicle travel; encouraging transit, carpooled, and active modes of travel (i.e., bicycling, walking, scooter); shifting travel patterns from congested peak to less congested off-peak hours, and proximity to closer complimentary destinations. But most importantly, the biggest of effect of TDM strategies on VMT derive from regional policies related to land use location efficiency, jobs/housing/activity balance, and infrastructure investments that support transit, walking, and bicycling. Of these strategies, only a few are likely to be effective in a suburban or rural setting such as the City of Manteca.

The *Handbook for Analyzing Greenhouse Gas (GHG) Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*[2] (California Air Pollution Control Officers Association [CAPCOA], 2021) is widely used by local governments across California to reduce VMT and GHG emissions from new land use development projects. Mitigation Measure **MM-TRA-1** summarizes transportation measures with

[2] https://www.airquality.org/ClimateChange/Documents/Final%20Handbook_AB434.pdf

VMT-reducing benefits that may be applicable at project or community level in the City of Manteca. However, it should be noted that some of these strategies such as increased land use density or diversity may not be feasible for the project site because it would change the nature of the project.

MM-TRA-1: Implement VMT mitigation options

Potential measures for individual development include, but are not limited to:

- Increase residential density
- Limit residential parking supply
- Unbundle residential parking cost from property cost
- Provide access to transit (Transit Oriented Development)
- Improve street connectivity
- Provide ride-share program
- Implement subsidized or discounted transit program
- Provide end-of-trip bicycle facilities
- Provide community-based travel planning
- Implement market price public on-street parking
- Provide pedestrian network improvement
- Construct or improve bike facility
- Construct or improve bike boulevard
- Expand bikeway network
- Implement conventional or electric carshare program
- Implement pedal or electric bikeshare program
- Implement scooter-share program
- Extend transit network coverage or hours
- Increase transit service frequency
- Implement transit-supportive roadway treatments
- Reduce transit fares

It should be noted that two recent studies that included an evaluation of VMT per capita trends in California.

- *2018 Progress Report, California's Sustainable Communities and Climate Protection Act*, California Air Resources Board, November 2018[3] (Progress Report).

[3] https://ww2.arb.ca.gov/resources/documents/tracking-progress

- *California Air Resources Board Improved Program Measurement Would Help California Work More Strategically to Meet Its Climate Change Goals*, Auditor of the State of California, February 2021[4] (Audit Report).

The Progress Report measures the effect of SB 375 revealing that VMT and GHG per capita increased in California between 2010 and 2016 and are trending upward. The Scoping Plan supports two key observations that are relevant to the findings in this EIR:

The Audit Report is a more recent assessment of California's Air Resources Board GHG reduction programs, which also found that VMT and its associated GHG emissions were trending upward through 2018. Per the Audit Report, the state is not on track to achieve 2030 GHG reduction goals, and emissions from transportation have not been declining as anticipated.

The monitoring of statewide VMT performance noted above indicates that the state needs to take further action to meet its own VMT and GHG reduction goals. Doing so would alleviate the need for further actions by local agencies. To date, the state has not increased the cost of driving, made driving less convenient, or reduced the barriers or constraints that prevent more efficient use of vehicles and greater use of transit, walking, and bicycling.

The City of Manteca can reduce future VMT generation through the TDM actions listed above, especially those related to increasing land use density and increasing multi-modal accessibility to key destinations. However, given the suburban land use context of the City combined with the City's limited ability to influence other measures that would have the largest effect on VMT (such as implementation of a VMT tax or an increase in the fuel tax), the effectiveness of these TDM measures cannot be guaranteed to reduce the project VMT or total VMT impacts to a less-than-significant level. Therefore, the proposed project's VMT impact would be **significant and unavoidable**.

In addition to transportation impacts, VMT is one of the many key inputs in quantifying other environmental impacts related to air quality, greenhouse gases, and energy. Analysis and mitigation measures related to each of these topics are discussed in a dedicated chapter in this EIR.

[4] http://auditor.ca.gov/pdfs/reports/2020-114.pdf

4. Intersection Operations Analysis Methodology

This section describes the methods used to analyze the study intersections and to develop cumulative traffic forecasts.

4.1 Intersection Analysis

Study intersections were analyzed using procedures and methodologies contained in the *Highway Capacity Manual – 6th Edition* (Transportation Research Board, 2016). These methodologies were applied using Synchro 11 software which considers traffic volumes, lane configurations, signal timings, signal coordination, and other pertinent parameters of intersection operations.

Study intersections were analyzed using the concept of Level of Service (LOS). LOS is a qualitative measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions. For signalized intersections, roundabouts and all way stop control intersections, LOS is based on the average delay experienced by all vehicles passing through the intersection. For side-street stop-controlled intersections, the delay and LOS for the overall intersection is reported along with the delay for the worst-case movement. **Table 4** displays the delay range associated with each LOS category for signalized and unsignalized intersections.

As previously noted, level of service (LOS) may no longer be used to identify significant transportation impacts in CEQA documents for land use projects. However, this analysis includes a LOS analysis to determine if the proposed project would result in deficient intersection operations per the City of Manteca standards. Policy C-P-2 of the 2023 General Plan strives for LOS D or better while LOS E or worse is considered deficient.

In light of SB 743 and as described in the *Caltrans VMT-Focused Transportation Impact Study Guide* (May 2020), Caltrans has transitioned away from requesting LOS or other vehicle operations analyses of land use projects. Instead, Caltrans review of land use projects and plans is focused on a VMT metric, consistent with changes to the CEQA Guidelines resulting from SB 743. Still, based on LOS standards from previous work on State Route 99 and Interstate 5, a threshold of LOS D or better is also applied to ramp terminal intersections.

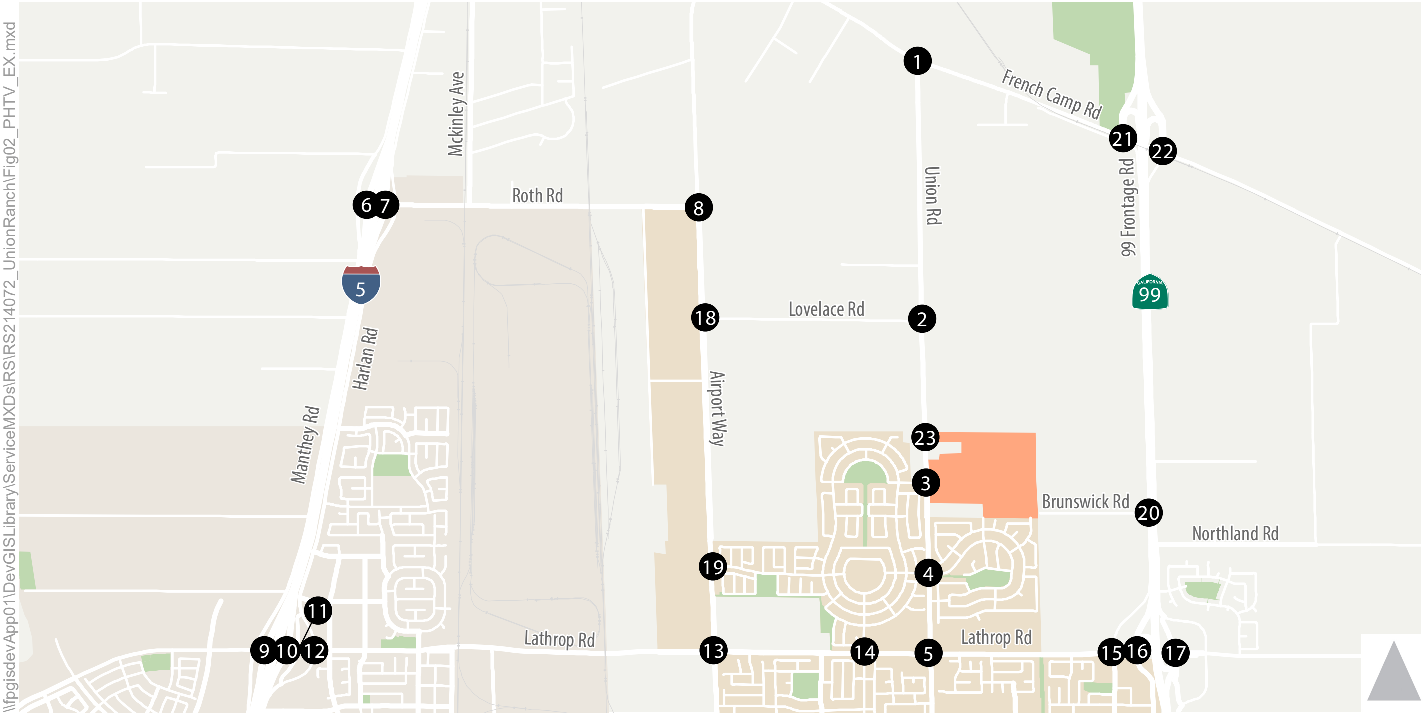
Table 4: Intersection Level of Service (LOS) Criteria			
LOS	**Description (for Signalized Intersections)**	**Average Delay (Seconds/Vehicle) at Signalized Intersections**	**Average Delay (Seconds/Vehicle) at Unsignalized Intersections**
A	Operations with very low delay occurring with favorable traffic signal progression and/or short cycle lengths.	< 10.0	< 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0	> 10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0	> 15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0	> 25.0 to 35.0
E	Operations with high delay values indicating poor progression, and long cycle lengths. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55.0 to 80.0	> 35.0 to 50.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0	> 50.0
Note: LOS = level of service; V/C ratio = volume-to-capacity ratio Source: Transportation Research Board, 2016			

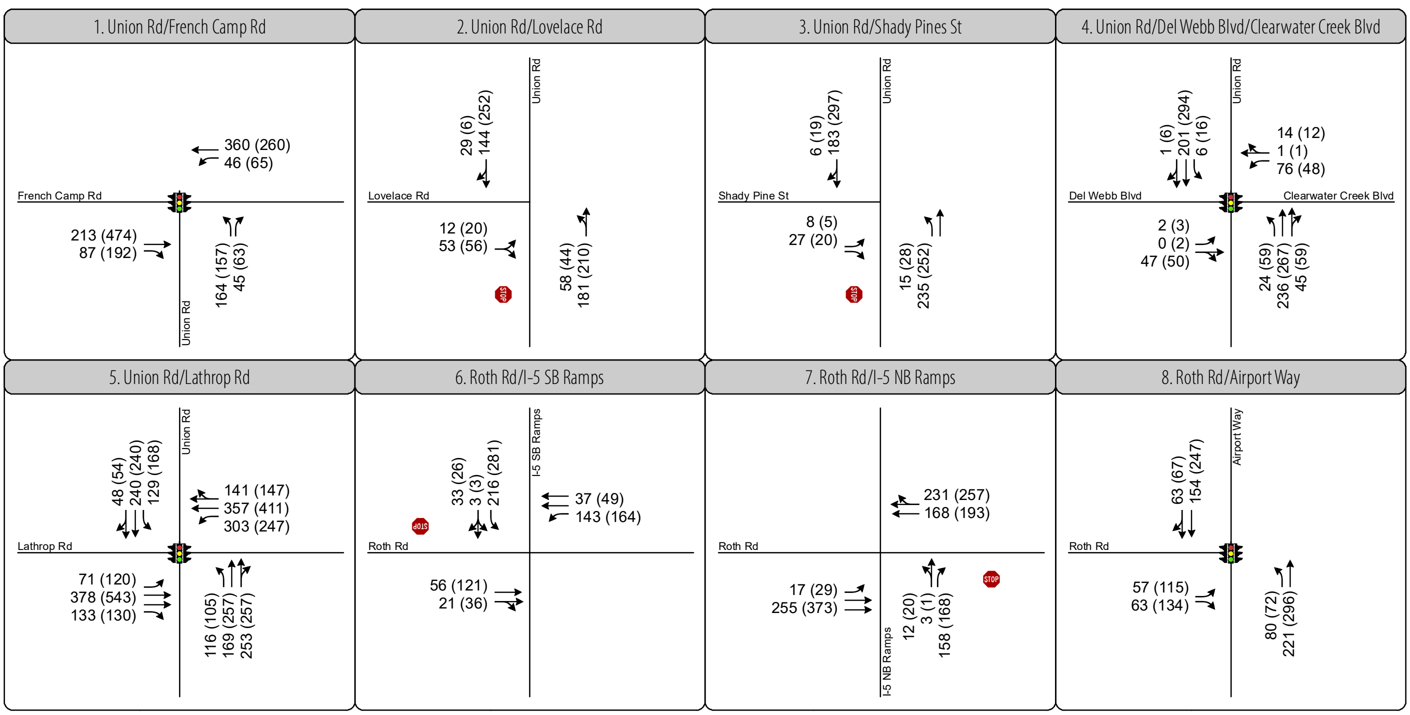
4.2 Data Collection

Traffic count data was collected in fall 2021, when school was in session, and weather condition was dry. Intersection turning movement counts were conducted during the AM (7:00 to 9:00) and PM (4:00 to 6:00) peak periods. **Figures 2A through 2C** display the existing intersection turning movement counts at the study intersections.

4.3 Travel Demand Forecasting

The City of Manteca, Lathrop, and Ripon TFM, as described in Section 2.2, was used to develop intersection turning movement forecasts and project trip distribution for Existing Plus Project and Cumulative Plus Project Conditions.





Turn Lane

AM (PM) Peak Hour Traffic Volume

Traffic Signal

Stop Sign

Study Intersection

Project Area

Lathrop City Limits

Manteca City Limits

Figure 2a

Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions

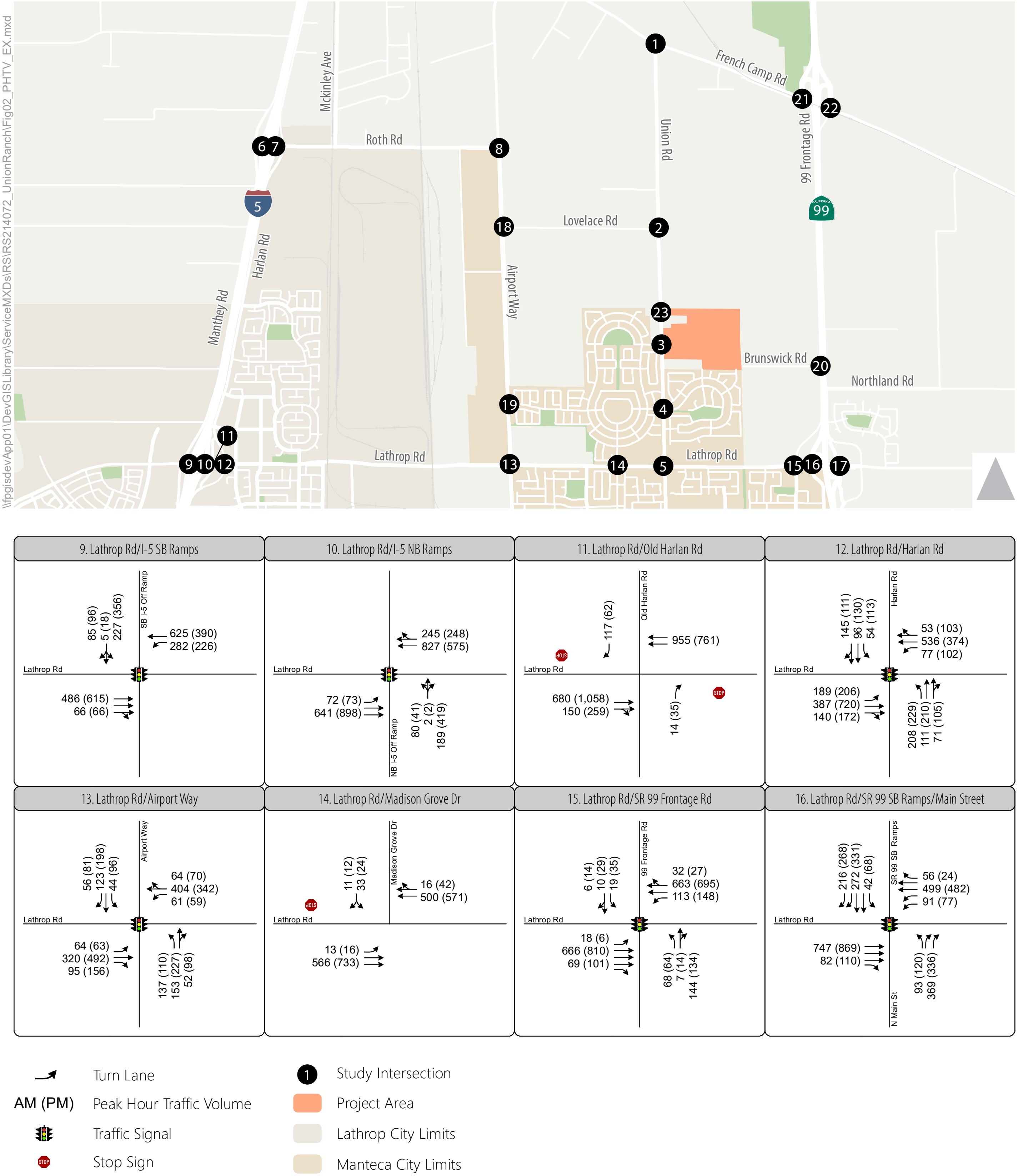
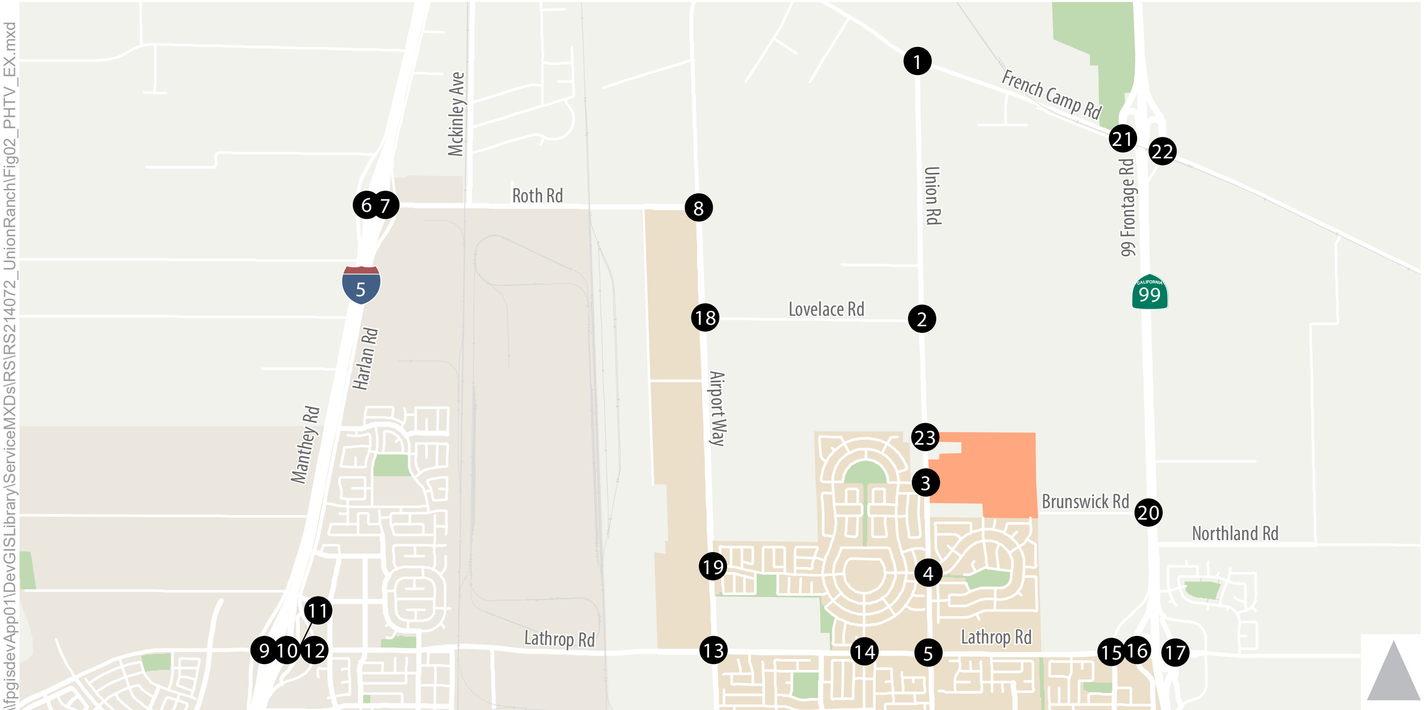
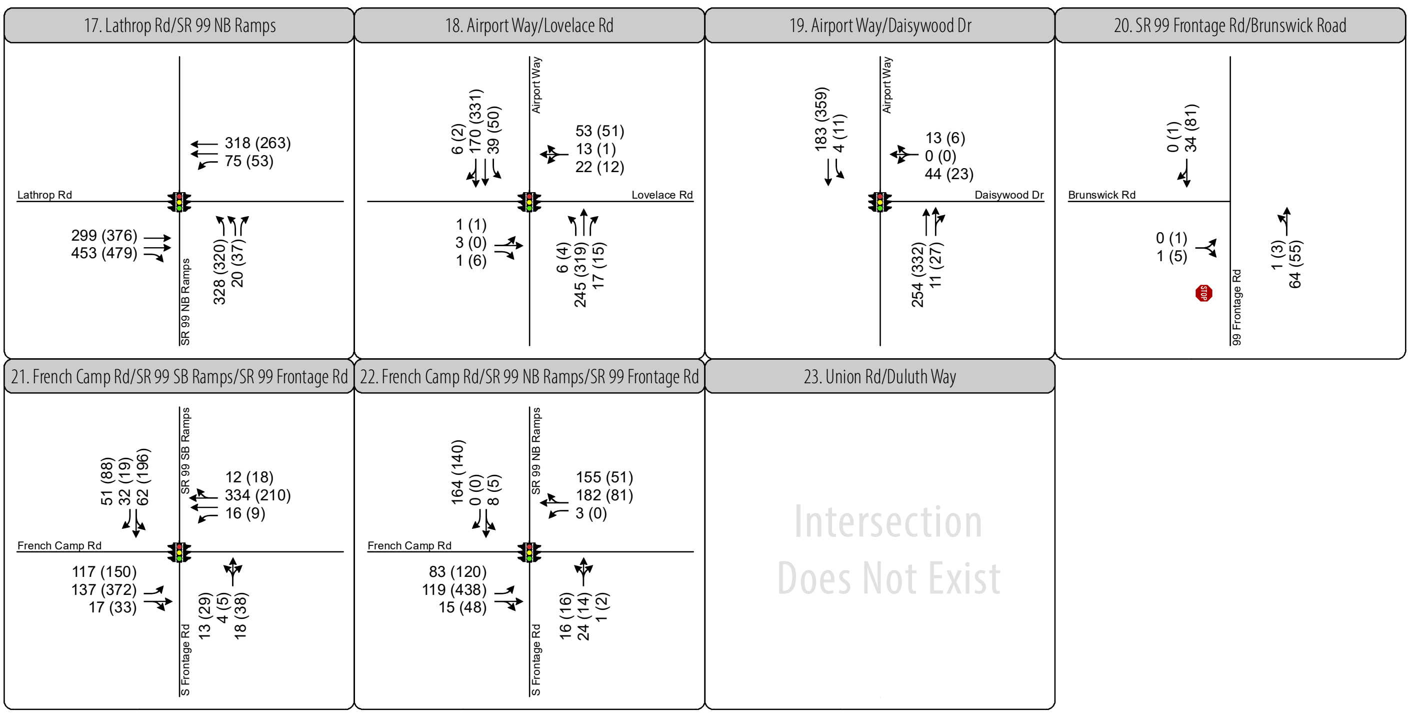


Figure 2b

Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions

\\fpgisdevApp01\DevGIS\Library\ServiceMXDs\RS\RS214072_UnionRanch\Fig02_PHTV_EX.mxd





Turn Lane
AM (PM) Peak Hour Traffic Volume
Traffic Signal
Stop Sign
Study Intersection
Project Area
Lathrop City Limits
Manteca City Limits

Figure 2c

Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions

The Base Year and Cumulative Year 2040 TFM was updated to detail out the street system in and near the Project site. The Base Year Plus Project and Cumulative Plus Project scenarios of the model incorporate the proposed residential developments.

The traffic forecasting adjustment procedure known as the "difference method" was used to develop Cumulative Year (2040) AM and PM Peak Hour traffic forecasts. For a given intersection, this forecasting procedure is calculated as follows for every movement at the study intersections:

Cumulative Year Forecast = *Existing Volume + (Cumulative Year TFM Volume – Base Year TFM Volume)*

In addition to developing intersection turning movement forecasts, the Base Year and Cumulative Year scenarios were used to develop trip distribution for Existing Plus Project and Cumulative Plus Project Conditions.

5. Existing Conditions

This chapter presents the existing bicycle, pedestrian, and transit facilities as well as intersection operations under Existing Conditions.

5.1 Existing Bicycle and Pedestrian Facilities

The City of Manteca Active Transportation Plan (adopted September 1, 2020) defines the following bicycle facility types:

Class I Bikeway: Bike Path

Bike paths, often referred to as shared-use paths or trails, are off-street facilities that provide exclusive use for non-motorized travel, including bicyclists and pedestrians. Bike paths have minimal cross flow with motorists and are typically located along landscaped corridors.

Class II Bikeway: Bike Lane

Class II bike lanes are on-street facilities that use striping, stencils, and signage to denote preferential or exclusive use by bicyclists. On-street bike lanes are located adjacent to motor vehicle traffic.

Class III Bikeway: Bike Route

Class III bike routes are streets with signage and optional pavement markings where bicyclists travel on the shoulder or share a lane with motor vehicles. Class III bike routes are utilized on low-speed and low-volume streets to connect bike lanes or paths along corridors that do not provide enough space for dedicated lanes.

Class III Bikeway: Bicycle Boulevard

Class III bicycle boulevards are similar to Class III bike routes, in that they are primarily utilized on low-speed and low-volume streets, and can close important gaps in the bicycle network where there may be insufficient space for dedicated lanes. Bicycle boulevards provide further enhancements to bike routes to encourage slow speeds and discourage non-local vehicle traffic via traffic diverters, chicanes, traffic circles, and/or speed tables.

Class IV Bikeway: Separated Bikeway

Class IV separated bikeways, commonly known as cycle tracks, are physically separated bicycle facilities that are distinct from the sidewalk and designed for exclusive use by bicyclists. They are located within the street right-of-way, but provide comfort similar to Class I bike paths.

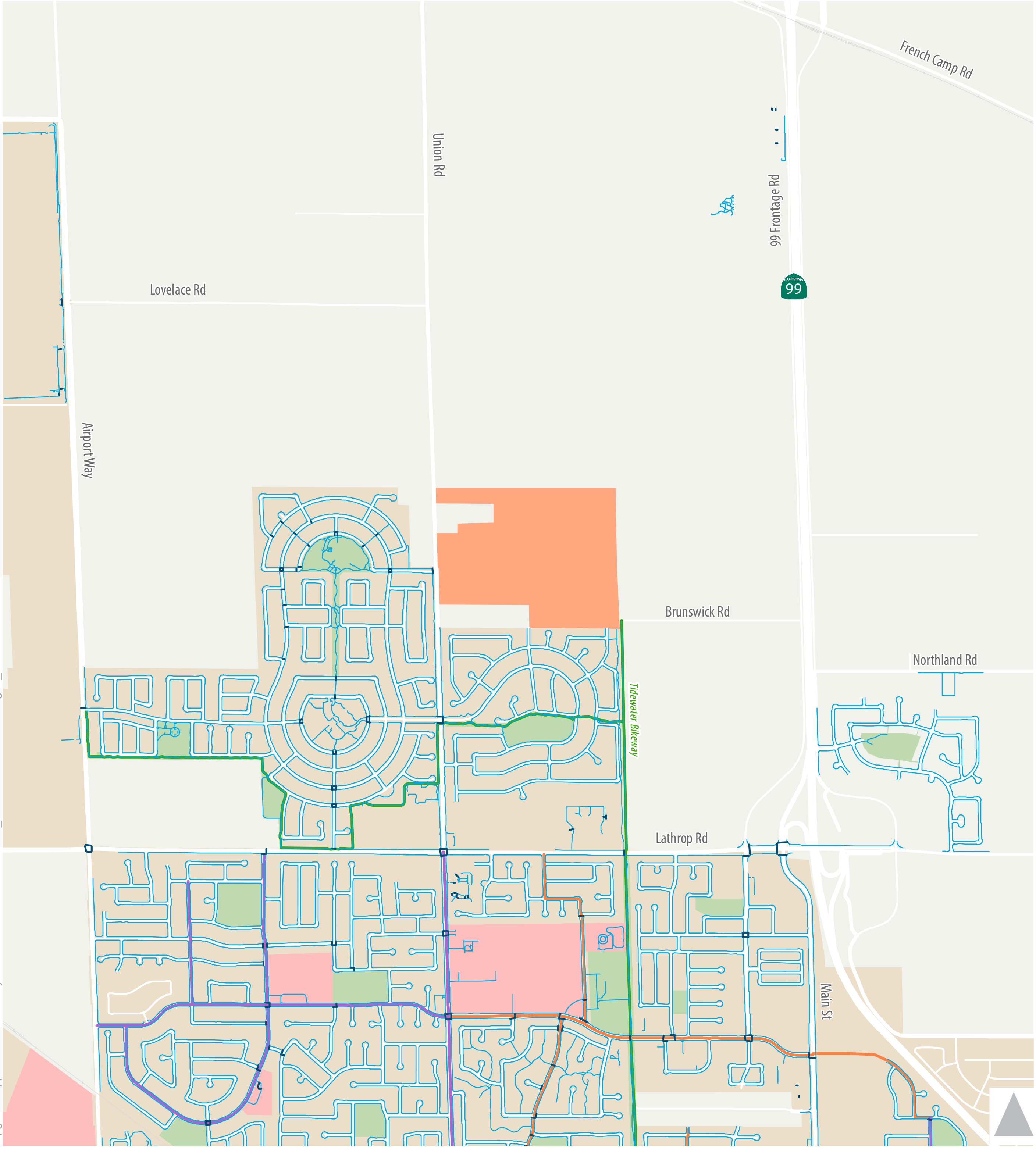
Figure 3 presents the existing bicycle and pedestrian network in the study area. As displayed, sidewalks are present along Union Road south of Shady Pines Street, adjacent to residential subdivisions and along internal roadways within those subdivisions. The Tidewater Bikeway, a north-south Class I bike path that runs through residential areas between Union Road and SR 99, terminates just south of the Development Area. An east-west Class I bicycle and pedestrian path runs through the residential subdivision south of the Development Area and connects with the Tidewater Bikeway.

5.2 Existing Transit Facilities

Figure 4 presents the existing transit network in the study area. Manteca Transit operates a fixed-route and Dial-a-Ride bus service with stops throughout the City. The nearest bus stop is the Route 3 stop located at the intersection of Union Road and Lathrop Road, less than one mile from the Development Area. Route 3 provides weekday fixed route service. In addition to Manteca Transit, the San Joaquin Regional Transportation District provides both weekday and weekend service to the City.

5.3 Existing Intersection Operations

Table 5 displays the existing AM and PM peak hour operations at the study intersections. Technical calculations are displayed in **Appendix A**. As displayed, all intersections operate acceptably at LOS A through D during both the AM and PM peak hour.

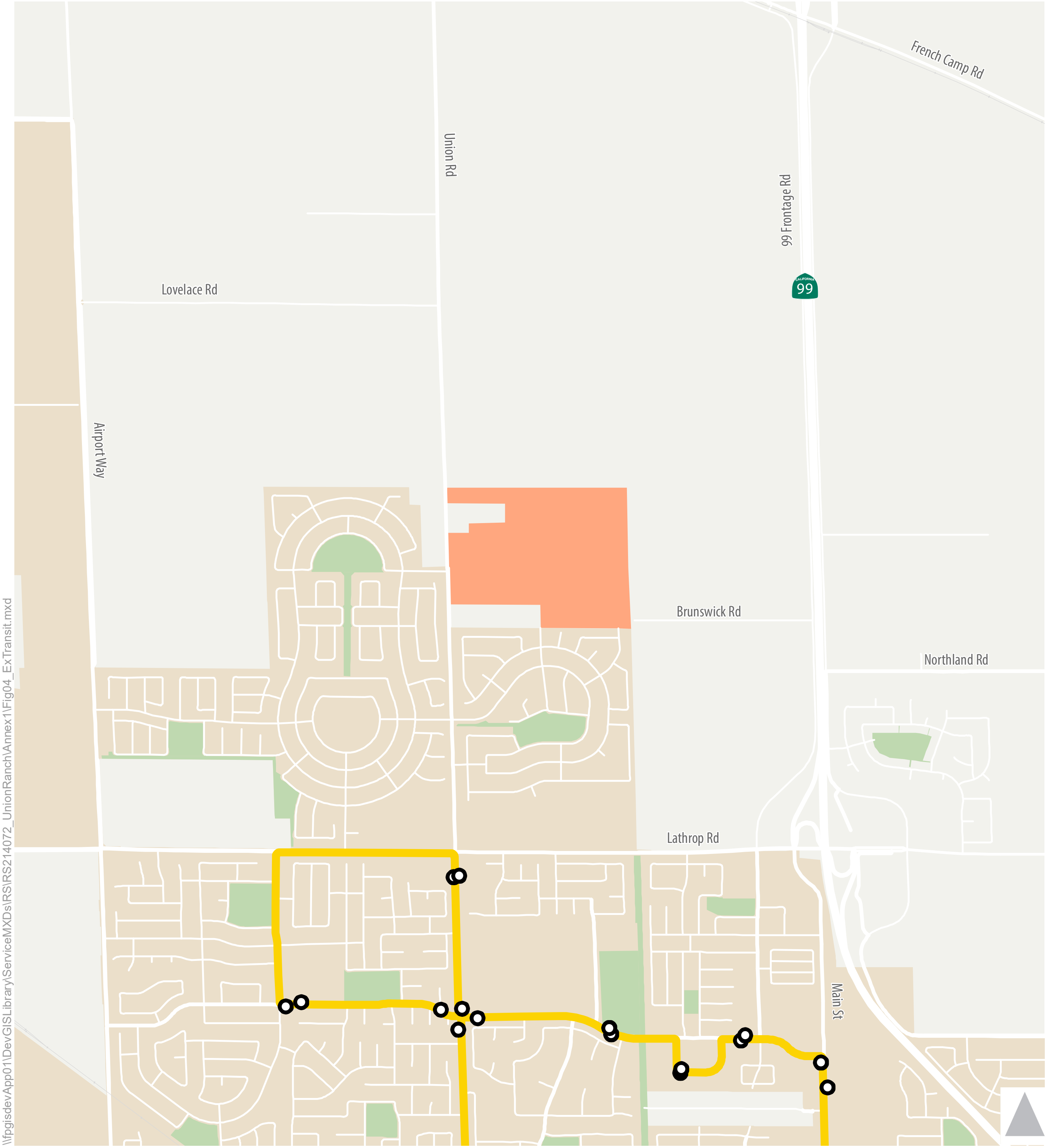


\\fgisdevApp01\DevGISLibrary\ServiceMXDs\RS\RS214072_UnionRanch\Annex1\Fig03_ExBikePed.mxd

- Class I Shared-Use Path
- Class II Bike Lane
- Class III Bike Route
- Crosswalk
- Sidewalk
- Project Area
- School
- Park
- Manteca City Limits

Figure 3

Existing Bicycle and Pedestrian Facilities



Manteca Transit

Route 3

Bus Stop

Project Area

Manteca City Limits

Figure 4

Existing Transit Facilities

Table 5: Intersection Operations – Existing Conditions					
Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS
1. Union Road/French Camp Road	Signal	13.0	B	15.1	B
2. Union Road/Lovelace Road	SSSC	2.4 (10.4)	A (B)	2.1 (11.9)	A (B)
3. Union Road/Shady Pines Street	SSSC	1 (12.3)	A (B)	<1 (14.2)	A (B)
4. Union Road/Del Webb Boulevard/Clearwater Creek Boulevard	Signal	8.6	A	10.2	B
5. Union Road/Lathrop Road	Signal	24.0	C	26.6	C
6. Roth Road/I-5 SB Ramps	SSSC	10.5 (18.5)	B (C)	10.9 (22.1)	B (C)
7. Roth Road/I-5 NB Ramps	SSSC	3.4 (13.1)	A (B)	3.2 (15.7)	A (C)
8. Roth Road/Airport Way	Signal	12.0	B	12.0	B
9. Lathrop Road/I-5 SB Ramps	Signal	14.4	B	17.8	B
10. Lathrop Road/I-5 NB Ramps	Signal	10.2	B	17.4	B
11. Lathrop Road/Old Harlan Road	SSSC	1.0 (15.5)	A (C)	<1 (16.3)	A (C)
12. Lathrop Road/Harlan Road	Signal	34.4	C	37.7	D
13. Lathrop Road/Airport Way	Signal	26.6	C	26.8	C
14. Lathrop Road/Madison Grove Drive	SSSC	<1 (19.9)	A (C)	<1 (19.7)	A (C)
15. Lathrop Road/SR 99 Frontage Road	Signal	11.3	B	11.8	B
16. Lathrop Road/SR 99 SB Ramps/Main Street	Signal	19.7	B	22.7	C
17. Lathrop Road/SR 99 NB Ramps	Signal	10.1	B	9.9	A
18. Airport Way/Lovelace Road	Signal	9.7	A	7.8	A
19. Airport Way/Daisywood Drive	Signal	6.3	A	5.8	A
20. SR 99 Frontage Road/Brunswick Road	SSSC	<1 (8.6)	A (A)	<1 (8.9)	A (A)
21. French Camp Road/SR 99 SB Ramps/SR 99 Frontage Road	Signal	22.5	C	28.1	C
22. French Camp Road/SR 99 NB Ramps/SR 99 Frontage Road	Signal	17.9	B	17.3	B

Notes:
SSSC = Side-Street Stop Control; LOS = Level of Service
[1] For signalized intersections and all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For side street stop-controlled intersections, intersection delay is reported in seconds per vehicle for the overall intersection and (worst-case) movement. Intersection delay is calculated based on the procedures and methodology contained in the Highway Capacity Manual 6th Edition (Transportation Research Board, 2016).
Source: Fehr & Peers, 2024

6. Existing Plus Project Conditions

This chapter presents the results of intersection operations analysis under Existing Plus Project Conditions.

6.1 Project Trip Generation

Project trips generated by the Development Area were estimated using trip rates published in the *Trip Generation Manual 11th Edition* (Institute of Transportation Engineers, 2021). **Table 6** displays the estimated number of daily, AM peak hour, and PM peak hour vehicle trips for the proposed project.

Table 6: Project Trip Generation

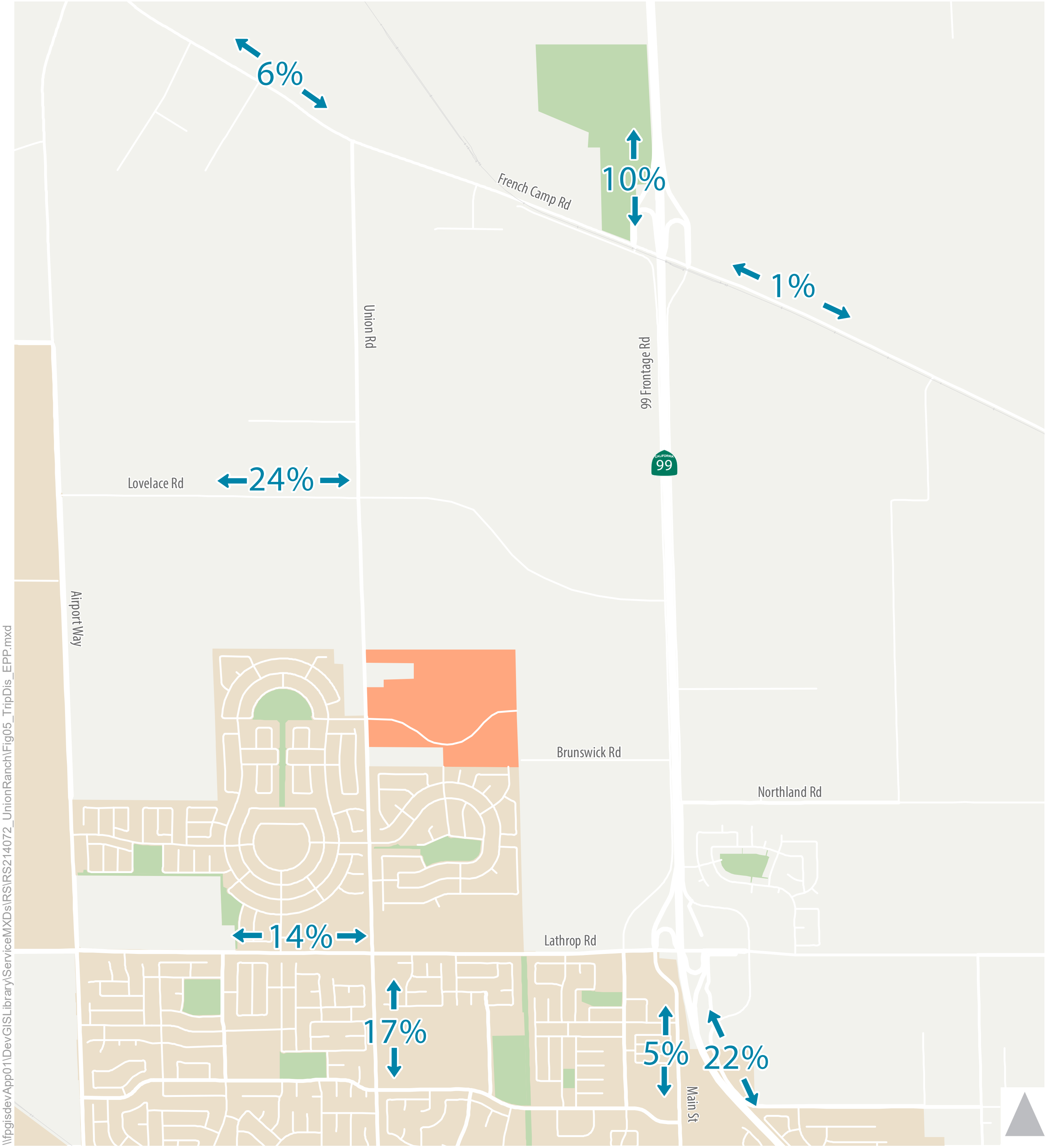
Land Use	Quantity	Daily	AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Single Family Detached Housing (ITE 210)	465 Dwelling Units	4,385	81	245	326	275	162	437

Notes:
Trip generation is based on trip rates published in *Trip Generation Manuel 11th Edition* (Institute of Transportation Engineers, 2021).
Source: Fehr & Peers, 2024

6.2 Project Trip Distribution

Project trips were distributed throughout the study area based the location of project access roads, existing directional patterns, and output from the base year TFM. **Figure 5** presents the trip distribution under Existing Plus Project Conditions. **Figures 6A through 6C** display the traffic volumes under Existing Plus Project Conditions.

Figure 5 – Existing Plus Project Trip Distribution



XX% Trip Distribution Percentage

Figure 5

Existing Plus Project Trip Distribution

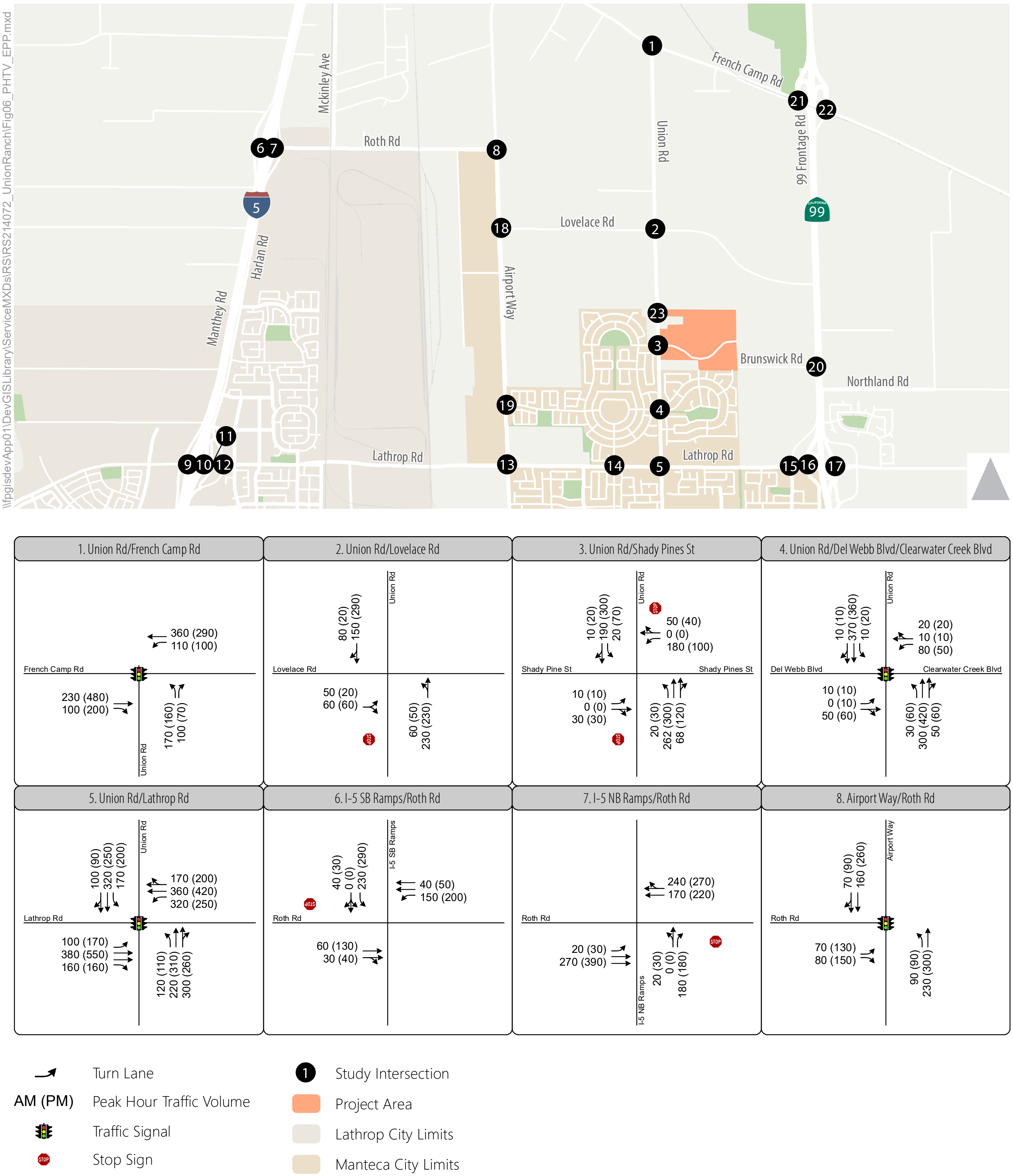
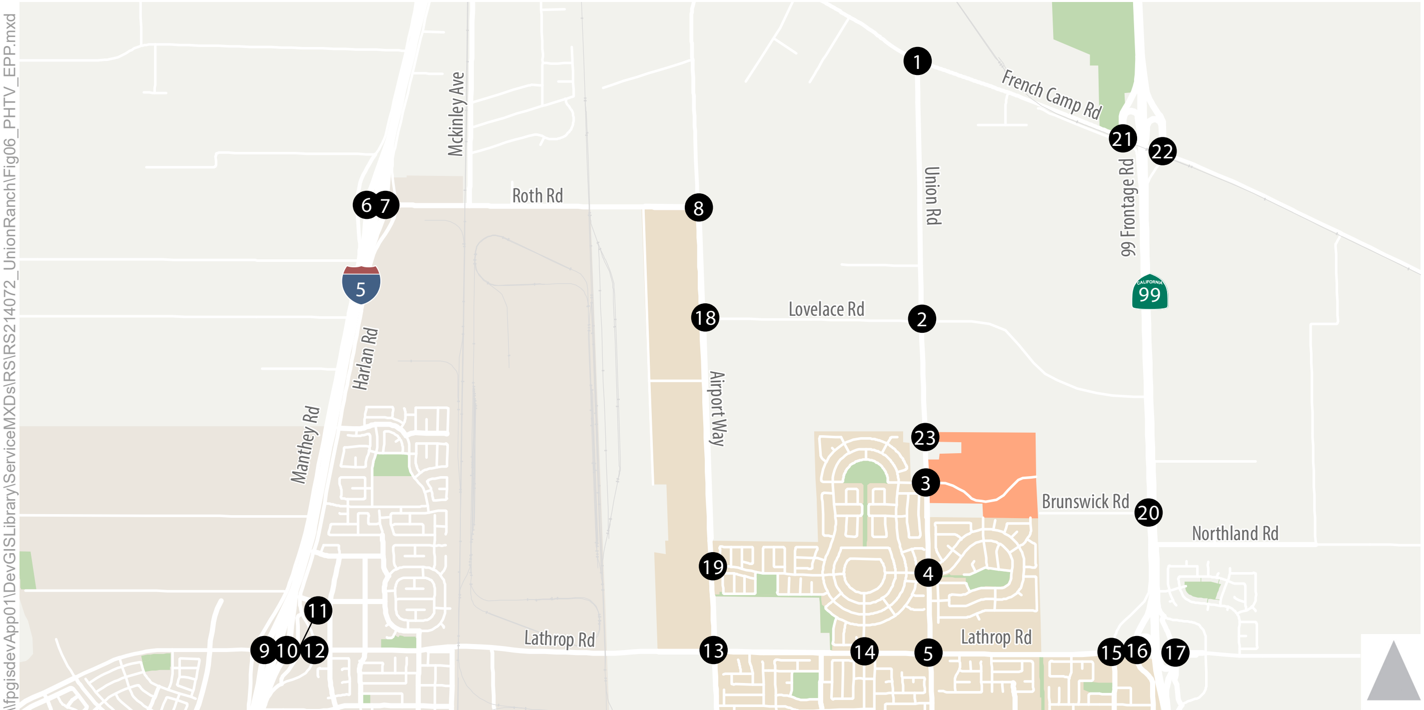
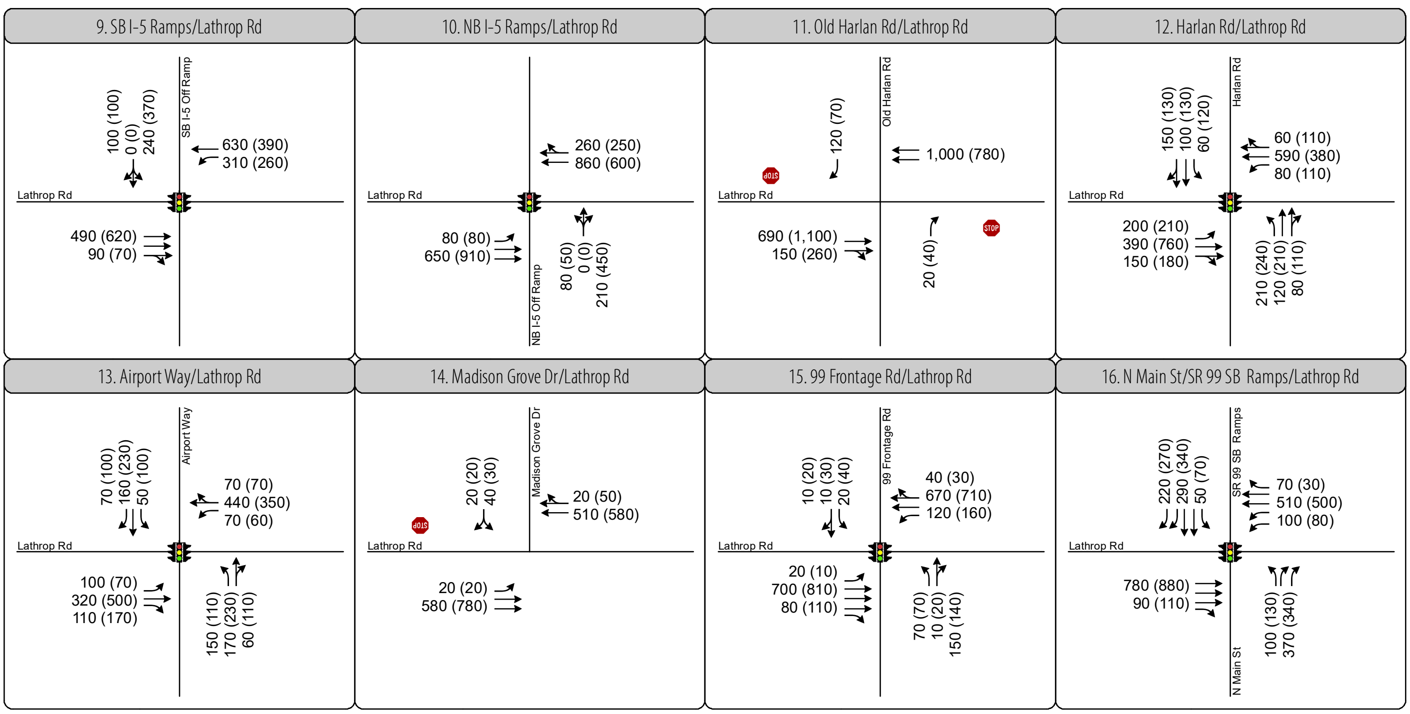


Figure 6a

Peak Hour Traffic Volumes and Lane Configurations - Existing Plus Project Conditions

\\fpgisdevApp01\DevGIS\Library\ServiceMXDs\RS\RS214072_UnionRanch\Fig06_PHTV_EPP.mxd

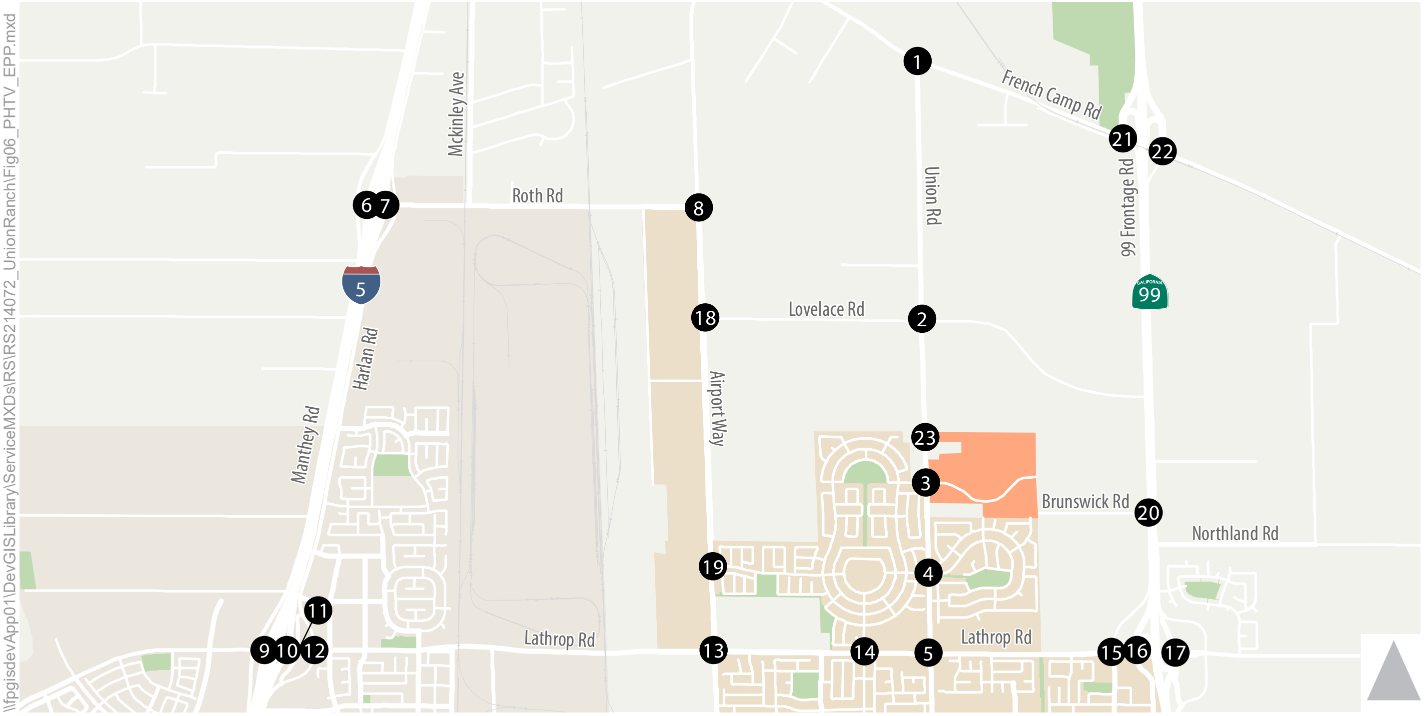


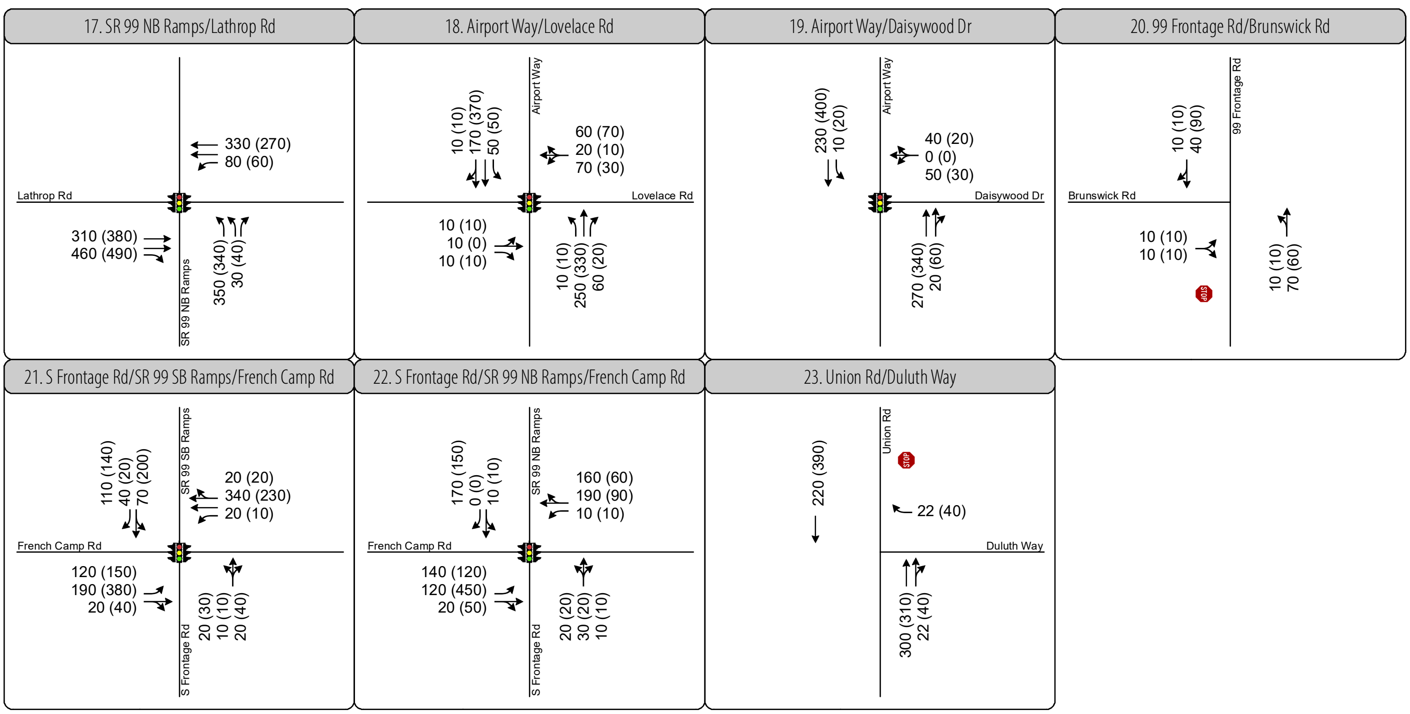


Turn Lane
AM (PM) Peak Hour Traffic Volume
Traffic Signal
Stop Sign
Study Intersection
Project Area
Lathrop City Limits
Manteca City Limits

Figure 6b

Peak Hour Traffic Volumes and Lane Configurations - Existing Plus Project Conditions





Turn Lane
AM (PM) Peak Hour Traffic Volume
Traffic Signal
Stop Sign
Study Intersection
Project Area
Lathrop City Limits
Manteca City Limits

Figure 6c

Peak Hour Traffic Volumes and Lane Configurations - Existing Plus Project Conditions

6.3 Existing Plus Project Intersection Operations

As displayed on **Figure 7**, access to the proposed project would be provided by a full access intersection located at Union Road/Shady Pines Street and a right-in/right-out driveway at Union Road/Duluth Way. The following improvements were assumed under Existing Plus Project Conditions based on the Tentative Subdivision Map Plans.

- **Union Road** – The existing 3-lane Union Road between Shady Pines Street and the southern Project Site boundary will be widened to 4-lanes. The widening would add a northbound lane and preserve the existing median and turn lanes.
- **Union Road/Shady Pines Street** – The existing 3-way, side-street stop-controlled intersection would be modified to a four-way intersection. The southbound and westbound approach would consist of a left turn pocket and shared through/right turn lane. The northbound approach would consist of a left-turn pocket, one through lane, and one shared through/right turn lane. No modifications are proposed to the eastbound approach. As discussed below, this intersection would be signalized.
- **Union Road/Duluth Way** – This new 3-way, side-street stop-controlled intersection would be constructed with a through lane and a shared through/right turn lane on the northbound approach, a through lane on the southbound approach, and a right turn lane on the westbound approach.

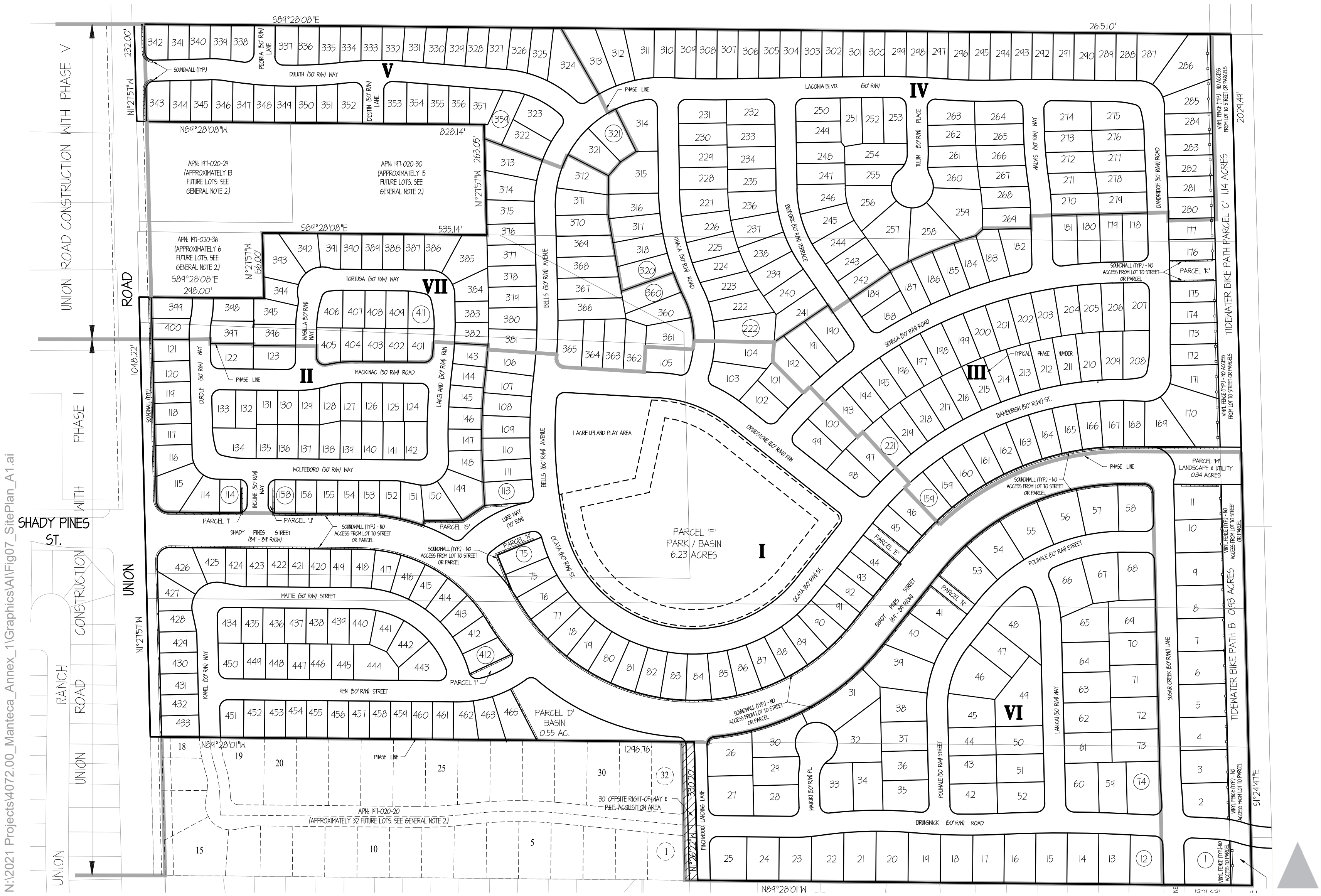


Figure 7

Site Plan

Table 7 displays the AM and PM peak hour intersection operations under Existing Plus Project Conditions. Technical calculations are displayed in **Appendix A**.

Table 7: Intersection Operations – Existing Plus Project Conditions									
Intersection	Control Type	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
1. Union Road/French Camp Road	Signal	13.0	B	15.1	B	14.7	B	16.6	B
2. Union Road/Lovelace Road	SSSC	2.4 (10.4)	A (B)	2.1 (11.9)	A (B)	3.1 (13.0)	A (B)	2.1 (12.7)	A (B)
3. Union Road/Shady Pines Street	SSSC	1 (12.3)	A (B)	<1 (14.2)	A (B)	7.9 (31.3)	A (D)	**6.4 (49.4)**	**A (E)**
4. Union Road/Del Webb Boulevard/Clearwater Creek Boulevard	Signal	8.6	A	10.2	B	9.7	A	11.0	B
5. Union Road/Lathrop Road	Signal	24.0	C	26.6	C	29.7	C	30.8	C
6. Roth Road/I-5 SB Ramps	SSSC	10.5 (18.5)	B (C)	10.9 (22.1)	B (C)	11 (20.2)	B (C)	13.2 (29.9)	B (D)
7. Roth Road/I-5 NB Ramps	SSSC	3.4 (13.1)	A (B)	3.2 (15.7)	A (C)	3.8 (13.5)	A (B)	3.3 (15.5)	A (C)
8. Roth Road/Airport Way	Signal	12.0	B	12.0	B	12.4	B	12.6	B
9. Lathrop Road/I-5 SB Ramps	Signal	14.4	B	17.8	B	15.7	B	22.1	C
10. Lathrop Road/I-5 NB Ramps	Signal	10.2	B	17.4	B	10.9	B	23.4	C
11. Lathrop Road/Old Harlan Road	SSSC	1.0 (15.5)	A (C)	<1 (16.3)	A (C)	1.1 (16.2)	A (C)	<1 (17.0)	A (C)
12. Lathrop Road/Harlan Road	Signal	34.4	C	37.7	D	37.4	D	45.1	D
13. Lathrop Road/Airport Way	Signal	26.6	C	26.8	C	31.3	C	28.1	C
14. Lathrop Road/Madison Grove Drive	SSSC	<1 (19.9)	A (C)	<1 (19.7)	A (C)	1.2 (21.1)	A (C)	<1 (20.8)	A (C)
15. Lathrop Road/SR 99 Frontage Road	Signal	11.3	B	11.8	B	11.5	B	14.3	B

Table 7: Intersection Operations – Existing Plus Project Conditions									
Intersection	Control Type	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
16. Lathrop Road/SR 99 SB Ramps/Main Street	Signal	19.7	B	22.7	C	21.0	C	22.7	C
17. Lathrop Road/SR 99 NB Ramps	Signal	10.1	B	9.9	A	10.2	B	10.3	B
18. Airport Way/Lovelace Road	Signal	9.7	A	7.8	A	10.8	B	8.6	A
19. Airport Way/Daisywood Drive	Signal	6.3	A	5.8	A	6.6	A	6.1	A
20. SR 99 Frontage Road/Brunswick Road	SSSC	<1 (8.6)	A (A)	<1 (8.9)	A (A)	1.7 (9.1)	A (A)	1.4 (9.3)	A (A)
21. French Camp Road/SR 99 SB Ramps/SR 99 Frontage Road	Signal	22.5	C	28.1	C	23.8	C	28.3	C
22. French Camp Road/SR 99 NB Ramps/SR 99 Frontage Road	Signal	17.9	B	17.3	B	20.2	C	21.6	C
23. Union Road/Duluth Way	SSSC	Intersection does not exist under this scenario				<1 (9.5)	A (A)	<1 (10.7)	A (B)

Notes:
Bold indicates deficient operations.
SSSC = Side-Street Stop Control; LOS = Level of Service
[1] For signalized intersections and all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For side street stop-controlled intersections, intersection delay is reported in seconds per vehicle for the overall intersection and (worst-case) movement. Intersection delay is calculated based on the procedures and methodology contained in the Highway Capacity Manual 6th Edition (Transportation Research Board, 2016).
Source: Fehr & Peers, 2024

As displayed, with the addition of project trips, the Union Road/Shady Pines Street intersection would operate deficiently as side-street stop controlled intersections during the PM peak hour.

An AM and PM peak hour signal warrant analysis was completed to determine if traffic volumes under Existing Plus Project Conditions satisfy the warrant for installation of a traffic signal. Results of this analysis indicate that the Union Road/Shady Pines Street intersection does not satisfy the AM and PM peak hour warrant for installation of a traffic signal under Existing Plus Project Conditions. However, as part of the proposed project, Union Road will be widened to 2 lanes in the northbound direction. At the Union Road/Shady Pines Street intersection, the northbound approach will consist of a left turn pocket, one through lane, and one shared through/right turn lane. The widening of Union Road would increase safety risks for pedestrians crossing the intersection. With consideration to safety, it is recommended that this intersection be constructed as a signalized intersection. In addition, it is recommended that the southbound approach be modified to include a left-turn pocket that will provide storage for project traffic. All technical calculations related to signal warrant analysis are provided in **Appendix B**.

Table 8 displays the AM and PM peak hour intersection operations at the Union Road/Shady Pines Street intersection with installation of a traffic signal. As shown, the intersections would operate acceptably during both AM and PM peak hour. Technical calculations are displayed in **Appendix A**.

Table 8: Intersection Operations – Existing Plus Project Conditions Mitigation

Intersection	Control Type	Existing Plus Project Conditions				Existing Plus Project With Mitigation			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
3. Union Road/Shady Pines Street	Signal	7.9 (31.3)	A (D)	**6.4 (49.4)**	**A (E)**	18.2	B	15.0	B

Notes:
Bold indicates deficient operations.
LOS = Level of Service
[1] For signalized intersections and all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches. Intersection delay is calculated based on the procedures and methodology contained in the Highway Capacity Manual 6th Edition (Transportation Research Board, 2016).
Source: Fehr & Peers, 2024

Based on results of the intersection operations analysis, it is recommended that the following be included in the Conditions of Approval (COA) for the proposed project.

- **Traffic COA #1** – The developer shall install a traffic signal and implement intersection lane configuration improvements (i.e., add a southbound left turn pocket) at the Union Road/Shady Pines Street intersection. The design of the traffic signal and intersection improvements shall be reviewed and approved by the Director of Engineering. The developer shall pay for the total cost for the design and installation of the improvements as this intersection would provide direct access to the project site.

7. Cumulative Conditions Analysis

This chapter presents the results of intersection operations analysis under Cumulative Conditions. The analysis reflects long-term development in the City of Manteca and other nearby jurisdictions using the Interim General Plan Year 2040 TFM previously described.

The Cumulative Year analysis assumes the following improvements:

- **PFIP Improvements**: Intersection lane configurations, traffic controls, and roadway improvements identified in the City of Manteca PFIP were assumed to be constructed. This results in modifications at the following locations:
    - Widening of Union Road to 4 lanes between Shady Pines Street and Lovelace Road
    - Widening of Lovelace Road to 4 lanes between Airport Way and Union Road
    - Construction of 4-lane Lovelace Road between Union Road and SR 99 Frontage Road
    - Widening of Airport Way to 4 lanes between French Camp Road and Yosemite Avenue
    - Widening of Lathrop Road to 4 lanes between western city limit and London Avenue; between Arrowsmith Drive and SR 99 Frontage Road
    - Union Road/Lovelace Road expansion and signalization
    - Airport Way/Roth Road expansion and signal modification
    - Airport Way/Lathrop Road expansion and signal modification
    - Airport Way/Lovelace Road expansion and signal modification
    - Airport Way/Daisywood Road expansion and signal modification
- **City of Manteca General Plan Improvements**: planned future roadways identified in the draft proposed City of Manteca General Plan were assumed to be constructed. This results in modifications at the following locations:
    - Construction of 4-lane Roth Road east of Airport Way
- **SJCOG RTP/SCS Improvements**: Intersection lane configurations, traffic controls, and roadway improvements identified in the SJCOG RTP were assumed to be constructed. This results in modifications at the following locations:
    - Reconstruction of the I-5/Lathrop Road interchange. The design has not been formalized; therefore, we conservatively assumed the reconstruction would be an improved tight-diamond interchange that is similar to the existing configuration.
    - Widening of Roth Road to 5 lanes between Manthey Road and Harlan Road
    - Widening of Roth Road to 4 lanes between UPRR and Airport Way
    - I-5 Southbound Ramps/Roth Road expansion and signalization

- I-5 Northbound Ramps/Roth Road expansion and signalization
- Roth Road/Harlan Road expansion and signalization

7.1 Cumulative No Project Intersection Operations

The Interim General Plan Year 2040 TFM was used to develop Cumulative No Project forecasts. **Figures 8A through 8C** display AM and PM peak hour turning movements and lane configurations at the study intersections.

Table 9 displays the AM and PM peak hour intersection operations. Technical calculations are displayed in **Appendix A**.

Table 9: Intersection Operations – Cumulative No Project Conditions

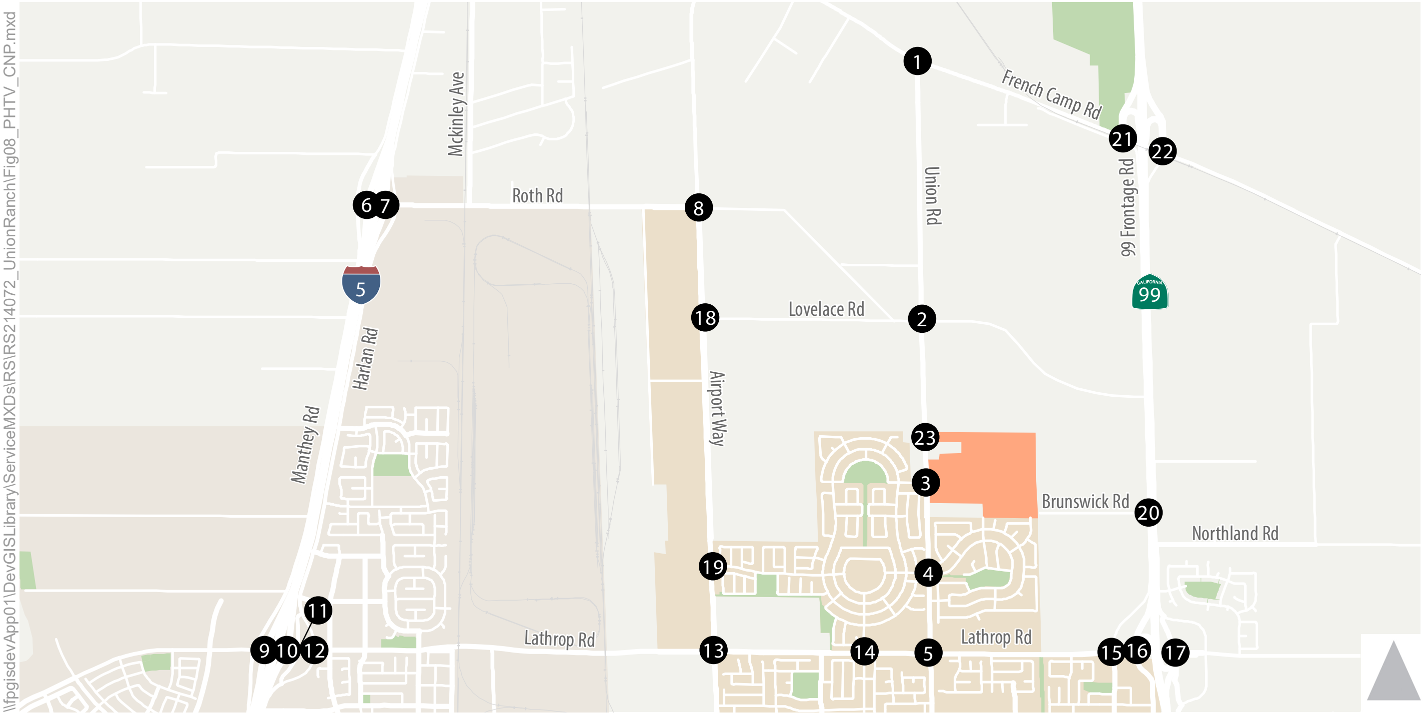
Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS
1. Union Road/French Camp Road	Signal	10.7	B	11.9	B
2. Union Road/Lovelace Road[2]	Signal	15.7	B	15.5	B
3. Union Road/Shady Pines Street[2]	SSSC	1.9 (20.0)	A (C)	1.9 (24.4)	A (C)
4. Union Road/Del Webb Boulevard/Clearwater Creek Boulevard	Signal	12.3	B	12.6	B
5. Union Road/Lathrop Road	Signal	**63.1**	**E**	**94.2**	**F**
6. Roth Road/I-5 SB Ramps[2]	Signal	11.8	B	21.3	C
7. Roth Road/I-5 NB Ramps[2]	Signal	6.9	A	7.8	A
8. Roth Road/Airport Way[2]	Signal	22.8	C	18.9	B
9. Lathrop Road/I-5 SB Ramps[2 3]	Signal	17.8	B	23.8	C
10. Lathrop Road/I-5 NB Ramps[2 3]	Signal	34.5	C	28.7	C
11. Lathrop Road/Old Harlan Road	SSSC	1.2 (29.2)	A (D)	<1 (28.8)	A (D)
12. Lathrop Road/Harlan Road	Signal	50.7	D	**66.3**	**E**
13. Lathrop Road/Airport Way[2]	Signal	31.0	C	36.4	D
14. Lathrop Road/Madison Grove Drive	SSSC	**36.8 (>300)**	**E (F)**	**41.4 (>300)**	**E (F)**
15. Lathrop Road/SR 99 Frontage Road	Signal	12.1	B	13.0	B
16. Lathrop Road/SR 99 SB Ramps/Main Street	Signal	47.8	D	**62.1**	**E**
17. Lathrop Road/SR 99 NB Ramps	Signal	11.2	B	11.1	B
18. Airport Way/Lovelace Road[2]	Signal	9.8	A	9.0	A
19. Airport Way/Daisywood Drive[2]	Signal	5.5	A	5.3	A
20. SR 99 Frontage Road/Brunswick Road	SSSC	1.3 (9.2)	A (A)	<1 (9.7)	A (A)

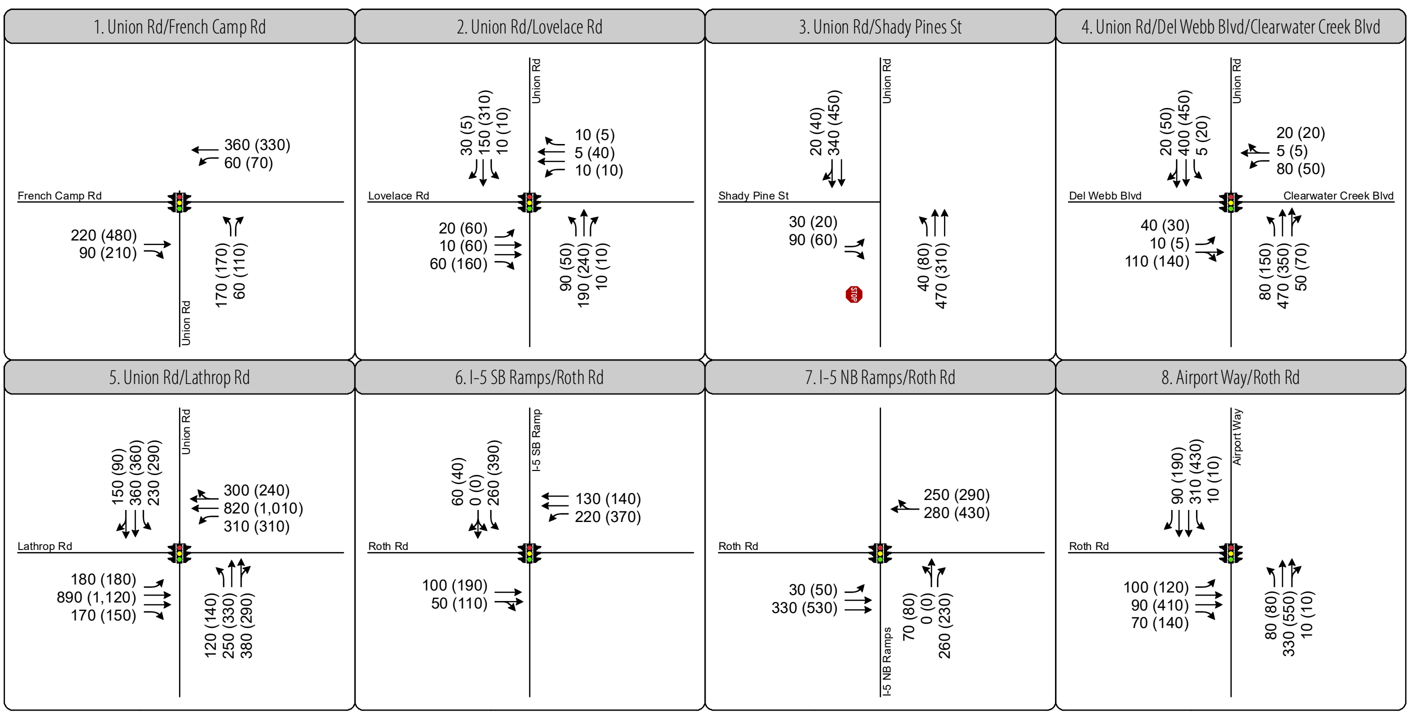
Table 9: Intersection Operations – Cumulative No Project Conditions					
Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS
21. French Camp Road/SR 99 SB Ramps/SR 99 Frontage Road	Signal	15.4	B	21.0	C
22. French Camp Road/SR 99 NB Ramps/SR 99 Frontage Road	Signal	14.0	B	10.4	B

Notes:
Bold indicates deficient operations.
SSSC = Side-Street Stop Control; LOS = Level of Service
[1] For signalized intersections, roundabouts, and all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For side street stop-controlled intersections, intersection delay is reported in seconds per vehicle for the overall intersection and (worst-case) movement. Intersection delay is calculated based on the procedures and methodology contained in the Highway Capacity Manual 6th Edition (Transportation Research Board, 2016).
[2] Intersection lane configuration and/or traffic control are different from Existing Conditions due to planned intersection and roadway improvements.
[3] The future interchange design has not been formalized. Delay and LOS are estimated using an improved tight-diamond interchange configuration and are subject to change.
Source: Fehr & Peers, 2024

Under Cumulative No Project Conditions, traffic associated with land use growth in the City of Manteca and surrounding areas contributes to the increase in traffic volumes along Lathrop Road. As displayed, the following three intersections would operate deficiently:

- Union Road/Lathrop Road would operate deficiently at LOS E during the AM peak hour and LOS F during the PM peak hour.
- Lathrop Road/Harlan Road would operate deficiently at LOS E during the PM peak hour.
- Lathrop Road/Madison Grove Drive would operate deficiently at LOS F during the AM and PM peak hour.

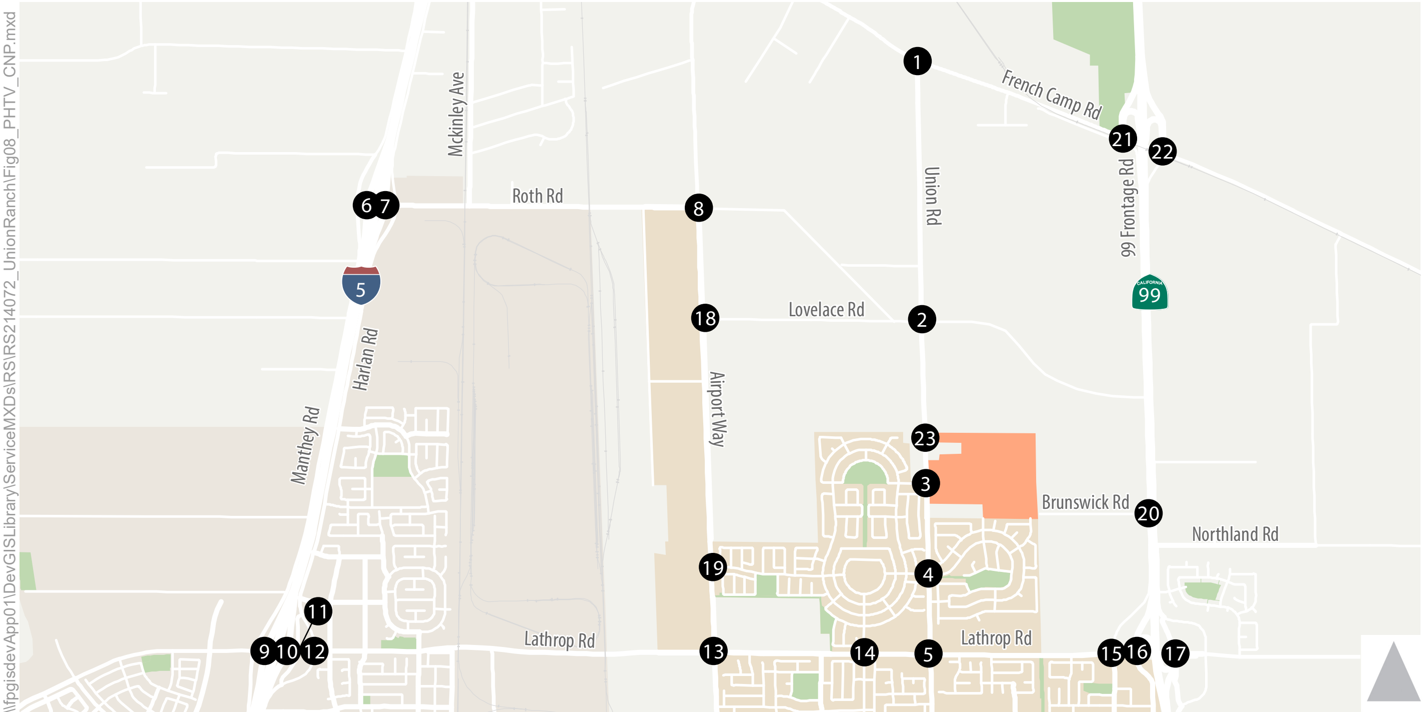


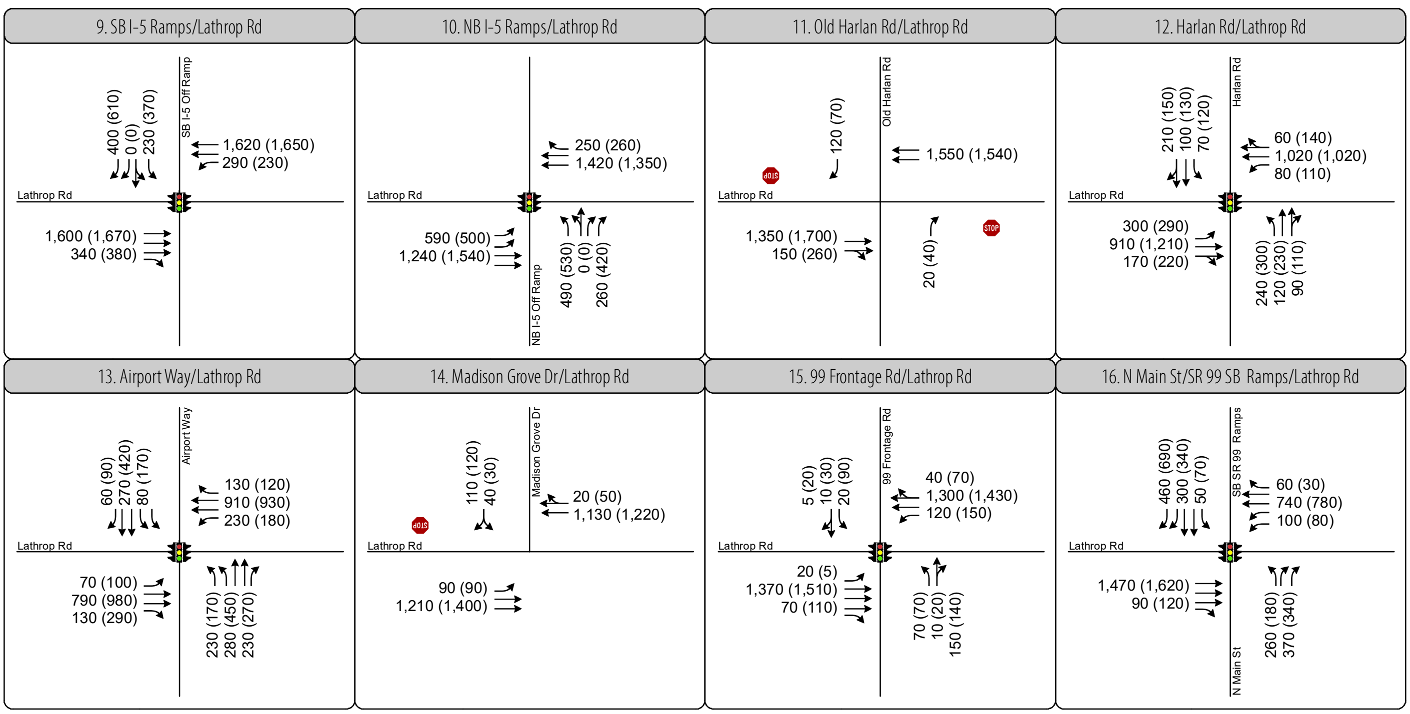


Turn Lane
AM (PM) Peak Hour Traffic Volume
Traffic Signal
Stop Sign
Study Intersection
Project Area
Lathrop City Limits
Manteca City Limits

Figure 8a

Peak Hour Traffic Volumes and Lane Configurations - Cumulative No Project Conditions

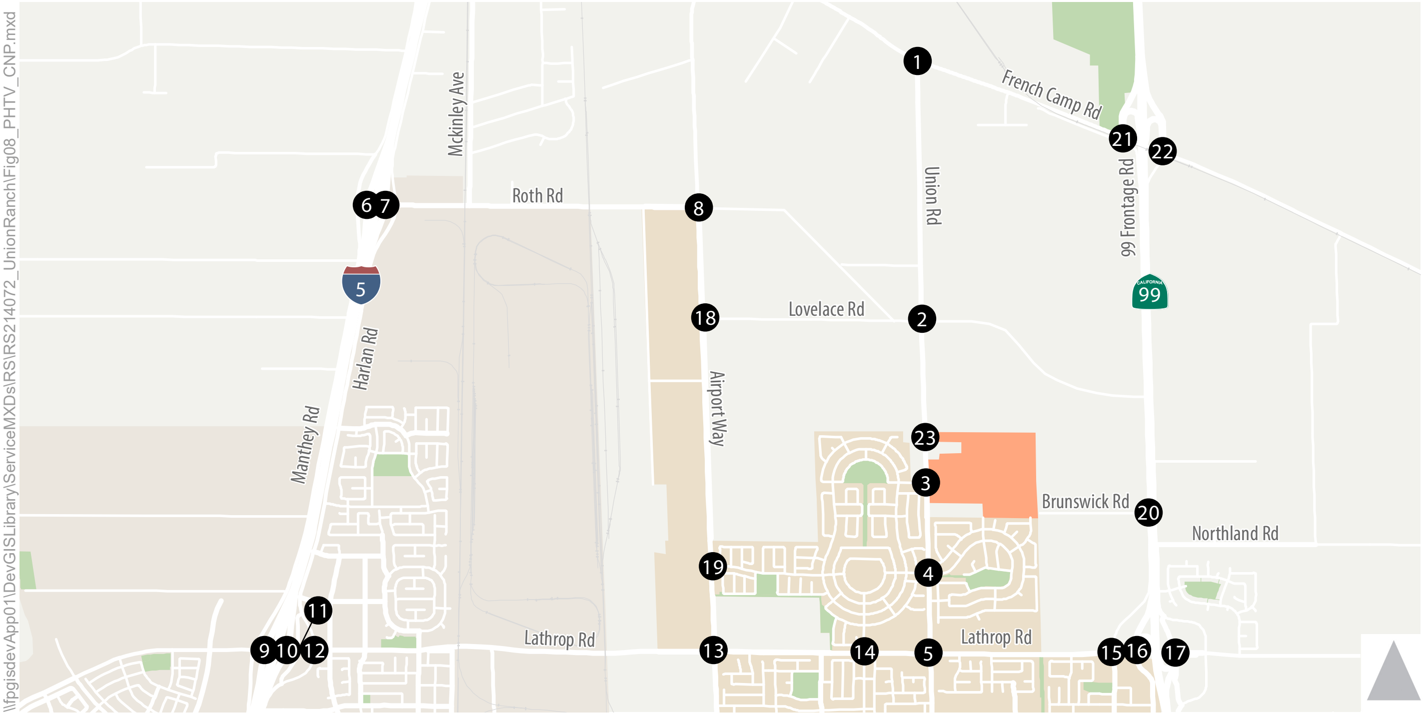


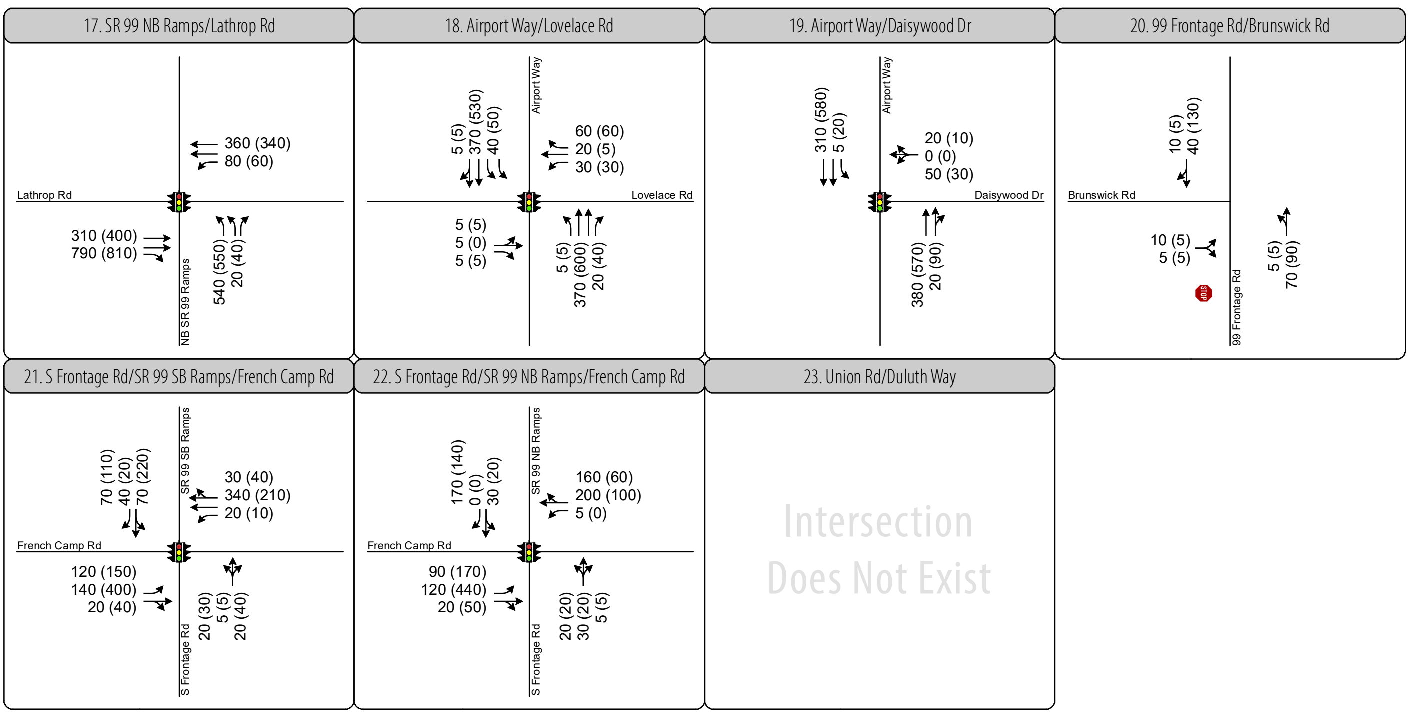


Turn Lane
AM (PM) Peak Hour Traffic Volume
Traffic Signal
Stop Sign
1 Study Intersection
Project Area
Lathrop City Limits
Manteca City Limits

Figure 8b

Peak Hour Traffic Volumes and Lane Configurations - Cumulative No Project Conditions





Turn Lane
AM (PM) Peak Hour Traffic Volume
Traffic Signal
Stop Sign
Study Intersection
Project Area
Lathrop City Limits
Manteca City Limits

Figure 8c

Peak Hour Traffic Volumes and Lane Configurations - Cumulative No Project Conditions

7.2 Cumulative Plus Project Intersection Operations

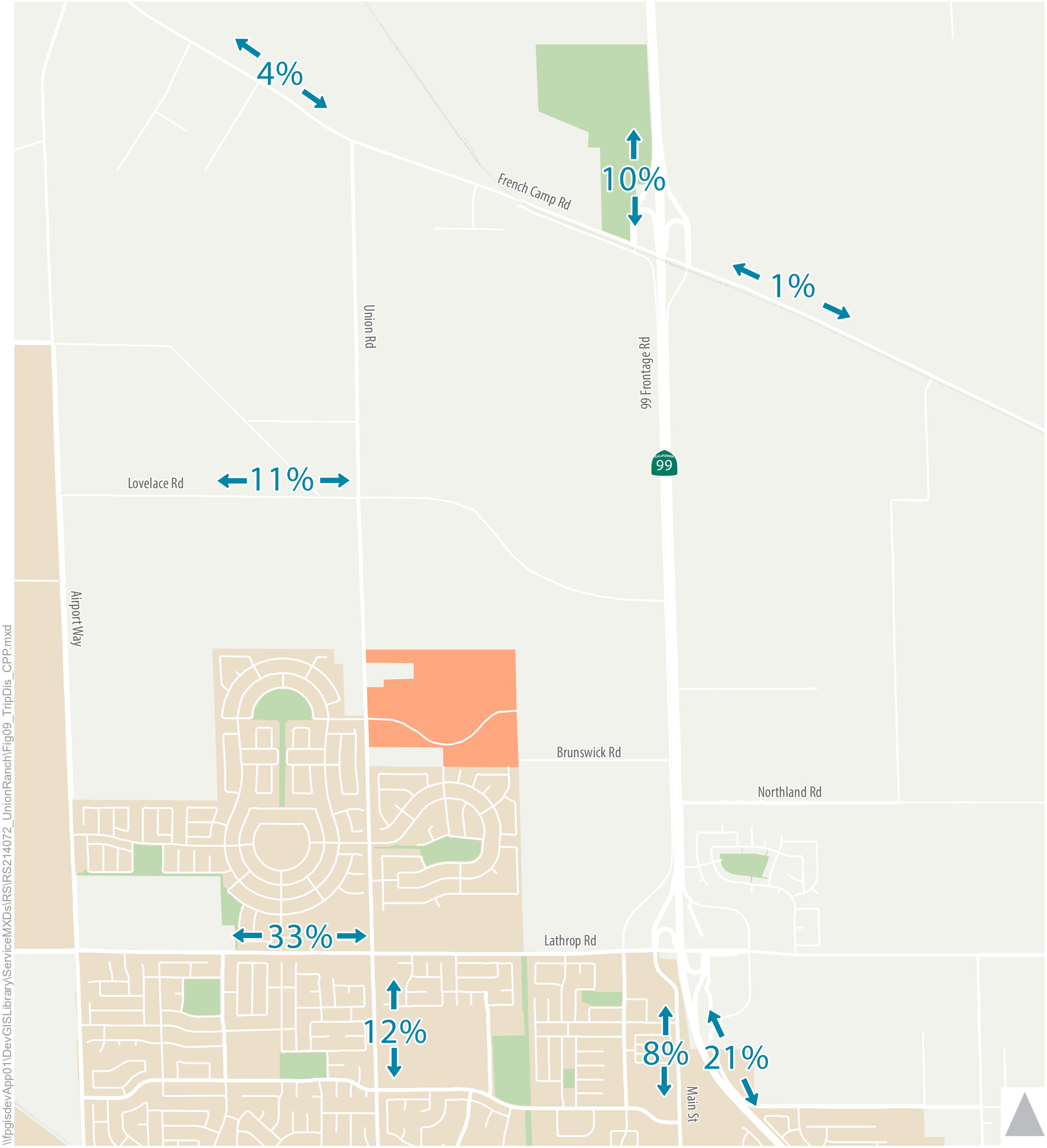
Under Cumulative conditions, changes in availability and locations of complimentary land use and transportation network would result in modifications to the project's trip distribution. The Interim General Plan Year 2040 TFM was used to develop Cumulative Plus Project trip distribution and forecasts. **Figure 9** displays Cumulative Plus Project trip distribution. **Figures 10A through 10 C** display the intersection turning movements under Cumulative Plus Project Conditions.

Table 10 presents the results of the Cumulative Plus Project intersection operations analysis.

Table 10: Intersection Operations –Cumulative Plus Project Conditions									
Intersection	Control Type	Cumulative Conditions				Cumulative Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
1. Union Road/French Camp Road	Signal	10.7	B	11.9	B	10.9	B	12.3	B
2. Union Road/Lovelace Road[2]	Signal	15.7	B	15.5	B	15.8	B	15.5	B
3. Union Road/Shady Pines Street[2]	SSSC/ Signal[4]	1.9 (20.0)	A (C)	1.9 (24.4)	A (C)	15.1	B	16.1	B
4. Union Road/Del Webb Boulevard/Clearwater Creek Boulevard	Signal	12.3	B	12.6	B	12.6	B	12.7	B
5. Union Road/Lathrop Road	Signal	**63.1**	**E**	**94.2**	**F**	**85.3**	**F**	**108.1**	**F**
6. Roth Road/I-5 SB Ramps[2]	Signal	11.8	B	21.3	C	16.5	B	24.4	C
7. Roth Road/I-5 NB Ramps[2]	Signal	6.9	A	7.8	A	7.1	A	8.2	A
8. Roth Road/Airport Way[2]	Signal	22.8	C	18.9	B	22.9	C	19.3	B
9. Lathrop Road/I-5 SB Ramps[2 3]	Signal	17.8	B	23.8	C	17.9	B	26.1	C
10. Lathrop Road/I-5 NB[2 3] Ramps	Signal	34.5	C	28.7	C	47.0	D	28.6	C
11. Lathrop Road/Old Harlan Road	SSSC	1.2 (29.2)	A (D)	<1 (28.8)	A (D)	1.3 (33.0)	A (D)	<1 (28.8)	A (D)
12. Lathrop Road/Harlan Road	Signal	50.7	D	**66.3**	**E**	52.0	D	**67.4**	**E**
13. Lathrop Road/Airport Way[2]	Signal	31.0	C	36.4	D	34.3	C	40.1	D
14. Lathrop Road/Madison Grove Drive	SSSC	**36.8 (>300)**	**E (F)**	**41.4 (>300)**	**E (F)**	**42.2 (>300)**	**E (F)**	**40.3 (>300)**	**C (F)**

Table 10: Intersection Operations –Cumulative Plus Project Conditions									
Intersection	Control Type	Cumulative Conditions				Cumulative Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
15. Lathrop Road/SR 99 Frontage Road	Signal	12.1	B	13.0	B	13.3	B	15.6	B
16. Lathrop Road/SR 99 SB Ramps/Main Street	Signal	47.8	D	**62.1**	**E**	49.3	D	**66.6**	**E**
17. Lathrop Road/SR 99 NB Ramps	Signal	11.2	B	11.1	B	11.6	B	11.1	B
18. Airport Way/Lovelace Road[2]	Signal	9.8	A	9.0	A	9.7	A	9.0	A
19. Airport Way/Daisywood Drive[2]	Signal	5.5	A	5.3	A	5.7	A	5.5	A
20. SR 99 Frontage Road/Brunswick Road	SSSC	1.3 (9.2)	A (A)	<1 (9.7)	A (A)	1.3 (9.2)	A (A)	<1 (10.0)	A (B)
21. French Camp Road/SR 99 SB Ramps/SR 99 Frontage Road	Signal	15.4	B	21.0	C	15.4	B	21.1	C
22. French Camp Road/SR 99 NB Ramps/SR 99 Frontage Road	Signal	14.0	B	10.4	B	14.3	B	10.4	B
23. Union Road/Duluth Way	SSSC	Intersection does not exist under this scenario				<1 (10.3)	A (B)	<1 (9.6)	A (A)

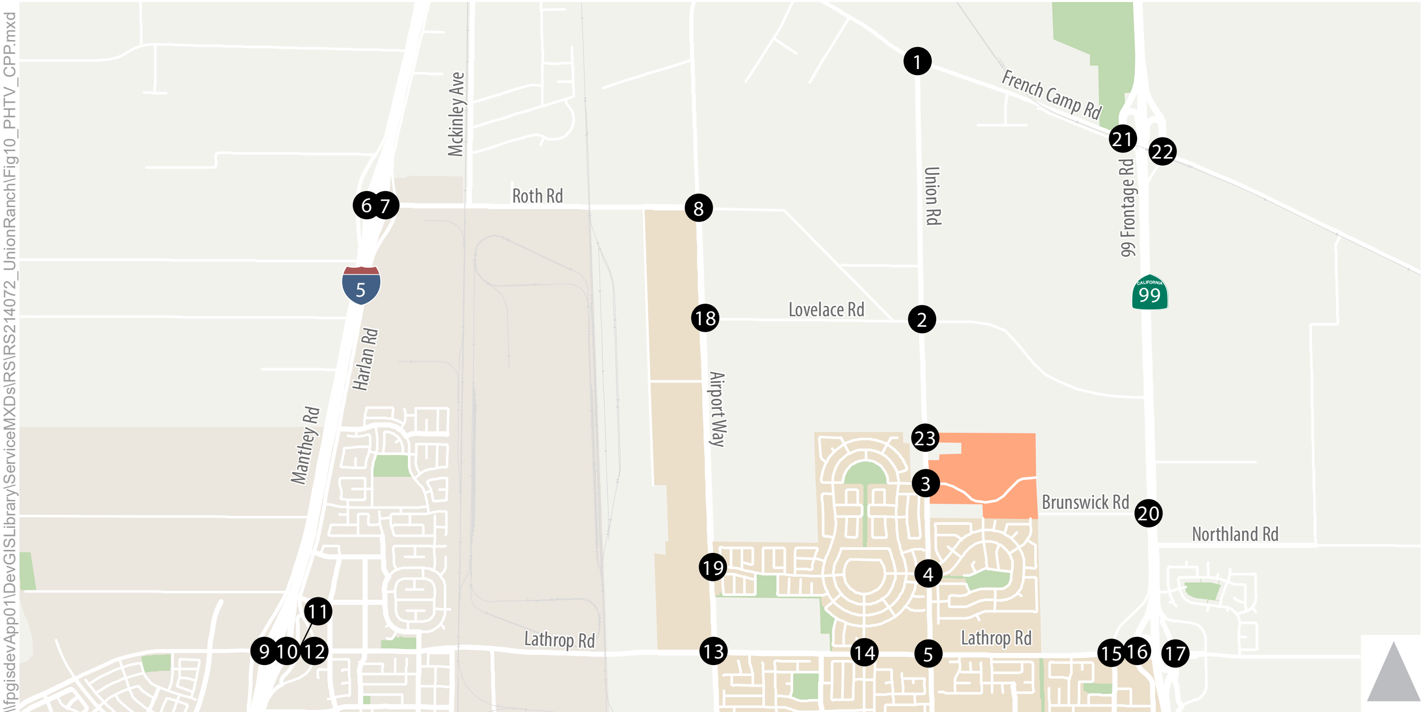
Notes:
Bold indicates deficient operations; SSSC = Side-Street Stop Control; LOS = Level of Service
[1] For signalized intersections and roundabouts, average intersection delay is reported in seconds per vehicle for all approaches. For side street stop-controlled intersections, intersection delay is reported in seconds per vehicle for the overall intersection and (worst-case) movement. Intersection delay is calculated based on the procedures and methodology contained in the Highway Capacity Manual 6th Edition (Transportation Research Board, 2016).
[2] Intersection lane configuration and/or traffic control are different from Existing Conditions due to planned intersection and roadway improvements.
[3] The future interchange design has not been formalized. Delay and LOS are estimated using an improved tight-diamond interchange configuration and are subject to change.
[4] Per Traffic COA #1, the developer shall install a traffic signal at Union Road/Shady Pines Street under Existing Plus Project conditions. Therefore, the intersection is analyzed as a side-street stop controlled intersection under Cumulative No Project conditions, and as a signalized intersection under Cumulative Plus Project conditions.
Source: Fehr & Peers, 2024

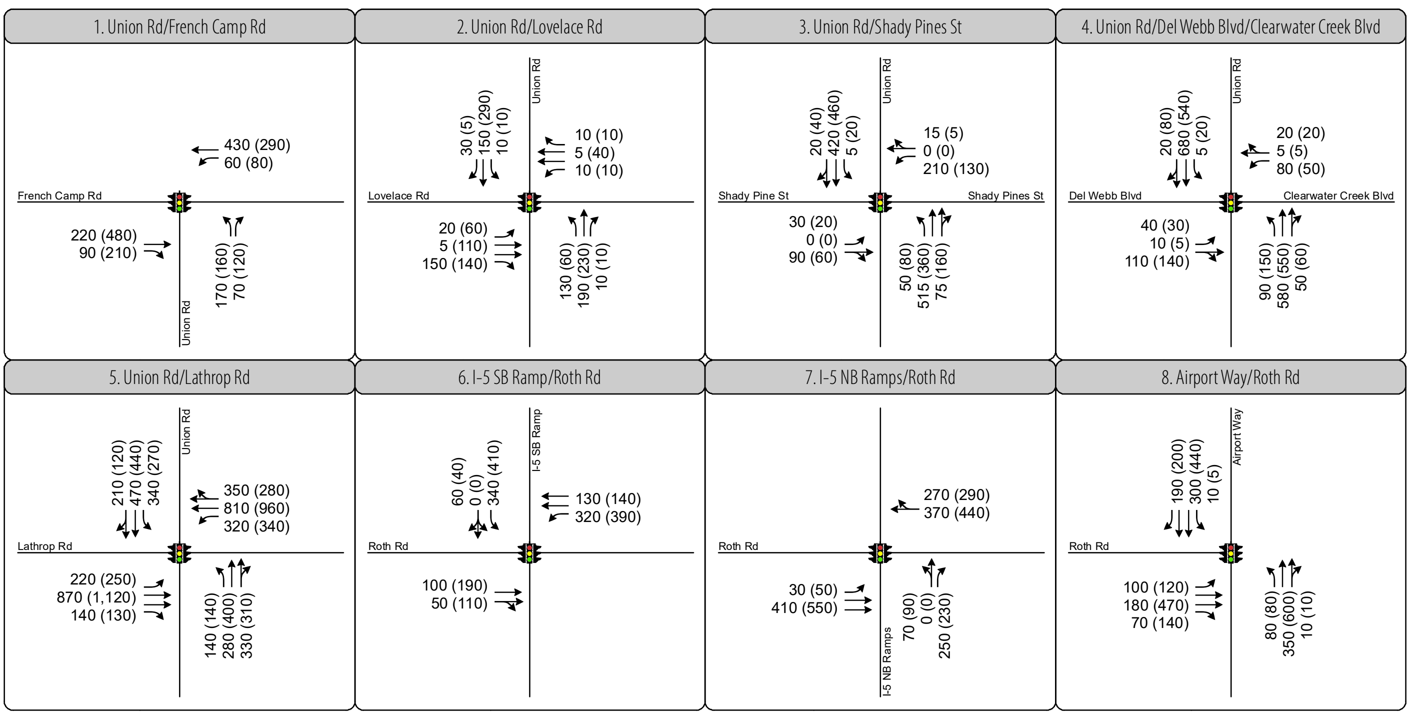


XX% Trip Distribution Percentage

Figure 9

Cumulative Plus Project Trip Distribution

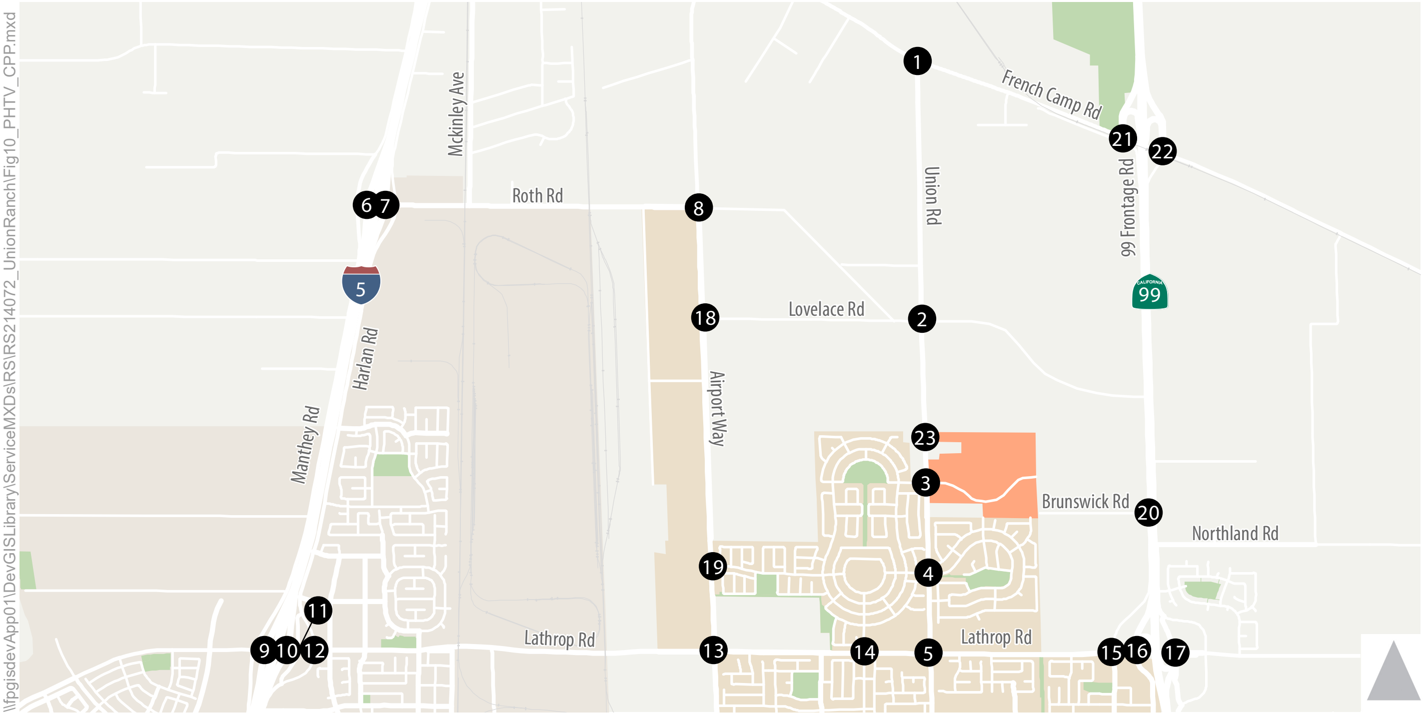


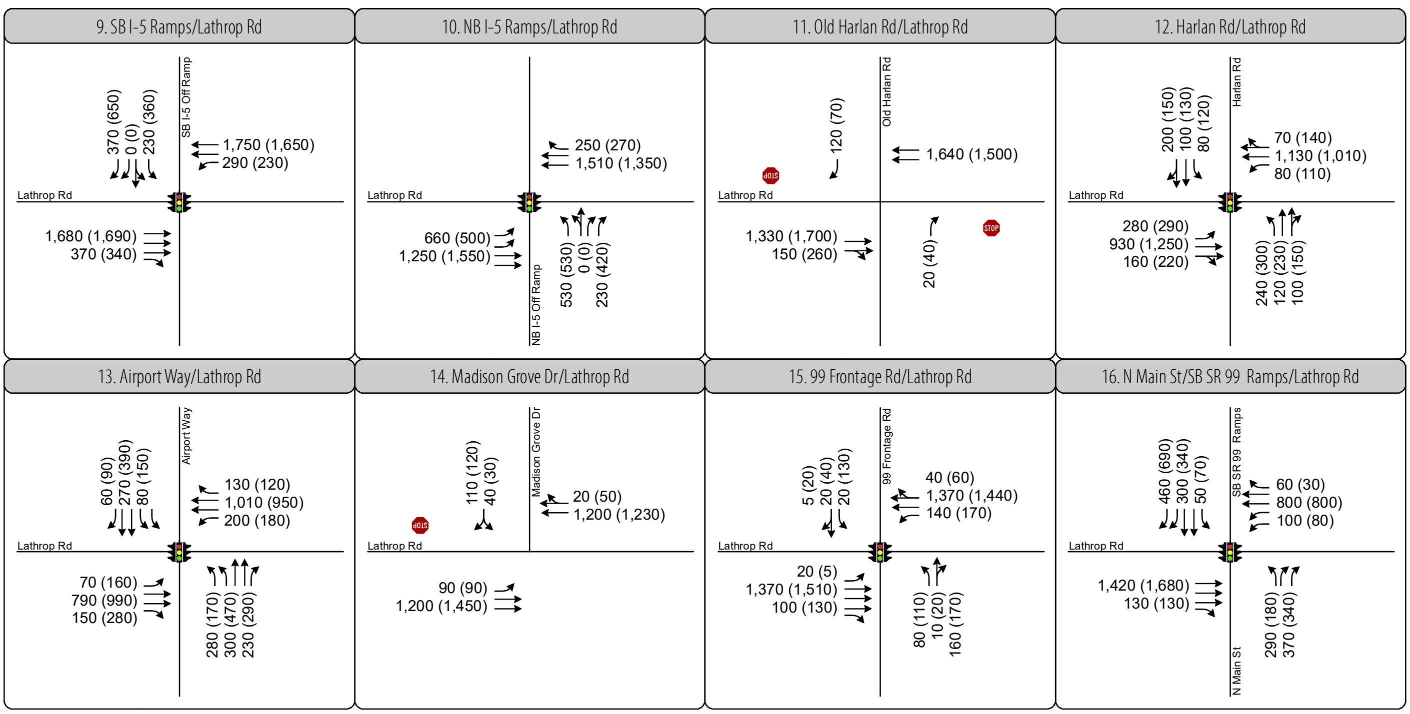


Turn Lane
AM (PM) Peak Hour Traffic Volume
Traffic Signal
Stop Sign
Study Intersection
Project Area
Lathrop City Limits
Manteca City Limits

Figure 10a

Peak Hour Traffic Volumes and Lane Configurations - Cumulative Plus Project Conditions

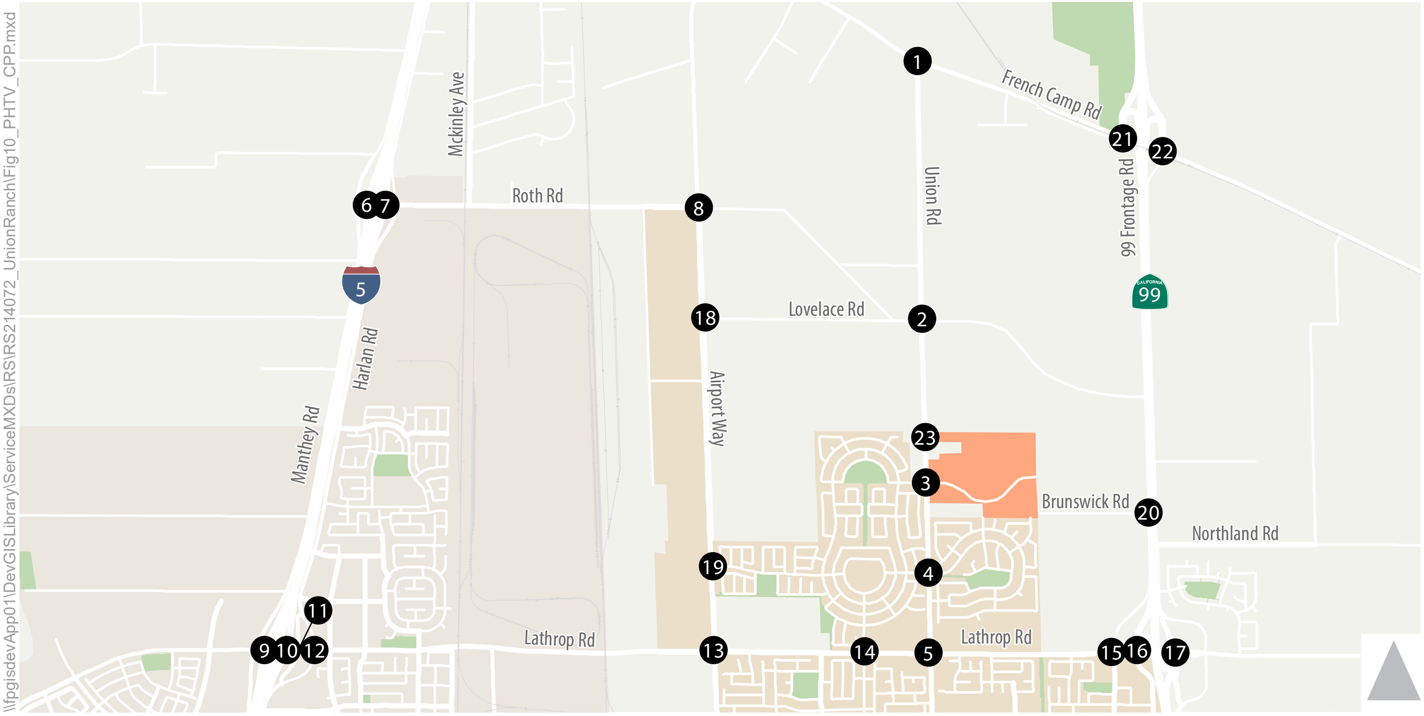


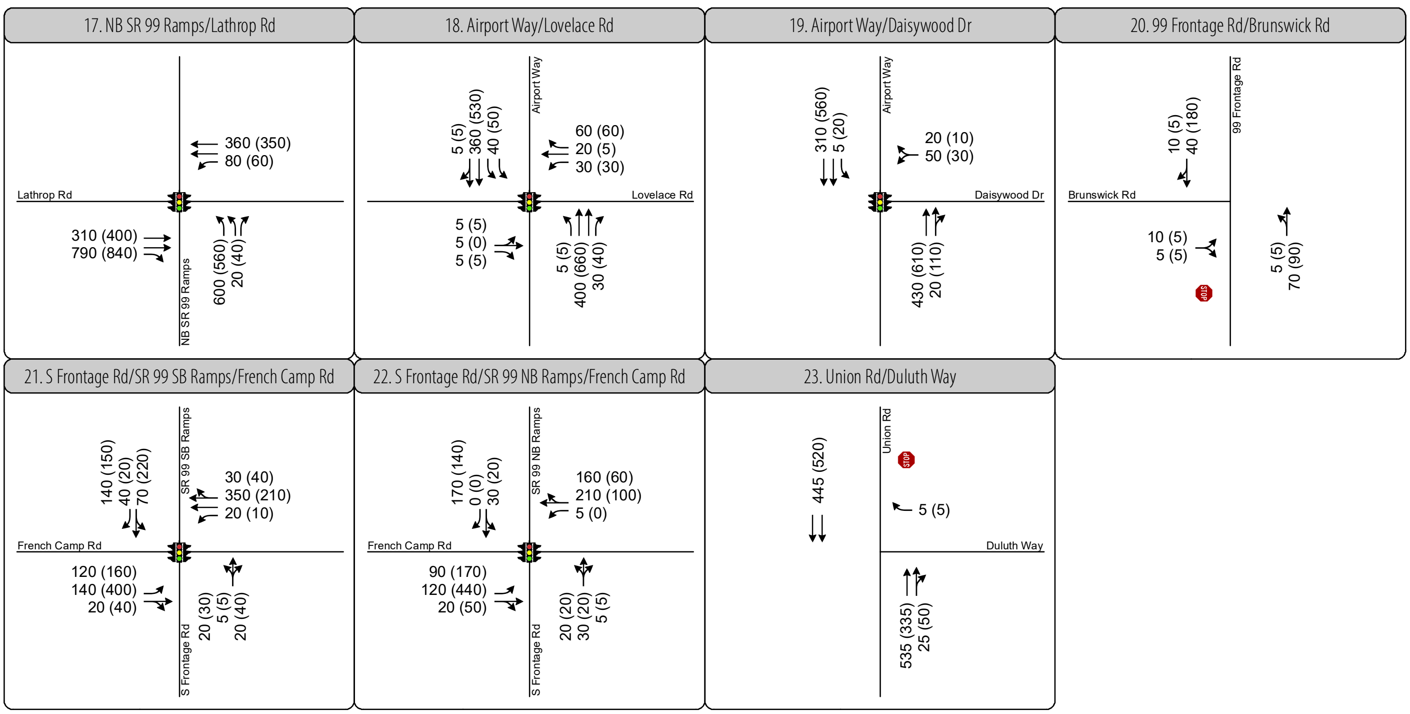


	Turn Lane	1	Study Intersection
AM (PM)	Peak Hour Traffic Volume		Project Area
	Traffic Signal		Lathrop City Limits
STOP	Stop Sign		Manteca City Limits

Figure 10b

Peak Hour Traffic Volumes and Lane Configurations - Cumulative Plus Project Conditions





Turn Lane		Study Intersection	
AM (PM)	Peak Hour Traffic Volume		Project Area
	Traffic Signal		Lathrop City Limits
	Stop Sign		Manteca City Limits

Figure 10c

Peak Hour Traffic Volumes and Lane Configurations - Cumulative Plus Project Conditions

Traffic COA #1 requires the developer to install a traffic signal and implement intersection lane configuration improvements at the Union Road/Shady Pines Street intersection. Therefore, this improvement is assumed to be in place under Cumulative Plus Project conditions. As shown in **Table 10**, with improvements identified in Traffic COA #1, this intersection would operate acceptably at LOS B during the AM and PM peak hour.

As displayed in **Table 10**, under Cumulative Plus Project Conditions:

- Union Road/Lathrop Road would continue to operate deficiently with additional delay during the AM and PM peak hour.
- Lathrop Road/Harlan Road would continue to operate deficiently with additional delay during the PM peak hour.
- Lathrop Road/Madison Grove Drive would continue to operate deficiently with additional delay during the AM and PM peak hour.

The City of Manteca is in the process of updating the PFIP. The improvements required for Union Road/Lathrop Road and Lathrop Road/Madison Grove Drive will be analyzed separately as part of the PFIP update. Because the Project would contribute to the cumulative growth in traffic volumes at these intersections, it is recommended that the following be incorporated into the Conditions of Approval for the proposed project:

- **Traffic COA #2 –** The developer shall pay the current PFIP fee as determined by the City of Manteca prior to issuance of building permits to mitigate the Project's impact at Union Road/Lathrop Road and Lathrop Road/Madison Grove Drive. The developer shall install a new traffic signal controller at the Union Road/Lathrop Road intersection and fund a traffic signal timing optimization study.

The Lathrop Road/Harlan Road intersection is located in the City of Lathrop. This intersection will be further evaluated as part of the I-5/Lathrop Road interchange improvement project identified in the SJCOG RTP/SCS. Potential improvements may include lane configuration improvements and signal coordination with the reconstructed I-5/Lathrop Road interchange.

8. Safety Assessment Analysis

This section describes the potential safety impacts associated with transportation and circulation that could result from implementation of the proposed project. It describes the safety-related reviews, investigations, and analysis that was completed for Existing Plus Project and Cumulative Plus Project scenarios.

8.1 Planned Traffic Safety Improvements in the Project Area

The following documents and projects in the City of Manteca, City of Lathrop, San Joaquin County, San Joaquin Council of Governments, and Caltrans jurisdictions are reviewed for traffic safety improvements:

- **City of Manteca Active Transportation Plan (ATP) (2020)**
- **City of Manteca PFIP**
- **SJCOG RTP/SCS**
- **I-5/Roth Road Interchange Project** – This interchange would be improved to provide additional travel lanes for motor vehicles, signalized intersections, and sidewalks with ADA compliant ramps and crosswalks for pedestrians.
- **I-5/Louise Avenue Interchange Project** – This interchange would be improved to provide additional travel lanes for motor vehicles, and sidewalks with ADA compliant ramps and crosswalks for pedestrians.

The proposed project proposes multi-modal safety improvements including sidewalk along Union Road and internal roadways, as well as a continuation of the Class I (off-street) Tidewater Bikeway. The project will also support the implementation of City of Manteca and SHS safety projects by paying fees to assist in funding safety improvement projects.

The proposed project does not consist of any improvements or physical changes to freeway mainline, freeway interchange, or other State Highway System (SHS) facilities. Besides the A detailed review of the facility design of the safety improvement projects listed above confirmed that the proposed project would not physically disrupt any existing multi-modal facility.

A review of the City of Manteca ATP indicate that future Class II bike lane have been identified on Union Road north of Lathrop Road and SR 99 Frontage Road north of Lathrop Road. Based on the Tentative Subdivision Map Plans (labeled Attachment A) in the Notice of Preparation dated October 22, 2021, the proposed project will include the widening of Union Road, but does not currently include the construction of Class II bike lanes along Union Road or SR 99 Frontage Road. Therefore, it is recommended that the following be included in the COA for the proposed project.

- **Traffic COA #3** – The developer shall construct Class II bike lanes along its frontage on Union Road and SR 99 Frontage Road, as identified in the City of Manteca ATP. The design of the bike lane shall be reviewed and approved by the Director of Engineering. The cost of bike lane construction shall be included in the total cost associated with the Union Road widening along the project frontage.

The proposed project consists of single-family dwelling units. Implementation of the proposed project would result in changes in traffic volumes on local roadways, freeway mainline segments, and interchange ramp intersections around the project area. Based on analysis on the similar land use types, the mix of pedestrian, bicycle, and motor vehicle travel would not change, and the traffic mix would remain compatible with existing and planned facility design.

8.2 Freeway Off-Ramp Queueing Analysis

As described in Chapter 5 and 6, intersection operations analyses were completed for the following freeway ramp intersections:

6. Roth Road/I-5 SB Ramps
7. Roth Road/I-5 NB Ramps
9. Lathrop Road/I-5 SB Ramps
10. Lathrop Road/I-5 NB Ramps
15. Lathrop Road/SR 99 SB Ramps/Main Street
16. Lathrop Road/SR 99 NB Ramps
20. French Camp Road/SR 99 SB Ramps/W 99 Frontage Road
21. French Camp Road/SR 99 NB Ramps/S 99 Frontage Road

Results of the intersection operations analysis show that all 8 ramp intersections operate at LOS D or better during the AM and PM peak hour under Existing Plus Project, Cumulative No Project, and Cumulative Plus Project Conditions.

In addition, a freeway off-ramp queueing analysis was completed for the 8 ramp intersections during the AM and PM peak hour. The off-ramp queueing analysis was completed using the Synchro 11 software package as described in Chapter 2, and the 95th percentile queue is reported for all freeway off-ramp movements.

Table 11 presents the results of the freeway off-ramp queueing analysis for the AM and PM peak hour under Existing Plus Project Conditions. As shown, with the addition of the project traffic, all freeway off-ramp queues can be accommodated within the off-ramp storage. Technical Calculations are included in **Appendix A**.

Table 11: Freeway Off-Ramp Queueing Analysis – Existing Plus Project Conditions						
Intersection	Move-ment	Storage (ft)	AM Peak Hour		PM Peak Hour	
			Volume	95th Percentile Queue (ft)	Volume	95th Percentile Queue (ft)
6. Roth Road/I-5 SB Ramps	SBL	1400	230	75	290	100
	SBL/T/R	520	40	50	30	50
7. Roth Road/I-5 NB Ramps	NBL/T	1375	20	25	30	25
	NBR	630	180	50	180	25
9. Lathrop Road/I-5 SB Ramps	SBL/T/R	1525	340	260	470	418
10. Lathrop Road/I-5 NB Ramps	NBL/T/R	1625	290	205	500	466
16. Lathrop Road/SR 99 SB Ramps/Main Street	SBL	560	50	81	70	95
	SBT	1450	290	162	340	164
	SBR	1450	220	35	270	37
17. Lathrop Road/SR 99 NB Ramps	NBL	1350	350	80	340	81
	NBR	670	30	16	40	19
21. French Camp Road/SR 99 SB Ramps/W 99 Frontage Road	SBL/T	1800	110	127	220	219
	SBR	500	110	48	140	49
22. French Camp Road/SR 99 NB Ramps/S 99 Frontage Road	SBL/T	1800	10	25	10	19
	SBR	400	170	68	150	51
Source: Fehr & Peers, 2024						

Table 12 presents the results of the freeway off-ramp queueing analysis for the AM and PM peak hour under Cumulative Plus Project Conditions. As shown, with the addition of the project traffic, all freeway off-ramp queues can be accommodated within the off-ramp storage. Technical Calculations are included in **Appendix A**.

Table 12: Freeway Off-Ramp Queueing Analysis – Cumulative Plus Project Conditions						
Intersection	Move-ment	Storage (ft)	AM Peak Hour		PM Peak Hour	
			Volume	95th Percentile Queue	Volume	95th Percentile Queue
6. Roth Road/I-5 SB Ramps[1]	SBL	1,400	340	172	410	218
	SBL/T/R	520	60	97	40	142
7. Roth Road/I-5 NB Ramps[1]	NBL/T	1,375	70	97	90	97
	NBR	630	250	61	230	61
9. Lathrop Road/I-5 SB Ramps[1 2]	SBL	1,525	230	148	360	148
	SBR	1,525	370	298	650	298
10. Lathrop Road/I-5 NB Ramps[1 2]	NBL	1,625	530	333	530	333
	NBR	1,625	230	204	420	204
16. Lathrop Road/SR 99 SB Ramps/Main Street	SBL	560	50	128	70	128
	SBT	1,450	300	184	340	184
	SBR	1,450	460	401	690	401
17. Lathrop Road/SR 99 NB Ramps	NBL	1,350	600	138	560	138
	NBR	670	20	18	40	18
21. French Camp Road/SR 99 SB Ramps/W 99 Frontage Road	SBL/T	1,800	110	248	240	248
	SBR	500	140	37	150	37
22. French Camp Road/SR 99 NB Ramps/S 99 Frontage Road	SBL/T	1,800	30	26	20	26
	SBR	400	170	17	140	17

Notes:
[1] Intersection lane configuration and/or traffic control are different from Existing Conditions due to planned intersection and roadway improvements.
[2] The future interchange design has not been formalized. Off-Ramp storage is assumed to be equal to the existing off-ramp storage.
Source: Fehr & Peers, 2024

Based on the freeway off-ramp queueing analysis, the proposed project would not result in freeway off-ramp queuing spilling back from interchanges and would not affect traffic operations on the freeway mainline. Traffic generated by the proposed project would remain compatible with the planned traffic safety improvements in the vicinity of the project.

9. Additional Analysis

This chapter describes the additional analysis completed for the proposed project, including a policy consistency review and a site access evaluation.

9.1 Policy Consistency

The City of Manteca ATP (2020) and City of Manteca General Plan (2003) were reviewed to determine if the proposed project results in any inconsistencies with adopted transportation related policies.

Active Transportation Plan (ATP)

The ATP identifies planned future Class II bike lane on Union Road north of Lathrop Road and SR 99 Frontage Road north of Lathrop Road. Based on the Tentative Subdivision Map Plans (labeled Attachment A) in the Notice of Preparation dated October 22, 2021, the proposed project will include the widening of Union Road, which will provide a second northbound vehicle travel lane and landscaped sidewalk area. The proposed project will also construct landscaped sidewalk area long SR 99 Frontage Road. However, the project plans do not currently include the construction of Class II bike lanes as identified in the ATP. Therefore, the following COA is recommended to ensure the project is consistent with the ATP:

- **Traffic COA #3** – The developer shall construct Class II bike lanes along its frontage on Union Road and SR 99 Frontage Road, as identified in the City of Manteca ATP. The design of the bike lane shall be reviewed and approved by the Director of Engineering. The cost of bike lane construction shall be included in the total cost associated with the Union Road widening along the project frontage.

The proposed project will construct the continuation of the Class I Tidewater Bikeway. The proposed project will also construct sidewalks on internal streets, providing adequate connections to and throughout the site for pedestrians.

Manteca General Plan

The City of Manteca General Plan (adopted July 18, 2023) land use designation shows that the project site is within an area designated for Low Density Residential, High Density Residential, and Park land use. The project is consistent with the General Plan land use designation.

Additionally, the proposed project is consistent with goals and policies identified in the Circulation Element of the City of Manteca General Plan 2023, as described below:

Goals

- Goal C-2. Provide complete streets designed to serve a broad spectrum of travel modes, including automobiles, public transit, walking, and bicycling.

- Goal C-9. Provide a safe, secure, and convenient bicycle route system that connects to retail, employment centers, public facilities, and parks
- Goal C-10. Provide for safe and convenient pedestrian circulation.

The proposed project includes bicycle and pedestrian improvements that will help create complete streets and are consistent with the goals described above.

Policies

- C-P-2: To the extent feasible, the City shall strive for a vehicular LOS of D or better at all streets and intersections, except in the Downtown area where right-of-way is limited, pedestrian, bicycle, and transit mobility are most important and vehicular LOS is not a consideration.
- C-P-9: Residential and collector street intersections with collector and arterial streets shall be aligned with other residential and collector streets, where feasible, to maintain a high degree of connectivity between neighborhoods, minimize circuitous travel, and to allow bicyclists and pedestrians to travel conveniently and safely from one neighborhood to another without using major streets.

Although LOS cannot be used as a CEQA metric to identify significant transportation impacts, intersection operations were analyzed for the proposed project and are discussed in Chapters 4, 5, and 6. With recommended improvements described in those chapters, all intersections would operate at LOS D or better with the addition of project trips. Additionally, the project has been designed so residential streets align with the existing intersection at Union Road/Shady Pines Street and connect to the residential development to the west.

9.2 Site Access Evaluation

As described in Chapter 4 and displayed in **Figure 7**, access for the proposed project would be at Union Road/Shady Pines Street, SR 99 Frontage Road/Shady Pines Street, and Union Road/Duluth Way. The preliminary site plan indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. However, all intersections and street sections should be reviewed by the City of Manteca and designed to comply with typical City standards. With consideration to pedestrian safety, it is recommended that Union Road/Shady Pines Street be constructed as a signalized intersection. Per City of Manteca Engineering comments, the Union Road/Duluth Way intersections shall be constructed as a right-in/right-out only intersection with side-street stop control intersections. A median shall be constructed along Union Road to prevent left turns. All project access intersections, internal intersections, and internal roadways should be carefully designed to ensure they can accommodate emergency vehicles.

10. Conclusion

This chapter presents the conclusions of the transportation impact analysis for the proposed project in the City of Manteca.

10.1 Transportation Impact Analysis

Consistent with SB 743, VMT is used as the primary metric for identifying significant transportation impacts. Under both Existing and Cumulative Conditions, the proposed project would generate home-based VMT per single family household that exceed 85 percent of the City-wide average. In addition, under both Existing and Cumulative Conditions, the proposed project would result in a net increase of total VMT in the model area. Therefore, there is a **significant** transportation impact.

The VMT generation of a project is largely dictated by the combination of land use proximity and transportation infrastructure. Mitigation Measure **MM-TRA-1** summarizes transportation measures with VMT-reducing benefits that may be applicable at project or community level in the City of Manteca. However, as the suburban land use context of the City largely dictates the distance and modes of travel between destinations, combined with the City's limited ability to influence other measures that would have the largest effect on VMT (such as implementation of a VMT tax or an increase in the fuel tax), the effectiveness of these TDM measures cannot be guaranteed to reduce impacts and the impact is considered **significant and unavoidable.**

MM-TRA-1: Implement VMT mitigation options

Potential measures for individual development include, but are not limited to:

- Increase residential density
- Limit residential parking supply
- Unbundle residential parking cost from property cost
- Provide access to transit (Transit Oriented Development)
- Improve street connectivity
- Provide ride-share program
- Implement subsidized or discounted transit program
- Provide end-of-trip bicycle facilities
- Provide community-based travel planning
- Provide electric vehicle charging infrastructure
- Implement market price public on-street parking
- Provide pedestrian network improvement
- Construct or improve bike facility

- Construct or improve bike boulevard
- Expand bikeway network
- Implement conventional or electric carshare program
- Implement pedal or electric bikeshare program
- Implement scootershare program
- Extend transit network coverage or hours
- Increase transit service frequency
- Implement transit-supportive roadway treatments
- Reduce transit fares

With the implementation of **Traffic COA #3**, the proposed project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. These impacts would be **less than significant**.

10.2 Intersection Operations Analysis

Results of the intersection operations analysis indicate that all intersections operate acceptably under Existing Conditions. With the addition of project trips, level of service at Union Road/Shady Pines Street and Union Road/Lovelace Road would degrade from acceptable operations to deficient operations during both peak hours. Under Existing Plus Project Conditions, both intersections would operate acceptably as a signalized intersection.

Under Cumulative No Project and Cumulative Plus Project conditions, Union Road/Lathrop Road and Lathrop Road/Madison Grove Drive would operate deficiently during the AM and PM peak hour. Because the Project would contribute to the cumulative growth in traffic volumes at these intersections, the developer shall contribute to improve traffic operations at these two locations.

Under Cumulative No Project and Cumulative Plus Project conditions, the Lathrop Road/Harlan Road intersection would operate deficiently during the AM and PM peak hour. This intersection is located in the City of Lathrop and will be further evaluated as part of the I-5/Lathrop Road interchange improvement project identified in the SJCOG RTP/SCS.

Recommended Conditions of Approval

The following conditions should be incorporated into the Conditions of Approval for the proposed project:

- **Traffic COA #1** – The developer shall install a traffic signal and implement intersection lane configuration improvements (i.e., add a southbound left turn pocket) at the Union Road/Shady Pines Street intersection. The design of the traffic signal and intersection improvements shall be reviewed and approved by the Director of Engineering. The developer shall pay for the total cost for the design and installation of the improvements as this intersection would provide direct access to the project site.

- **Traffic COA #2 –** The developer shall pay the current PFIP fee as determined by the City of Manteca prior to issuance of building permits to mitigate the Project's impact at Union Road/Lathrop Road and Lathrop Road/Madison Grove Drive. The developer shall install a new traffic signal controller at the Union Road/Lathrop Road intersection and fund a traffic signal timing optimization study.
- **Traffic COA #3** – The developer shall construct Class II bike lanes along its frontage on Union Road and SR 99 Frontage Road, as identified in the City of Manteca ATP. The design of the bike lane shall be reviewed and approved by the Director of Engineering. The cost of bike lane construction shall be included in the total cost associated with the Union Road widening along the project frontage.

Appendix A – Technical Calculations

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	213	87	46	360	164	45
Future Volume (veh/h)	213	87	46	360	164	45
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	1737	1737	1737	1737	1737	1737
Adj Flow Rate, veh/h	227	93	49	383	174	48
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	11	11	11	11	11	11
Cap, veh/h	462	391	87	815	380	338
Arrive On Green	0.27	0.27	0.05	0.47	0.23	0.23
Sat Flow, veh/h	1737	1472	1654	1737	1654	1472
Grp Volume(v), veh/h	227	93	49	383	174	48
Grp Sat Flow(s),veh/h/ln	1737	1472	1654	1737	1654	1472
Q Serve(g_s), s	4.4	2.0	1.2	6.0	3.6	1.0
Cycle Q Clear(g_c), s	4.4	2.0	1.2	6.0	3.6	1.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	462	391	87	815	380	338
V/C Ratio(X)	0.49	0.24	0.56	0.47	0.46	0.14
Avail Cap(c_a), veh/h	1745	1479	831	1745	831	739
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	12.3	11.5	18.4	7.2	13.2	12.2
Incr Delay (d2), s/veh	2.9	1.1	5.6	1.5	3.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.5	0.5	1.3	1.2	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.3	12.6	24.0	8.7	16.3	12.9
LnGrp LOS	B	B	C	A	B	B
Approach Vol, veh/h	320			432	222	
Approach Delay, s/veh	14.5			10.5	15.6	
Approach LOS	B			B	B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.1	16.6		15.1		24.7
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	20.0	40.0		20.0		40.0
Max Q Clear Time (g_c+I1), s	3.2	6.4		5.6		8.0
Green Ext Time (p_c), s	0.1	4.2		1.6		5.7

Intersection Summary		
HCM 6th Ctrl Delay		13.0
HCM 6th LOS		B

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	53	58	181	144	29
Future Vol, veh/h	12	53	58	181	144	29
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	89	89	89	89	89	89
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	13	60	65	203	162	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	512	179	195	0	-	0
Stage 1	179	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Critical Hdwy	6.48	6.28	4.18	-	-	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.372	2.272	-	-	-
Pot Cap-1 Maneuver	511	849	1343	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	483	849	1343	-	-	-
Mov Cap-2 Maneuver	483	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	713	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	1.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1343	-	745	-	-
HCM Lane V/C Ratio	0.049	-	0.098	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Intersection						
Int Delay, s/veh	1					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	27	15	235	183	6
Future Vol, veh/h	8	27	15	235	183	6
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	7	7	7	7	7	7
Mvmt Flow	9	31	17	270	210	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	519	215	218	0	-	0
Stage 1	215	-	-	-	-	-
Stage 2	304	-	-	-	-	-
Critical Hdwy	6.47	6.27	4.17	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.363	2.263	-	-	-
Pot Cap-1 Maneuver	508	813	1322	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	500	812	1321	-	-	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	736	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1321	-	500	812	-	-
HCM Lane V/C Ratio	0.013	-	0.018	0.038	-	-
HCM Control Delay (s)	7.8	-	12.3	9.6	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	47	76	1	14	24	236	45	6	201	1
Future Volume (veh/h)	2	0	47	76	1	14	24	236	45	6	201	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		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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	2	0	0	93	1	0	29	288	43	7	245	1
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	6	6	0	187	10	0	74	1122	166	20	1200	5
Arrive On Green	0.00	0.00	0.00	0.11	0.01	0.00	0.04	0.37	0.37	0.01	0.34	0.34
Sat Flow, veh/h	1725	1811	0	1725	1811	0	1725	3008	444	1725	3514	14
Grp Volume(v), veh/h	2	0	0	93	1	0	29	163	168	7	120	126
Grp Sat Flow(s),veh/h/ln	1725	1811	0	1725	1811	0	1725	1721	1731	1725	1721	1808
Q Serve(g_s), s	0.0	0.0	0.0	1.5	0.0	0.0	0.5	1.9	2.0	0.1	1.5	1.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.5	0.0	0.0	0.5	1.9	2.0	0.1	1.5	1.5
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.26	1.00		0.01
Lane Grp Cap(c), veh/h	6	6	0	187	10	0	74	642	646	20	587	617
V/C Ratio(X)	0.34	0.00	0.00	0.50	0.10	0.00	0.39	0.25	0.26	0.36	0.20	0.20
Avail Cap(c_a), veh/h	1228	1412	0	1228	1412	0	1520	2333	2347	1520	2333	2452
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	0.0	0.0	12.4	14.6	0.0	13.7	6.4	6.4	14.5	6.9	6.9
Incr Delay (d2), s/veh	31.3	0.0	0.0	2.0	4.4	0.0	3.3	0.3	0.3	10.7	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	0.1	0.0	0.0	0.5	0.0	0.0	0.2	0.3	0.3	0.1	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	0.0	0.0	14.4	19.0	0.0	17.1	6.7	6.7	25.2	7.1	7.1
LnGrp LOS	D	A	A	B	B	A	B	A	A	C	A	A
Approach Vol, veh/h		2			94			360			253	
Approach Delay, s/veh		45.9			14.5			7.5			7.6	
Approach LOS		D			B			A			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.3	16.3	7.2	1.7	5.3	15.4	4.1	4.8				
Change Period (Y+Rc), s	4.0	5.3	4.0	4.6	4.0	5.3	4.0	4.6				
Max Green Setting (Gmax), s	26.0	40.0	21.0	23.0	26.0	40.0	21.0	23.0				
Max Q Clear Time (g_c+I1), s	2.1	4.0	3.5	0.0	2.5	3.5	2.0	2.0				
Green Ext Time (p_c), s	0.0	2.7	0.2	0.0	0.0	1.9	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			8.6									
HCM 6th LOS			A									

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)	71	378	133	303	357	141	116	169	253	129	240	48
Future Volume (veh/h)	71	378	133	303	357	141	116	169	253	129	240	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	81	430	23	344	406	133	132	192	33	147	273	39
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	105	721	322	406	981	318	173	435	73	191	480	68
Arrive On Green	0.06	0.21	0.21	0.24	0.38	0.38	0.10	0.15	0.15	0.11	0.16	0.16
Sat Flow, veh/h	1725	3441	1535	1725	2555	828	1725	2938	496	1725	3020	426
Grp Volume(v), veh/h	81	430	23	344	272	267	132	111	114	147	154	158
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1725	1721	1662	1725	1721	1713	1725	1721	1725
Q Serve(g_s), s	2.8	6.9	0.7	11.6	7.0	7.2	4.5	3.6	3.7	5.0	5.0	5.1
Cycle Q Clear(g_c), s	2.8	6.9	0.7	11.6	7.0	7.2	4.5	3.6	3.7	5.0	5.0	5.1
Prop In Lane	1.00		1.00	1.00		0.50	1.00		0.29	1.00		0.25
Lane Grp Cap(c), veh/h	105	721	322	406	660	638	173	255	254	191	273	274
V/C Ratio(X)	0.77	0.60	0.07	0.85	0.41	0.42	0.76	0.44	0.45	0.77	0.56	0.58
Avail Cap(c_a), veh/h	682	1983	885	682	992	958	682	1133	1128	682	1133	1137
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	21.7	19.3	22.2	13.7	13.7	26.6	23.6	23.6	26.2	23.6	23.6
Incr Delay (d2), s/veh	11.3	1.1	0.1	5.1	0.6	0.6	6.9	1.7	1.8	6.4	2.6	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.5	0.2	4.6	2.3	2.3	2.0	1.4	1.5	2.2	2.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	22.8	19.4	27.3	14.3	14.4	33.5	25.2	25.4	32.6	26.2	26.4
LnGrp LOS	D	C	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		534			883			357			459	
Approach Delay, s/veh		25.2			19.4			28.3			28.3	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	17.7	10.1	14.6	7.7	28.3	10.7	14.0
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	24.0	35.0	24.0	40.0	24.0	35.0	24.0	40.0
Max Q Clear Time (g_c+I1), s	13.6	8.9	6.5	7.1	4.8	9.2	7.0	5.7
Green Ext Time (p_c), s	0.8	3.9	0.3	2.5	0.2	4.5	0.3	1.8

Intersection Summary	
HCM 6th Ctrl Delay	24.0
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	10.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	56	21	143	37	0	0	0	0	216	3	33
Future Vol, veh/h	0	56	21	143	37	0	0	0	0	216	3	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	0	-	520
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	37	37	37	37	37	37	37	37	37	37	37	37
Mvmt Flow	0	64	24	164	43	0	0	0	0	248	3	38

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	88	0	0	403	459	22
Stage 1	-	-	-	-	-	-	371	371	-
Stage 2	-	-	-	-	-	-	32	88	-
Critical Hdwy	-	-	-	4.84	-	-	7.54	7.24	7.64
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	6.24	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	6.24	-
Follow-up Hdwy	-	-	-	2.57	-	-	3.87	4.37	3.67
Pot Cap-1 Maneuver	0	-	-	1284	-	0	493	427	947
Stage 1	0	-	-	-	-	0	575	538	-
Stage 2	0	-	-	-	-	0	893	746	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1284	-	-	430	0	947
Mov Cap-2 Maneuver	-	-	-	-	-	-	430	0	-
Stage 1	-	-	-	-	-	-	575	0	-
Stage 2	-	-	-	-	-	-	779	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	6.5	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1284	-	430	519
HCM Lane V/C Ratio	-	-	0.128	-	0.385	0.239
HCM Control Delay (s)	-	-	8.2	-	18.5	14.1
HCM Lane LOS	-	-	A	-	C	B
HCM 95th %tile Q(veh)	-	-	0.4	-	1.8	0.9

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	255	0	0	168	231	12	3	158	0	0	0
Future Vol, veh/h	17	255	0	0	168	231	12	3	158	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Stop	-	-	None
Storage Length	0	-	-	-	-	-	630	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	37	37	37	37	37	37	37	37	37	37	37	37
Mvmt Flow	20	293	0	0	193	266	14	3	182	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	193	0	-	-	-	0	430	526	147
Stage 1	-	-	-	-	-	-	333	333	-
Stage 2	-	-	-	-	-	-	97	193	-
Critical Hdwy	4.84	-	-	-	-	-	7.54	7.24	7.64
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	6.24	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	6.24	-
Follow-up Hdwy	2.57	-	-	-	-	-	3.87	4.37	3.67
Pot Cap-1 Maneuver	1157	-	0	0	-	0	472	387	773
Stage 1	-	-	0	0	-	0	604	562	-
Stage 2	-	-	0	0	-	0	821	661	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	1157	-	-	-	-	-	464	0	773
Mov Cap-2 Maneuver	-	-	-	-	-	-	464	0	-
Stage 1	-	-	-	-	-	-	594	0	-
Stage 2	-	-	-	-	-	-	821	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.5	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	464	773	1157	-	-
HCM Lane V/C Ratio	0.037	0.235	0.017	-	-
HCM Control Delay (s)	13.1	11.1	8.2	-	-
HCM Lane LOS	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	0.9	0.1	-	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	57	63	80	221	154	63
Future Volume (veh/h)	57	63	80	221	154	63
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	1604	1604	1604	1604	1604	1604
Adj Flow Rate, veh/h	61	67	85	235	164	67
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	20	20	20	20	20	20
Cap, veh/h	138	122	106	771	536	210
Arrive On Green	0.09	0.09	0.07	0.48	0.25	0.25
Sat Flow, veh/h	1527	1359	1527	1604	2217	839
Grp Volume(v), veh/h	61	67	85	235	115	116
Grp Sat Flow(s),veh/h/ln	1527	1359	1527	1604	1523	1453
Q Serve(g_s), s	1.1	1.3	1.5	2.5	1.7	1.8
Cycle Q Clear(g_c), s	1.1	1.3	1.5	2.5	1.7	1.8
Prop In Lane	1.00	1.00	1.00			0.58
Lane Grp Cap(c), veh/h	138	122	106	771	382	364
V/C Ratio(X)	0.44	0.55	0.81	0.30	0.30	0.32
Avail Cap(c_a), veh/h	1311	1166	1311	2237	2125	2026
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	12.1	12.2	12.8	4.4	8.5	8.5
Incr Delay (d2), s/veh	2.2	3.8	18.0	0.8	1.6	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	0.4	0.4	0.8	0.2	0.4	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.3	15.9	30.8	5.2	10.1	10.3
LnGrp LOS	B	B	C	A	B	B
Approach Vol, veh/h	128			320	231	
Approach Delay, s/veh	15.2			12.0	10.2	
Approach LOS	B			B	B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.4	13.0		8.5		19.4
Change Period (Y+Rc), s	4.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	24.0	39.0		24.0		39.0
Max Q Clear Time (g_c+I1), s	3.5	3.8		3.3		4.5
Green Ext Time (p_c), s	0.3	3.2		0.3		3.3

Intersection Summary						
HCM 6th Ctrl Delay			12.0			
HCM 6th LOS			B			

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)	0	486	66	282	625	0	0	0	0	227	5	85
Future Volume (veh/h)	0	486	66	282	625	0	0	0	0	227	5	85
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	0				1811	1811	1811
Adj Flow Rate, veh/h	0	552	75	320	710	0				258	6	97
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	6	6	6	6	0				6	6	6
Cap, veh/h	0	1033	138	379	981	0				310	7	116
Arrive On Green	0.00	0.24	0.24	0.22	0.54	0.00				0.26	0.26	0.26
Sat Flow, veh/h	0	4559	587	1725	1811	0				1194	28	449
Grp Volume(v), veh/h	0	412	215	320	710	0				361	0	0
Grp Sat Flow(s),veh/h/ln	0	1648	1687	1725	1811	0				1671	0	0
Q Serve(g_s), s	0.0	5.0	5.2	8.2	13.7	0.0				9.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.0	5.2	8.2	13.7	0.0				9.4	0.0	0.0
Prop In Lane	0.00		0.35	1.00		0.00				0.71		0.27
Lane Grp Cap(c), veh/h	0	775	397	379	981	0				433	0	0
V/C Ratio(X)	0.00	0.53	0.54	0.84	0.72	0.00				0.83	0.00	0.00
Avail Cap(c_a), veh/h	0	3212	1644	934	1765	0				1447	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)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	15.4	15.5	17.3	8.0	0.0				16.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	1.1	2.0	0.9	0.0				1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	1.7	2.8	3.0	0.0				2.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.0	16.5	19.3	8.9	0.0				17.8	0.0	0.0
LnGrp LOS	A	B	B	B	A	A				B	A	A
Approach Vol, veh/h		627			1030						361	
Approach Delay, s/veh		16.2			12.1						17.8	
Approach LOS		B			B						B	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	14.1	15.5		16.6		29.6						
Change Period (Y+Rc), s	4.0	4.6		4.6		4.6						
Max Green Setting (Gmax), s	25.0	45.0		40.0		45.0						
Max Q Clear Time (g_c+I1), s	10.2	7.2		11.4		15.7						
Green Ext Time (p_c), s	0.1	3.7		0.7		4.5						

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	641	0	0	827	245	80	2	189	0	0	0
Future Volume (veh/h)	72	641	0	0	827	245	80	2	189	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1811	1811	0	0	1811	1811	1811	1811	1811			
Adj Flow Rate, veh/h	82	728	0	0	940	260	91	2	123			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	6	6	0	0	6	6	6	6	6			
Cap, veh/h	119	2213	0	0	1291	356	114	3	155			
Arrive On Green	0.07	0.64	0.00	0.00	0.49	0.49	0.17	0.17	0.17			
Sat Flow, veh/h	1725	3532	0	0	2711	722	679	15	918			
Grp Volume(v), veh/h	82	728	0	0	616	584	216	0	0			
Grp Sat Flow(s),veh/h/ln	1725	1721	0	0	1721	1623	1612	0	0			
Q Serve(g_s), s	2.3	4.7	0.0	0.0	13.8	13.9	6.3	0.0	0.0			
Cycle Q Clear(g_c), s	2.3	4.7	0.0	0.0	13.8	13.9	6.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.45	0.42		0.57			
Lane Grp Cap(c), veh/h	119	2213	0	0	847	799	271	0	0			
V/C Ratio(X)	0.69	0.33	0.00	0.00	0.73	0.73	0.80	0.00	0.00			
Avail Cap(c_a), veh/h	883	3172	0	0	1586	1496	1321	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	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	22.2	3.9	0.0	0.0	9.8	9.8	19.5	0.0	0.0			
Incr Delay (d2), s/veh	2.7	0.1	0.0	0.0	1.1	1.2	2.0	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	0.9	0.6	0.0	0.0	3.4	3.3	2.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	4.0	0.0	0.0	10.9	11.0	21.5	0.0	0.0			
LnGrp LOS	C	A	A	A	B	B	C	A	A			
Approach Vol, veh/h		810			1200			216				
Approach Delay, s/veh		6.1			10.9			21.5				
Approach LOS		A			B			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		36.0			7.4	28.6		12.8				
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6				
Max Green Setting (Gmax), s		45.0			25.0	45.0		40.0				
Max Q Clear Time (g_c+I1), s		6.7			4.3	15.9		8.3				
Green Ext Time (p_c), s		4.7			0.0	8.1		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			10.2									
HCM 6th LOS			B									

Intersection												
Int Delay, s/veh	1											
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations												
Traffic Vol, veh/h	0	680	150	0	955	0	0	0	14	0	0	117
Future Vol, veh/h	0	680	150	0	955	0	0	0	14	0	0	117
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	773	170	0	1085	0	0	0	16	0	0	133

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	474	-	-	543
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.02	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.36	-	-	3.36
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	526	0	0	474
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	525	-	-	474
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.1	15.5
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	525	-	-	-	474
HCM Lane V/C Ratio	0.03	-	-	-	0.28
HCM Control Delay (s)	12.1	-	-	-	15.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	387	140	77	536	53	208	111	71	54	96	145
Future Volume (veh/h)	189	387	140	77	536	53	208	111	71	54	96	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	215	440	159	88	609	60	236	126	81	61	109	165
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	247	930	333	114	940	92	268	556	334	103	298	263
Arrive On Green	0.14	0.38	0.38	0.07	0.30	0.30	0.16	0.27	0.27	0.06	0.17	0.17
Sat Flow, veh/h	1725	2480	888	1725	3156	310	1725	2062	1238	1725	1721	1516
Grp Volume(v), veh/h	215	304	295	88	332	337	236	104	103	61	109	165
Grp Sat Flow(s),veh/h/ln	1725	1721	1648	1725	1721	1745	1725	1721	1580	1725	1721	1516
Q Serve(g_s), s	11.4	12.5	12.8	4.7	15.7	15.7	12.5	4.4	4.8	3.2	5.2	9.4
Cycle Q Clear(g_c), s	11.4	12.5	12.8	4.7	15.7	15.7	12.5	4.4	4.8	3.2	5.2	9.4
Prop In Lane	1.00		0.54	1.00		0.18	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	247	645	618	114	513	520	268	464	426	103	298	263
V/C Ratio(X)	0.87	0.47	0.48	0.77	0.65	0.65	0.88	0.22	0.24	0.59	0.37	0.63
Avail Cap(c_a), veh/h	369	736	705	369	736	746	406	699	642	332	717	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	22.2	22.3	43.0	28.6	28.6	38.6	26.6	26.7	42.9	34.1	35.9
Incr Delay (d2), s/veh	9.8	1.1	1.2	12.5	2.9	2.9	9.6	0.5	0.6	2.0	1.6	5.2
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	4.9	4.8	2.3	6.4	6.6	5.8	1.8	1.8	1.4	2.2	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.0	23.3	23.5	55.5	31.5	31.5	48.2	27.1	27.3	44.9	35.7	41.0
LnGrp LOS	D	C	C	E	C	C	D	C	C	D	D	D
Approach Vol, veh/h		814			757			443			335	
Approach Delay, s/veh		30.2			34.3			38.4			40.0	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	40.6	19.6	22.2	18.4	33.4	10.6	31.2
Change Period (Y+Rc), s	5.0	5.5	5.0	6.0	5.0	5.5	5.0	6.0
Max Green Setting (Gmax), s	20.0	40.0	22.0	39.0	20.0	40.0	18.0	38.0
Max Q Clear Time (g_c+I1), s	6.7	14.8	14.5	11.4	13.4	17.7	5.2	6.8
Green Ext Time (p_c), s	0.2	6.8	0.0	3.0	0.0	7.2	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	34.4
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)	64	320	95	61	404	64	137	153	52	44	123	56
Future Volume (veh/h)	64	320	95	61	404	64	137	153	52	44	123	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	74	368	109	70	464	74	157	176	60	51	141	64
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, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	95	695	589	90	578	92	199	306	104	76	303	251
Arrive On Green	0.06	0.39	0.39	0.05	0.39	0.39	0.12	0.24	0.24	0.04	0.17	0.17
Sat Flow, veh/h	1697	1781	1510	1697	1494	238	1697	1262	430	1697	1781	1476
Grp Volume(v), veh/h	74	368	109	70	0	538	157	0	236	51	141	64
Grp Sat Flow(s),veh/h/ln	1697	1781	1510	1697	0	1732	1697	0	1692	1697	1781	1476
Q Serve(g_s), s	3.1	11.4	3.4	2.9	0.0	19.8	6.4	0.0	8.8	2.1	5.1	2.7
Cycle Q Clear(g_c), s	3.1	11.4	3.4	2.9	0.0	19.8	6.4	0.0	8.8	2.1	5.1	2.7
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	95	695	589	90	0	670	199	0	411	76	303	251
V/C Ratio(X)	0.78	0.53	0.18	0.78	0.00	0.80	0.79	0.00	0.57	0.68	0.47	0.26
Avail Cap(c_a), veh/h	592	921	780	592	0	1016	592	0	945	592	1294	1072
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00
Uniform Delay (d), s/veh	33.3	16.8	14.3	33.5	0.0	19.5	30.7	0.0	23.9	33.7	26.8	25.8
Incr Delay (d2), s/veh	12.6	1.3	0.3	13.4	0.0	5.1	6.8	0.0	2.0	10.0	1.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.2	1.1	1.5	0.0	7.7	2.8	0.0	3.4	1.0	2.1	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	18.1	14.7	46.9	0.0	24.6	37.5	0.0	25.9	43.7	28.6	26.6
LnGrp LOS	D	B	B	D	A	C	D	A	C	D	C	C
Approach Vol, veh/h		551			608			393			256	
Approach Delay, s/veh		21.2			27.2			30.5			31.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	33.9	7.2	22.7	8.0	33.7	12.4	17.5
Change Period (Y+Rc), s	4.0	6.0	4.0	5.3	4.0	6.0	4.0	5.3
Max Green Setting (Gmax), s	25.0	37.0	25.0	40.0	25.0	42.0	25.0	52.0
Max Q Clear Time (g_c+I1), s	4.9	13.4	4.1	10.8	5.1	21.8	8.4	7.1
Green Ext Time (p_c), s	0.1	4.8	0.1	2.1	0.1	5.9	0.3	1.6

Intersection Summary	
HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	0.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	566	500	16	33	11
Future Vol, veh/h	13	566	500	16	33	11
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	7	7	7	7	7	7
Mvmt Flow	15	658	581	19	38	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	601	0	-	0	951	301
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	359	-
Critical Hdwy	4.24	-	-	-	6.94	7.04
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.27	-	-	-	3.57	3.37
Pot Cap-1 Maneuver	939	-	-	-	249	680
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	663	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	938	-	-	-	245	679
Mov Cap-2 Maneuver	-	-	-	-	245	-
Stage 1	-	-	-	-	493	-
Stage 2	-	-	-	-	662	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	19.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	938	-	-	-	292
HCM Lane V/C Ratio	0.016	-	-	-	0.175
HCM Control Delay (s)	8.9	-	-	-	19.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	666	69	113	663	32	68	7	144	19	10	6
Future Volume (veh/h)	18	666	69	113	663	32	68	7	144	19	10	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	20	748	21	127	745	34	76	8	6	21	11	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	44	1387	421	175	1194	54	129	60	45	46	26	0
Arrive On Green	0.03	0.28	0.28	0.10	0.36	0.36	0.07	0.06	0.06	0.03	0.01	0.00
Sat Flow, veh/h	1725	4944	1502	1725	3347	153	1725	961	721	1725	1811	0
Grp Volume(v), veh/h	20	748	21	127	383	396	76	0	14	21	11	0
Grp Sat Flow(s),veh/h/ln	1725	1648	1502	1725	1721	1780	1725	0	1681	1725	1811	0
Q Serve(g_s), s	0.4	4.5	0.4	2.5	6.4	6.4	1.5	0.0	0.3	0.4	0.2	0.0
Cycle Q Clear(g_c), s	0.4	4.5	0.4	2.5	6.4	6.4	1.5	0.0	0.3	0.4	0.2	0.0
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.43	1.00		0.00
Lane Grp Cap(c), veh/h	44	1387	421	175	614	635	129	0	106	46	26	0
V/C Ratio(X)	0.46	0.54	0.05	0.73	0.62	0.62	0.59	0.00	0.13	0.46	0.42	0.00
Avail Cap(c_a), veh/h	986	5655	1718	986	1968	2035	982	0	1923	986	2072	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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.8	10.7	9.2	15.2	9.3	9.3	15.7	0.0	15.5	16.8	17.1	0.0
Incr Delay (d2), s/veh	2.8	0.1	0.0	2.2	0.4	0.4	1.6	0.0	0.2	2.7	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	0.2	1.0	0.1	0.8	1.4	1.4	0.5	0.0	0.1	0.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	10.8	9.2	17.4	9.7	9.7	17.3	0.0	15.7	19.5	21.0	0.0
LnGrp LOS	B	B	A	B	A	A	B	A	B	B	C	A
Approach Vol, veh/h		789			906			90			32	
Approach Delay, s/veh		11.0			10.8			17.0			20.0	
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	18.2	5.0	6.8	7.6	15.5	6.7	5.1
Change Period (Y+Rc), s	4.1	5.7	4.1	4.6	4.1	5.7	4.1	4.6
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.0	19.9	40.0
Max Q Clear Time (g_c+I1), s	2.4	8.4	2.4	2.3	4.5	6.5	3.5	2.2
Green Ext Time (p_c), s	0.0	0.5	0.0	0.0	0.1	3.3	0.1	0.0

Intersection Summary		
HCM 6th Ctrl Delay		11.3
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	747	82	91	499	56	93	0	369	42	272	216
Future Volume (veh/h)	0	747	82	91	499	56	93	0	369	42	272	216
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	1811	1811	0	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	839	20	102	561	25	104	0	415	47	306	26
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	6	6	6	6	6	6	0	6	6	6	6
Cap, veh/h	0	1630	554	210	1722	751	138	0	0	75	575	452
Arrive On Green	0.00	0.37	0.37	0.06	0.50	0.50	0.08	0.00	0.00	0.04	0.17	0.17
Sat Flow, veh/h	0	4781	1515	3346	3441	1502	1725	104		1725	3441	2701
Grp Volume(v), veh/h	0	839	20	102	561	25	104	42.9		47	306	26
Grp Sat Flow(s),veh/h/ln	0	1485	1515	1673	1721	1502	1725	D		1725	1721	1351
Q Serve(g_s), s	0.0	10.0	0.6	2.0	6.6	0.6	4.0			1.8	5.5	0.6
Cycle Q Clear(g_c), s	0.0	10.0	0.6	2.0	6.6	0.6	4.0			1.8	5.5	0.6
Prop In Lane	0.00		1.00	1.00		1.00	1.00			1.00		1.00
Lane Grp Cap(c), veh/h	0	1630	554	210	1722	751	138			75	575	452
V/C Ratio(X)	0.00	0.51	0.04	0.49	0.33	0.03	0.75			0.63	0.53	0.06
Avail Cap(c_a), veh/h	0	3985	1356	981	3078	1343	506			506	1867	1466
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.9	13.9	30.9	10.2	8.7	30.7			32.1	26.0	23.9
Incr Delay (d2), s/veh	0.0	0.5	0.1	2.8	0.2	0.0	12.2			13.1	1.7	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
%ile BackOfQ(50%),veh/ln	0.0	3.0	0.2	0.8	2.0	0.2	2.0			1.0	2.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.4	14.0	33.6	10.4	8.7	42.9			45.2	27.7	24.0
LnGrp LOS	A	B	B	C	B	A	D			D	C	C
Approach Vol, veh/h		859			688						379	
Approach Delay, s/veh		17.3			13.8						29.6	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2	3	4		6	7
Phs Duration (G+Y+Rc), s	9.2	30.9	10.2	17.9		40.1	7.6
Change Period (Y+Rc), s	4.9	* 6	* 4.7	6.5		6.0	* 4.7
Max Green Setting (Gmax), s	20.0	* 61	* 20	37.0		61.0	* 20
Max Q Clear Time (g_c+I1), s	4.0	12.0	6.0	7.5		8.6	3.8
Green Ext Time (p_c), s	0.4	12.9	0.3	3.9		8.0	0.1

Intersection Summary		
HCM 6th Ctrl Delay		19.7
HCM 6th LOS		B

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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	299	453	75	318	328	20
Future Volume (veh/h)	299	453	75	318	328	20
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	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	336	0	84	357	369	22
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	962		136	1619	733	336
Arrive On Green	0.28	0.00	0.08	0.47	0.22	0.22
Sat Flow, veh/h	3532	1535	1725	3532	3346	1535
Grp Volume(v), veh/h	336	0	84	357	369	22
Grp Sat Flow(s),veh/h/ln	1721	1535	1725	1721	1673	1535
Q Serve(g_s), s	2.8	0.0	1.7	2.2	3.5	0.4
Cycle Q Clear(g_c), s	2.8	0.0	1.7	2.2	3.5	0.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	962		136	1619	733	336
V/C Ratio(X)	0.35		0.62	0.22	0.50	0.07
Avail Cap(c_a), veh/h	3367		965	3367	2152	987
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	10.3	0.0	15.9	5.6	12.3	11.1
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.0	0.2	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	0.7	0.0	0.6	0.3	0.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.4	0.0	17.6	5.6	12.5	11.1
LnGrp LOS	B		B	A	B	B
Approach Vol, veh/h	336			441	391	
Approach Delay, s/veh	10.4			7.9	12.4	
Approach LOS	B			A	B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.8	16.2				23.0		12.7
Change Period (Y+Rc), s	4.0	* 6.2				6.2		4.9
Max Green Setting (Gmax), s	20.0	* 35				35.0		23.0
Max Q Clear Time (g_c+I1), s	3.7	4.8				4.2		5.5
Green Ext Time (p_c), s	0.0	0.3				0.4		0.2

Intersection Summary			
HCM 6th Ctrl Delay			10.1
HCM 6th LOS			B

Notes

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

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)	1	3	1	22	13	53	6	245	17	39	170	6
Future Volume (veh/h)	1	3	1	22	13	53	6	245	17	39	170	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693
Adj Flow Rate, veh/h	1	3	1	25	15	60	7	278	19	44	193	7
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, %	14	14	14	14	14	14	14	14	14	14	14	14
Cap, veh/h	191	128	139	195	20	81	18	495	420	83	1053	38
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.01	0.29	0.29	0.05	0.33	0.33
Sat Flow, veh/h	312	1328	1434	348	209	835	1612	1693	1434	1612	3163	114
Grp Volume(v), veh/h	4	0	1	100	0	0	7	278	19	44	98	102
Grp Sat Flow(s),veh/h/ln	1639	0	1434	1392	0	0	1612	1693	1434	1612	1608	1669
Q Serve(g_s), s	0.0	0.0	0.0	1.9	0.0	0.0	0.1	3.9	0.3	0.7	1.2	1.2
Cycle Q Clear(g_c), s	0.1	0.0	0.0	2.0	0.0	0.0	0.1	3.9	0.3	0.7	1.2	1.2
Prop In Lane	0.25		1.00	0.25		0.60	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	320	0	139	296	0	0	18	495	420	83	535	556
V/C Ratio(X)	0.01	0.00	0.01	0.34	0.00	0.00	0.38	0.56	0.05	0.53	0.18	0.18
Avail Cap(c_a), veh/h	1546	0	1285	1944	0	0	1502	2608	2210	1444	2478	2572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.4	0.0	11.4	12.3	0.0	0.0	13.7	8.4	7.1	12.9	6.6	6.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	4.8	1.4	0.1	1.9	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.7	0.0	0.2	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.4	0.0	11.4	12.6	0.0	0.0	18.5	9.8	7.1	14.8	6.8	6.8
LnGrp LOS	B	A	B	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		5			100			304			244	
Approach Delay, s/veh		11.4			12.6			9.8			8.3	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	14.4		7.4	5.0	15.5		7.4				
Change Period (Y+Rc), s	* 4.7	6.2		* 4.7	* 4.7	6.2		* 4.7				
Max Green Setting (Gmax), s	* 25	43.0		* 25	* 26	43.0		* 35				
Max Q Clear Time (g_c+I1), s	2.7	5.9		2.1	2.1	3.2		4.0				
Green Ext Time (p_c), s	0.0	2.3		0.0	0.0	1.5		0.3				

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

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)	0	0	0	44	0	13	0	254	11	4	183	0
Future Volume (veh/h)	0	0	0	44	0	13	0	254	11	4	183	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1722	1811	1722	0	1722	1722	1722	1722	0
Adj Flow Rate, veh/h				54	0	0	0	310	9	5	223	0
Peak Hour Factor				0.82	0.92	0.82	0.92	0.82	0.82	0.82	0.82	0.92
Percent Heavy Veh, %				12	6	12	0	12	12	12	12	0
Cap, veh/h				128	0	0	0	1179	34	13	926	0
Arrive On Green				0.07	0.00	0.00	0.00	0.36	0.36	0.01	0.54	0.00
Sat Flow, veh/h				1725	0	0	0	3331	94	1640	1722	0
Grp Volume(v), veh/h				54	0	0	0	156	163	5	223	0
Grp Sat Flow(s),veh/h/ln				1725	0	0	0	1636	1703	1640	1722	0
Q Serve(g_s), s				0.8	0.0	0.0	0.0	1.8	1.8	0.1	1.9	0.0
Cycle Q Clear(g_c), s				0.8	0.0	0.0	0.0	1.8	1.8	0.1	1.9	0.0
Prop In Lane				1.00		0.00	0.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h				128	0	0	0	594	619	13	926	0
V/C Ratio(X)				0.42	0.00	0.00	0.00	0.26	0.26	0.37	0.24	0.00
Avail Cap(c_a), veh/h				1977	0	0	0	3024	3147	1576	3183	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				12.0	0.0	0.0	0.0	6.1	6.1	13.3	3.3	0.0
Incr Delay (d2), s/veh				2.2	0.0	0.0	0.0	0.5	0.5	16.3	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.3	0.0	0.0	0.0	0.3	0.3	0.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				14.2	0.0	0.0	0.0	6.6	6.5	29.6	3.6	0.0
LnGrp LOS				B	A	A	A	A	A	C	A	A
Approach Vol, veh/h					54			319			228	
Approach Delay, s/veh					14.2			6.6			4.2	
Approach LOS					B			A			A	

Timer - Assigned Phs	1	2		4		6			
Phs Duration (G+Y+Rc), s	4.7	15.8		6.5		20.6			
Change Period (Y+Rc), s	4.5	6.0		4.5		6.0			
Max Green Setting (Gmax), s	26.0	50.0		31.0		50.0			
Max Q Clear Time (g_c+I1), s	2.1	3.8		2.8		3.9			
Green Ext Time (p_c), s	0.0	3.7		0.2		2.5			

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

Intersection						
Int Delay, s/veh	0.2					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	1	64	34	0
Future Vol, veh/h	0	1	1	64	34	0
Conflicting Peds, #/hr	0	0	1	0	0	1
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	89	89	89	89	89	89
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	0	1	1	72	38	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	113	39	39	0	-	0
Stage 1	39	-	-	-	-	-
Stage 2	74	-	-	-	-	-
Critical Hdwy	6.49	6.29	4.19	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.381	2.281	-	-	-
Pot Cap-1 Maneuver	867	1013	1527	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	864	1012	1526	-	-	-
Mov Cap-2 Maneuver	864	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	930	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1526	-	1012	-	-
HCM Lane V/C Ratio	0.001	-	0.001	-	-
HCM Control Delay (s)	7.4	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	137	17	16	334	12	13	4	18	62	32	51
Future Volume (veh/h)	117	137	17	16	334	12	13	4	18	62	32	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	130	152	19	18	371	13	14	4	20	69	36	57
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	166	369	46	63	707	25	27	8	38	109	57	145
Arrive On Green	0.10	0.25	0.25	0.04	0.23	0.23	0.05	0.05	0.05	0.10	0.10	0.10
Sat Flow, veh/h	1584	1449	181	1584	3114	109	550	157	786	1058	552	1409
Grp Volume(v), veh/h	130	0	171	18	188	196	38	0	0	105	0	57
Grp Sat Flow(s),veh/h/ln	1584	0	1630	1584	1580	1643	1494	0	0	1610	0	1409
Q Serve(g_s), s	4.2	0.0	4.6	0.6	5.5	5.5	1.3	0.0	0.0	3.3	0.0	2.0
Cycle Q Clear(g_c), s	4.2	0.0	4.6	0.6	5.5	5.5	1.3	0.0	0.0	3.3	0.0	2.0
Prop In Lane	1.00		0.11	1.00		0.07	0.37		0.53	0.66		1.00
Lane Grp Cap(c), veh/h	166	0	415	63	359	373	73	0	0	166	0	145
V/C Ratio(X)	0.78	0.00	0.41	0.29	0.52	0.53	0.52	0.00	0.00	0.63	0.00	0.39
Avail Cap(c_a), veh/h	779	0	928	899	1255	1306	452	0	0	853	0	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.1	0.0	16.4	24.7	17.9	17.9	24.6	0.0	0.0	22.7	0.0	22.2
Incr Delay (d2), s/veh	7.8	0.0	1.0	2.5	1.8	1.8	5.8	0.0	0.0	4.0	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	1.4	0.2	1.7	1.8	0.5	0.0	0.0	1.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	0.0	17.4	27.1	19.7	19.7	30.3	0.0	0.0	26.7	0.0	23.9
LnGrp LOS	C	A	B	C	B	B	C	A	A	C	A	C
Approach Vol, veh/h		301			402			38			162	
Approach Delay, s/veh		23.2			20.0			30.3			25.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	20.5		15.3	11.0	19.0		7.5				
Change Period (Y+Rc), s	7.5	* 7		* 9.9	5.5	7.0		4.9				
Max Green Setting (Gmax), s	30.0	* 30		* 28	26.0	42.0		16.0				
Max Q Clear Time (g_c+I1), s	2.6	6.6		5.3	6.2	7.5		3.3				
Green Ext Time (p_c), s	0.0	1.2		0.6	0.3	3.2		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		22.5
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)	83	119	15	3	182	155	16	24	1	8	0	164
Future Volume (veh/h)	83	119	15	3	182	155	16	24	1	8	0	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	92	132	15	3	202	152	18	27	0	9	0	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	139	523	59	9	242	182	43	64	0	25	0	22
Arrive On Green	0.09	0.36	0.36	0.01	0.27	0.27	0.07	0.07	0.00	0.02	0.00	0.02
Sat Flow, veh/h	1584	1466	167	1584	881	663	652	978	0	1584	0	1409
Grp Volume(v), veh/h	92	0	147	3	0	354	45	0	0	9	0	1
Grp Sat Flow(s),veh/h/ln	1584	0	1633	1584	0	1544	1630	0	0	1584	0	1409
Q Serve(g_s), s	2.7	0.0	3.1	0.1	0.0	10.5	1.3	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	2.7	0.0	3.1	0.1	0.0	10.5	1.3	0.0	0.0	0.3	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.43	0.40		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	0	582	9	0	424	107	0	0	25	0	22
V/C Ratio(X)	0.66	0.00	0.25	0.33	0.00	0.84	0.42	0.00	0.00	0.36	0.00	0.05
Avail Cap(c_a), veh/h	848	0	1077	881	0	1177	907	0	0	848	0	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.4	0.0	11.0	24.0	0.0	16.6	21.8	0.0	0.0	23.6	0.0	23.5
Incr Delay (d2), s/veh	2.0	0.0	0.1	7.7	0.0	1.7	1.0	0.0	0.0	3.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.8	0.1	0.0	3.4	0.5	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	0.0	11.1	31.7	0.0	18.3	22.8	0.0	0.0	27.0	0.0	23.8
LnGrp LOS	C	A	B	C	A	B	C	A	A	C	A	C
Approach Vol, veh/h		239			357			45			10	
Approach Delay, s/veh		15.9			18.4			22.8			26.6	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	24.3		8.7	10.6	20.3		9.0				
Change Period (Y+Rc), s	* 6.3	* 7		7.9	* 6.3	7.0		5.8				
Max Green Setting (Gmax), s	* 27	* 32		26.0	* 26	37.0		27.0				
Max Q Clear Time (g_c+I1), s	2.1	5.1		2.3	4.7	12.5		3.3				
Green Ext Time (p_c), s	0.0	0.1		0.0	0.0	0.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		17.9
HCM 6th LOS		B

Notes

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

Intersection	
Intersection Delay, s/veh	16.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	413	0	0	399	0	0	0	0	0	0	0
Future Vol, veh/h	0	413	0	0	399	0	0	0	0	0	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
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	449	0	0	434	0	0	0	0	0	0	0
Number of Lanes	1	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	3
HCM Control Delay	15.3	18.6	0	0
HCM LOS	C	C	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	413	0	399	0
LT Vol	0	0	0	0	0	0	0
Through Vol	0	0	0	413	0	399	0
RT Vol	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	449	0	434	0
Geometry Grp	8	8	7	7	7	8	8
Degree of Util (X)	0	0	0	0.616	0	0.665	0
Departure Headway (Hd)	7.039	7.039	4.94	4.94	4.94	5.524	7.039
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	732	0	655	0
Service Time	4.835	4.835	2.66	2.66	2.66	3.249	4.835
HCM Lane V/C Ratio	0	0	0	0.613	0	0.663	0
HCM Control Delay	9.8	9.8	7.7	15.3	7.7	18.6	9.8
HCM Lane LOS	N	N	N	C	N	C	N
HCM 95th-tile Q	0	0	0	4.3	0	5	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
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	
Adj Sat Flow, veh/h/ln							0	1811	0	0	1811	0
Adj Flow Rate, veh/h							0	0	0	0	0	0
Peak Hour Factor							0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %							0	6	0	0	6	0
Cap, veh/h							0	1449	0	0	1449	0
Arrive On Green							0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h							0	1811	0	0	1811	0
Grp Volume(v), veh/h							0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln							0	1811	0	0	1811	0
Q Serve(g_s), s							0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s							0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane							0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h							0	1449	0	0	1449	0
V/C Ratio(X)							0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h							0	1449	0	0	1449	0
HCM Platoon Ratio							1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)							0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh							0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh							0.0	0.0	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
%ile BackOfQ(50%),veh/ln							0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh							0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS							A	A	A	A	A	A
Approach Vol, veh/h								0			0	
Approach Delay, s/veh								0.0			0.0	
Approach LOS												

Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		22.5				22.5
Change Period (Y+Rc), s		4.5				4.5
Max Green Setting (Gmax), s		18.0				18.0
Max Q Clear Time (g_c+I1), s		0.0				0.0
Green Ext Time (p_c), s		0.0				0.0

Intersection Summary		
HCM 6th Ctrl Delay		0.0
HCM 6th LOS		A

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	694	0	0	889	0	0	0	22	0	0	66
Future Vol, veh/h	0	694	0	0	889	0	0	0	22	0	0	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	754	0	0	966	0	0	0	24	0	0	72

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	-	-	-	0	-	-	377	-	-	483
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.22	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.96	-	-	3.36
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	521	0	0	519
Stage 1	0	-	0	0	-	0	0	0	-	0	0	-
Stage 2	0	-	0	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-			-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	521	-	-	519
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.2	13
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT	SBLn1
Capacity (veh/h)	521	-	-	519
HCM Lane V/C Ratio	0.046	-	-	0.138
HCM Control Delay (s)	12.2	-	-	13
HCM Lane LOS	B	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	474	192	65	260	157	63
Future Volume (veh/h)	474	192	65	260	157	63
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	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	504	204	69	277	167	67
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	784	664	103	1090	307	273
Arrive On Green	0.43	0.43	0.06	0.60	0.18	0.18
Sat Flow, veh/h	1811	1535	1725	1811	1725	1535
Grp Volume(v), veh/h	504	204	69	277	167	67
Grp Sat Flow(s),veh/h/ln	1811	1535	1725	1811	1725	1535
Q Serve(g_s), s	11.9	4.7	2.1	3.9	4.8	2.0
Cycle Q Clear(g_c), s	11.9	4.7	2.1	3.9	4.8	2.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	784	664	103	1090	307	273
V/C Ratio(X)	0.64	0.31	0.67	0.25	0.54	0.25
Avail Cap(c_a), veh/h	1328	1125	632	1328	632	563
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	12.2	10.1	25.1	5.1	20.4	19.3
Incr Delay (d2), s/veh	3.2	0.9	7.4	0.4	5.4	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	1.3	0.9	0.8	2.0	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.4	11.1	32.6	5.5	25.8	21.0
LnGrp LOS	B	B	C	A	C	C
Approach Vol, veh/h	708			346	234	
Approach Delay, s/veh	14.1			10.9	24.4	
Approach LOS	B			B	C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.2	29.6		15.7		38.9
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	20.0	40.0		20.0		40.0
Max Q Clear Time (g_c+I1), s	4.1	13.9		6.8		5.9
Green Ext Time (p_c), s	0.1	9.7		1.6		3.9

Intersection Summary		
HCM 6th Ctrl Delay		15.1
HCM 6th LOS		B

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	56	44	210	252	6
Future Vol, veh/h	20	56	44	210	252	6
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	86	86	86	86	86	86
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	23	65	51	244	293	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	643	297	300	0	-	0
Stage 1	297	-	-	-	-	-
Stage 2	346	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	435	738	1250	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	415	738	1250	-	-	-
Mov Cap-2 Maneuver	415	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	712	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1250	-	613	-	-
HCM Lane V/C Ratio	0.041	-	0.144	-	-
HCM Control Delay (s)	8	0	11.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	20	28	252	297	19
Future Vol, veh/h	5	20	28	252	297	19
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	100	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	6	22	31	283	334	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	690	345	355	0	-	0
Stage 1	345	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	409	696	1198	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	398	696	1198	-	-	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1198	-	398	696	-	-
HCM Lane V/C Ratio	0.026	-	0.014	0.032	-	-
HCM Control Delay (s)	8.1	-	14.2	10.3	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2	50	48	1	12	59	267	59	16	294	6
Future Volume (veh/h)	3	2	50	48	1	12	59	267	59	16	294	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		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	3	2	1	52	1	1	63	287	52	17	316	5
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	9	12	6	123	63	63	142	1066	190	47	1080	17
Arrive On Green	0.00	0.01	0.01	0.07	0.07	0.07	0.08	0.36	0.36	0.03	0.30	0.30
Sat Flow, veh/h	1781	1176	588	1781	858	858	1781	3001	536	1781	3579	57
Grp Volume(v), veh/h	3	0	3	52	0	2	63	168	171	17	157	164
Grp Sat Flow(s),veh/h/ln	1781	0	1764	1781	0	1716	1781	1777	1760	1781	1777	1859
Q Serve(g_s), s	0.1	0.0	0.1	0.9	0.0	0.0	1.1	2.2	2.3	0.3	2.2	2.2
Cycle Q Clear(g_c), s	0.1	0.0	0.1	0.9	0.0	0.0	1.1	2.2	2.3	0.3	2.2	2.2
Prop In Lane	1.00		0.33	1.00		0.50	1.00		0.30	1.00		0.03
Lane Grp Cap(c), veh/h	9	0	17	123	0	127	142	631	625	47	536	561
V/C Ratio(X)	0.34	0.00	0.17	0.42	0.00	0.02	0.44	0.27	0.27	0.36	0.29	0.29
Avail Cap(c_a), veh/h	1128	0	1224	1128	0	1191	1397	2144	2124	1397	2139	2237
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	0.0	16.3	14.8	0.0	14.2	14.6	7.6	7.6	15.9	8.9	8.9
Incr Delay (d2), s/veh	21.4	0.0	4.7	2.3	0.0	0.0	2.2	0.3	0.3	4.7	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.4	0.0	0.0	0.4	0.5	0.5	0.2	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	0.0	21.0	17.1	0.0	14.3	16.7	7.9	8.0	20.6	9.3	9.3
LnGrp LOS	D	A	C	B	A	B	B	A	A	C	A	A
Approach Vol, veh/h		6			54			402			338	
Approach Delay, s/veh		29.4			17.0			9.3			9.8	
Approach LOS		C			B			A			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	17.1	6.3	4.9	6.6	15.3	4.2	7.0
Change Period (Y+Rc), s	4.0	5.3	4.0	4.6	4.0	5.3	4.0	4.6
Max Green Setting (Gmax), s	26.0	40.0	21.0	23.0	26.0	39.9	21.0	23.0
Max Q Clear Time (g_c+I1), s	2.3	4.3	2.9	2.1	3.1	4.2	2.1	2.0
Green Ext Time (p_c), s	0.0	2.8	0.1	0.0	0.1	2.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

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)	120	543	130	247	411	147	105	257	257	168	240	54
Future Volume (veh/h)	120	543	130	247	411	147	105	257	257	168	240	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	126	572	59	260	433	131	111	271	120	177	253	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	165	883	389	314	892	267	146	442	190	225	695	114
Arrive On Green	0.09	0.25	0.25	0.18	0.33	0.33	0.08	0.19	0.19	0.13	0.23	0.23
Sat Flow, veh/h	1767	3526	1552	1767	2664	798	1767	2389	1027	1767	3026	495
Grp Volume(v), veh/h	126	572	59	260	285	279	111	198	193	177	146	149
Grp Sat Flow(s),veh/h/ln	1767	1763	1552	1767	1763	1700	1767	1763	1653	1767	1763	1758
Q Serve(g_s), s	4.8	10.1	2.1	9.8	8.9	9.1	4.3	7.1	7.5	6.7	4.8	5.0
Cycle Q Clear(g_c), s	4.8	10.1	2.1	9.8	8.9	9.1	4.3	7.1	7.5	6.7	4.8	5.0
Prop In Lane	1.00		1.00	1.00		0.47	1.00		0.62	1.00		0.28
Lane Grp Cap(c), veh/h	165	883	389	314	590	569	146	326	306	225	405	404
V/C Ratio(X)	0.77	0.65	0.15	0.83	0.48	0.49	0.76	0.61	0.63	0.79	0.36	0.37
Avail Cap(c_a), veh/h	612	1780	784	612	890	858	612	1017	954	612	1017	1015
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	23.2	20.2	27.5	18.3	18.3	31.1	25.9	26.1	29.3	22.4	22.5
Incr Delay (d2), s/veh	7.2	1.1	0.3	5.6	0.9	0.9	7.9	2.6	3.0	6.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.8	0.7	4.2	3.3	3.2	2.0	3.0	3.0	3.0	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	24.4	20.5	33.0	19.2	19.3	39.0	28.5	29.1	35.4	23.2	23.3
LnGrp LOS	D	C	C	C	B	B	D	C	C	D	C	C
Approach Vol, veh/h		757			824			502			472	
Approach Delay, s/veh		26.3			23.6			31.1			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	16.3	22.4	9.7	20.9	10.5	28.2	12.8	17.8
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	24.0	35.0	24.0	40.0	24.0	35.0	24.0	40.0
Max Q Clear Time (g_c+I1), s	11.8	12.1	6.3	7.0	6.8	11.1	8.7	9.5
Green Ext Time (p_c), s	0.6	5.3	0.2	2.3	0.3	4.6	0.4	3.4

Intersection Summary			
HCM 6th Ctrl Delay			26.6
HCM 6th LOS			C

Intersection	
Int Delay, s/veh	10.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	121	36	164	49	0	0	0	0	281	3	26
Future Vol, veh/h	0	121	36	164	49	0	0	0	0	281	3	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	0	-	520
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	25	25	25	25	25	25	25	25	25	25	25	25
Mvmt Flow	0	129	38	174	52	0	0	0	0	299	3	28

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	167	0	0				465	567	26
Stage 1	-	-	-	-	-	-				400	400	-
Stage 2	-	-	-	-	-	-				65	167	-
Critical Hdwy	-	-	-	4.6	-	-				7.3	7	7.4
Critical Hdwy Stg 1	-	-	-	-	-	-				6.3	6	-
Critical Hdwy Stg 2	-	-	-	-	-	-				6.3	6	-
Follow-up Hdwy	-	-	-	2.45	-	-				3.75	4.25	3.55
Pot Cap-1 Maneuver	0	-	-	1256	-	0				472	386	974
Stage 1	0	-	-	-	-	0				583	546	-
Stage 2	0	-	-	-	-	0				886	707	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1256	-	-				406	0	974
Mov Cap-2 Maneuver	-	-	-	-	-	-				406	0	-
Stage 1	-	-	-	-	-	-				583	0	-
Stage 2	-	-	-	-	-	-				763	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	6.4	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1256	-	406	465
HCM Lane V/C Ratio	-	-	0.139	-	0.491	0.281
HCM Control Delay (s)	-	-	8.3	-	22.1	15.7
HCM Lane LOS	-	-	A	-	C	C
HCM 95th %tile Q(veh)	-	-	0.5	-	2.6	1.1

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	373	0	0	193	257	20	1	168	0	0	0
Future Vol, veh/h	29	373	0	0	193	257	20	1	168	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Stop	-	-	None
Storage Length	0	-	-	-	-	-	630	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	25	25	25	25	25	25	25	25	25	25	25	25
Mvmt Flow	31	397	0	0	205	273	21	1	179	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	205	0	-	-	-	0	664	664	199
Stage 1	-	-	-	-	-	-	459	459	-
Stage 2	-	-	-	-	-	-	205	205	-
Critical Hdwy	4.475	-	-	-	-	-	6.975	6.875	7.275
Critical Hdwy Stg 1	-	-	-	-	-	-	6.175	5.875	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.775	5.875	-
Follow-up Hdwy	2.4375	-	-	-	-	-	3.7375	4.2375	3.5375
Pot Cap-1 Maneuver	1226	-	0	0	-	0	368	345	749
Stage 1	-	-	0	0	-	0	551	520	-
Stage 2	-	-	0	0	-	0	770	684	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	1226	-	-	-	-	-	359	0	749
Mov Cap-2 Maneuver	-	-	-	-	-	-	359	0	-
Stage 1	-	-	-	-	-	-	537	0	-
Stage 2	-	-	-	-	-	-	770	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.6	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	359	749	1226	-	-
HCM Lane V/C Ratio	0.062	0.239	0.025	-	-
HCM Control Delay (s)	15.7	11.3	8	-	-
HCM Lane LOS	C	B	A	-	-
HCM 95th %tile Q(veh)	0.2	0.9	0.1	-	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	134	72	296	247	67
Future Volume (veh/h)	115	134	72	296	247	67
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	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	134	12	84	344	287	50
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	15	15	15	15	15	15
Cap, veh/h	180	160	106	851	812	140
Arrive On Green	0.11	0.11	0.07	0.51	0.30	0.30
Sat Flow, veh/h	1598	1422	1598	1678	2803	468
Grp Volume(v), veh/h	134	12	84	344	167	170
Grp Sat Flow(s),veh/h/ln	1598	1422	1598	1678	1594	1593
Q Serve(g_s), s	2.6	0.2	1.6	4.0	2.6	2.6
Cycle Q Clear(g_c), s	2.6	0.2	1.6	4.0	2.6	2.6
Prop In Lane	1.00	1.00	1.00			0.29
Lane Grp Cap(c), veh/h	180	160	106	851	476	476
V/C Ratio(X)	0.74	0.07	0.80	0.40	0.35	0.36
Avail Cap(c_a), veh/h	1215	1081	1215	2073	1969	1969
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	13.6	12.5	14.5	4.8	8.7	8.7
Incr Delay (d2), s/veh	6.0	0.2	17.2	1.1	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.1	0.9	0.4	0.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.5	12.7	31.8	5.9	10.3	10.3
LnGrp LOS	B	B	C	A	B	B
Approach Vol, veh/h	146			428	337	
Approach Delay, s/veh	19.0			11.0	10.3	
Approach LOS	B			B	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.6	15.4		9.6		22.0
Change Period (Y+Rc), s	4.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	24.0	39.0		24.0		39.0
Max Q Clear Time (g_c+I1), s	3.6	4.6		4.6		6.0
Green Ext Time (p_c), s	0.3	4.8		0.4		5.1
Intersection Summary						
HCM 6th Ctrl Delay			12.0			
HCM 6th LOS			B			

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)	0	615	66	226	390	0	0	0	0	356	18	96
Future Volume (veh/h)	0	615	66	226	390	0	0	0	0	356	18	96
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1841	1841	0				1841	1841	1841
Adj Flow Rate, veh/h	0	683	73	251	433	0				396	20	107
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	4	4	4	4	0				4	4	4
Cap, veh/h	0	1136	120	302	905	0				444	22	120
Arrive On Green	0.00	0.25	0.25	0.17	0.49	0.00				0.34	0.34	0.34
Sat Flow, veh/h	0	4757	486	1753	1841	0				1297	65	350
Grp Volume(v), veh/h	0	496	260	251	433	0				523	0	0
Grp Sat Flow(s),veh/h/ln	0	1675	1727	1753	1841	0				1713	0	0
Q Serve(g_s), s	0.0	7.3	7.4	7.7	8.7	0.0				16.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	7.3	7.4	7.7	8.7	0.0				16.0	0.0	0.0
Prop In Lane	0.00		0.28	1.00		0.00				0.76		0.20
Lane Grp Cap(c), veh/h	0	829	427	302	905	0				586	0	0
V/C Ratio(X)	0.00	0.60	0.61	0.83	0.48	0.00				0.89	0.00	0.00
Avail Cap(c_a), veh/h	0	2115	1090	632	1162	0				1081	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)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.4	18.5	22.2	9.4	0.0				17.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	1.3	2.3	0.4	0.0				1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	2.6	2.9	2.5	0.0				5.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.1	19.7	24.5	9.7	0.0				19.2	0.0	0.0
LnGrp LOS	A	B	B	C	A	A				B	A	A
Approach Vol, veh/h		756			684						523	
Approach Delay, s/veh		19.3			15.1						19.2	
Approach LOS		B			B						B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	13.5	18.3		23.6		31.9
Change Period (Y+Rc), s	4.0	4.6		4.6		4.6
Max Green Setting (Gmax), s	20.0	35.0		35.0		35.0
Max Q Clear Time (g_c+I1), s	9.7	9.4		18.0		10.7
Green Ext Time (p_c), s	0.1	4.3		1.0		2.2

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	898	0	0	575	248	41	2	419	0	0	0
Future Volume (veh/h)	73	898	0	0	575	248	41	2	419	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1841	0	0	1841	1841	1841	1841	1841			
Adj Flow Rate, veh/h	81	998	0	0	639	276	46	2	466			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	4	4	0	0	4	4	4	4	4			
Cap, veh/h	107	1712	0	0	843	364	51	2	514			
Arrive On Green	0.06	0.49	0.00	0.00	0.36	0.36	0.36	0.36	0.36			
Sat Flow, veh/h	1753	3589	0	0	2416	1003	141	6	1429			
Grp Volume(v), veh/h	81	998	0	0	481	434	514	0	0			
Grp Sat Flow(s),veh/h/ln	1753	1749	0	0	1749	1578	1576	0	0			
Q Serve(g_s), s	2.8	12.4	0.0	0.0	14.7	14.7	18.9	0.0	0.0			
Cycle Q Clear(g_c), s	2.8	12.4	0.0	0.0	14.7	14.7	18.9	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.64	0.09		0.91			
Lane Grp Cap(c), veh/h	107	1712	0	0	635	573	567	0	0			
V/C Ratio(X)	0.76	0.58	0.00	0.00	0.76	0.76	0.91	0.00	0.00			
Avail Cap(c_a), veh/h	575	2007	0	0	1003	906	905	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	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	28.2	11.1	0.0	0.0	17.1	17.1	18.6	0.0	0.0			
Incr Delay (d2), s/veh	4.0	0.3	0.0	0.0	1.7	1.9	5.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	3.6	0.0	0.0	5.1	4.6	6.5	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.2	11.4	0.0	0.0	18.8	19.0	24.2	0.0	0.0			
LnGrp LOS	C	B	A	A	B	B	C	A	A			
Approach Vol, veh/h		1079			915			514				
Approach Delay, s/veh		13.0			18.9			24.2				
Approach LOS		B			B			C				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		34.5			7.7	26.7		26.5				
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6				
Max Green Setting (Gmax), s		35.0			20.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s		14.4			4.8	16.7		20.9				
Green Ext Time (p_c), s		6.1			0.0	5.0		1.0				

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

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1058	259	0	761	0	0	0	35	0	0	62
Future Vol, veh/h	0	1058	259	0	761	0	0	0	35	0	0	62
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	1176	288	0	846	0	0	0	39	0	0	69

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	734	-	-	423
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.98	-	-	6.98
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.34	-	-	3.34
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	358	0	0	574
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	357	-	-	574
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	16.3	12.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	357	-	-	-	574
HCM Lane V/C Ratio	0.109	-	-	-	0.12
HCM Control Delay (s)	16.3	-	-	-	12.1
HCM Lane LOS	C	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	206	720	172	102	374	103	229	210	105	113	130	111
Future Volume (veh/h)	206	720	172	102	374	103	229	210	105	113	130	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	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	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	229	800	191	113	416	114	254	233	117	126	144	123
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	261	1012	242	144	801	217	286	547	265	155	304	237
Arrive On Green	0.15	0.36	0.36	0.08	0.30	0.30	0.16	0.24	0.24	0.09	0.17	0.17
Sat Flow, veh/h	1753	2787	665	1753	2700	731	1753	2276	1102	1753	1837	1433
Grp Volume(v), veh/h	229	502	489	113	268	262	254	177	173	126	136	131
Grp Sat Flow(s),veh/h/ln	1753	1749	1704	1753	1749	1682	1753	1749	1629	1753	1749	1522
Q Serve(g_s), s	12.2	24.4	24.4	6.0	12.1	12.4	13.5	8.1	8.6	6.7	6.7	7.5
Cycle Q Clear(g_c), s	12.2	24.4	24.4	6.0	12.1	12.4	13.5	8.1	8.6	6.7	6.7	7.5
Prop In Lane	1.00		0.39	1.00		0.43	1.00		0.68	1.00		0.94
Lane Grp Cap(c), veh/h	261	635	619	144	519	499	286	420	391	155	289	252
V/C Ratio(X)	0.88	0.79	0.79	0.78	0.52	0.53	0.89	0.42	0.44	0.81	0.47	0.52
Avail Cap(c_a), veh/h	368	735	716	368	735	707	405	698	650	331	716	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	27.1	27.1	42.8	27.8	27.9	39.0	30.6	30.7	42.6	36.0	36.3
Incr Delay (d2), s/veh	12.3	6.6	6.8	10.6	1.7	1.8	12.5	1.4	1.7	3.8	2.5	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	10.5	10.3	2.9	5.0	4.9	6.6	3.5	3.4	3.0	2.9	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	33.7	33.8	53.4	29.5	29.7	51.5	32.0	32.4	46.4	38.5	39.8
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1220			643			604			393	
Approach Delay, s/veh		37.2			33.8			40.3			41.5	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	40.1	20.5	21.7	19.2	33.7	13.4	28.9
Change Period (Y+Rc), s	5.0	5.5	5.0	6.0	5.0	5.5	5.0	6.0
Max Green Setting (Gmax), s	20.0	40.0	22.0	39.0	20.0	40.0	18.0	38.0
Max Q Clear Time (g_c+I1), s	8.0	26.4	15.5	9.5	14.2	14.4	8.7	10.6
Green Ext Time (p_c), s	0.2	8.1	0.0	2.9	0.0	5.9	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	37.7
HCM 6th LOS	D

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)	63	492	156	59	342	70	110	227	98	96	198	81
Future Volume (veh/h)	63	492	156	59	342	70	110	227	98	96	198	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	64	497	115	60	345	67	111	229	89	97	200	19
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	88	645	547	85	523	101	145	299	116	127	421	356
Arrive On Green	0.05	0.36	0.36	0.05	0.35	0.35	0.08	0.24	0.24	0.07	0.23	0.23
Sat Flow, veh/h	1725	1811	1535	1725	1473	286	1725	1233	479	1725	1811	1535
Grp Volume(v), veh/h	64	497	115	60	0	412	111	0	318	97	200	19
Grp Sat Flow(s),veh/h/ln	1725	1811	1535	1725	0	1760	1725	0	1712	1725	1811	1535
Q Serve(g_s), s	2.5	16.9	3.6	2.4	0.0	13.7	4.4	0.0	12.0	3.8	6.6	0.7
Cycle Q Clear(g_c), s	2.5	16.9	3.6	2.4	0.0	13.7	4.4	0.0	12.0	3.8	6.6	0.7
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	88	645	547	85	0	624	145	0	416	127	421	356
V/C Ratio(X)	0.73	0.77	0.21	0.70	0.00	0.66	0.77	0.00	0.77	0.77	0.48	0.05
Avail Cap(c_a), veh/h	621	965	818	621	0	1065	621	0	987	621	1357	1150
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00
Uniform Delay (d), s/veh	32.5	19.8	15.5	32.5	0.0	18.9	31.1	0.0	24.4	31.6	23.0	20.7
Incr Delay (d2), s/veh	10.8	4.3	0.4	10.1	0.0	2.5	8.2	0.0	4.6	9.2	1.3	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	1.2	6.8	1.2	1.2	0.0	5.2	2.0	0.0	4.8	1.8	2.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	24.1	15.9	42.6	0.0	21.4	39.3	0.0	29.1	40.8	24.3	20.8
LnGrp LOS	D	C	B	D	A	C	D	A	C	D	C	C
Approach Vol, veh/h		676			472			429			316	
Approach Delay, s/veh		24.5			24.1			31.7			29.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	30.7	9.1	22.2	7.5	30.6	9.8	21.4
Change Period (Y+Rc), s	4.0	6.0	4.0	5.3	4.0	6.0	4.0	5.3
Max Green Setting (Gmax), s	25.0	37.0	25.0	40.0	25.0	42.0	25.0	52.0
Max Q Clear Time (g_c+I1), s	4.4	18.9	5.8	14.0	4.5	15.7	6.4	8.6
Green Ext Time (p_c), s	0.1	5.8	0.2	2.9	0.1	4.8	0.2	1.9

Intersection Summary			
HCM 6th Ctrl Delay			26.8
HCM 6th LOS			C

Intersection						
Int Delay, s/veh	0.6					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	733	571	42	24	12
Future Vol, veh/h	16	733	571	42	24	12
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	17	772	601	44	25	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	646	0	-	0	1044	324
Stage 1	-	-	-	-	624	-
Stage 2	-	-	-	-	420	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	929	-	-	-	223	669
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	928	-	-	-	219	668
Mov Cap-2 Maneuver	-	-	-	-	219	-
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	627	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	19.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	928	-	-	-	282
HCM Lane V/C Ratio	0.018	-	-	-	0.134
HCM Control Delay (s)	9	-	-	-	19.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	810	101	148	695	27	64	14	134	35	29	14
Future Volume (veh/h)	6	810	101	148	695	27	64	14	134	35	29	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	6	853	38	156	732	26	67	15	12	37	31	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	14	1502	466	203	1401	50	118	58	46	75	68	0
Arrive On Green	0.01	0.30	0.30	0.11	0.40	0.40	0.07	0.06	0.06	0.04	0.04	0.00
Sat Flow, veh/h	1767	5066	1572	1767	3473	123	1767	954	764	1767	1856	0
Grp Volume(v), veh/h	6	853	38	156	371	387	67	0	27	37	31	0
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1763	1833	1767	0	1718	1767	1856	0
Q Serve(g_s), s	0.1	5.4	0.7	3.3	6.1	6.1	1.4	0.0	0.6	0.8	0.6	0.0
Cycle Q Clear(g_c), s	0.1	5.4	0.7	3.3	6.1	6.1	1.4	0.0	0.6	0.8	0.6	0.0
Prop In Lane	1.00		1.00	1.00		0.07	1.00		0.44	1.00		0.00
Lane Grp Cap(c), veh/h	14	1502	466	203	711	740	118	0	105	75	68	0
V/C Ratio(X)	0.42	0.57	0.08	0.77	0.52	0.52	0.57	0.00	0.26	0.49	0.46	0.00
Avail Cap(c_a), veh/h	927	5314	1650	927	1849	1923	927	0	1802	927	1947	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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.8	11.3	9.7	16.4	8.6	8.6	17.3	0.0	17.1	17.9	18.0	0.0
Incr Delay (d2), s/veh	7.1	0.1	0.0	2.3	0.2	0.2	4.3	0.0	0.5	4.9	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	0.1	1.3	0.2	1.1	1.3	1.4	0.6	0.0	0.2	0.4	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	11.5	9.7	18.7	8.8	8.8	21.5	0.0	17.6	22.8	19.8	0.0
LnGrp LOS	C	B	A	B	A	A	C	A	B	C	B	A
Approach Vol, veh/h		897			914			94			68	
Approach Delay, s/veh		11.5			10.5			20.4			21.4	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	21.1	5.7	6.9	8.5	17.0	6.6	6.0
Change Period (Y+Rc), s	4.1	5.7	4.1	4.6	4.1	5.7	4.1	4.6
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.1	8.1	2.8	2.6	5.3	7.4	3.4	2.6
Green Ext Time (p_c), s	0.0	0.5	0.0	0.1	0.2	3.9	0.1	0.1

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	869	110	77	482	24	120	0	336	68	331	268
Future Volume (veh/h)	0	869	110	77	482	24	120	0	336	68	331	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	915	33	81	507	10	126	0	354	72	348	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	0	1720	592	187	1752	781	167	0	679	96	629	494
Arrive On Green	0.00	0.38	0.38	0.05	0.50	0.50	0.09	0.00	0.22	0.05	0.18	0.18
Sat Flow, veh/h	0	4899	1572	3428	3526	1572	1767	0	3104	1767	3526	2768
Grp Volume(v), veh/h	0	915	33	81	507	10	126	0	354	72	348	49
Grp Sat Flow(s),veh/h/ln	0	1522	1572	1714	1763	1572	1767	0	1552	1767	1763	1384
Q Serve(g_s), s	0.0	11.7	1.0	1.7	6.3	0.2	5.2	0.0	7.5	3.0	6.7	1.1
Cycle Q Clear(g_c), s	0.0	11.7	1.0	1.7	6.3	0.2	5.2	0.0	7.5	3.0	6.7	1.1
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	1720	592	187	1752	781	167	0	679	96	629	494
V/C Ratio(X)	0.00	0.53	0.06	0.43	0.29	0.01	0.76	0.00	0.52	0.75	0.55	0.10
Avail Cap(c_a), veh/h	0	3730	1285	919	2881	1285	473	0	1539	473	1748	1372
HCM Platoon Ratio	1.00	1.00	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	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	0.0	18.1	14.8	34.2	11.0	9.5	33.0	0.0	25.7	34.8	28.0	25.7
Incr Delay (d2), s/veh	0.0	0.5	0.1	2.5	0.2	0.0	10.5	0.0	1.2	17.1	1.7	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	0.0	3.7	0.3	0.7	2.1	0.1	2.5	0.0	2.6	1.7	2.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	18.7	14.9	36.7	11.2	9.5	43.4	0.0	26.9	51.9	29.7	25.8
LnGrp LOS	A	B	B	D	B	A	D	A	C	D	C	C
Approach Vol, veh/h		948			598			480			469	
Approach Delay, s/veh		18.5			14.6			31.2			32.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	9.0	34.1	11.7	19.8		43.1	8.7	22.8
Change Period (Y+Rc), s	4.9	* 6	* 4.7	6.5		6.0	* 4.7	* 6.5
Max Green Setting (Gmax), s	20.0	* 61	* 20	37.0		61.0	* 20	* 37
Max Q Clear Time (g_c+I1), s	3.7	13.7	7.2	8.7		8.3	5.0	9.5
Green Ext Time (p_c), s	0.3	14.5	0.4	4.6		6.9	0.2	2.8

Intersection Summary		
HCM 6th Ctrl Delay		22.7
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.

User approved changes to right turn type.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	376	479	53	263	320	37
Future Volume (veh/h)	376	479	53	263	320	37
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	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	396	0	56	277	337	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1008		106	1622	764	350
Arrive On Green	0.29	0.00	0.06	0.46	0.22	0.22
Sat Flow, veh/h	3618	1572	1767	3618	3428	1572
Grp Volume(v), veh/h	396	0	56	277	337	39
Grp Sat Flow(s),veh/h/ln	1763	1572	1767	1763	1714	1572
Q Serve(g_s), s	3.2	0.0	1.1	1.6	3.0	0.7
Cycle Q Clear(g_c), s	3.2	0.0	1.1	1.6	3.0	0.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1008		106	1622	764	350
V/C Ratio(X)	0.39		0.53	0.17	0.44	0.11
Avail Cap(c_a), veh/h	3526		1010	3526	2253	1034
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	10.1	0.0	16.0	5.5	11.7	10.8
Incr Delay (d2), s/veh	0.1	0.0	1.5	0.0	0.1	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	0.8	0.0	0.4	0.3	0.8	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.1	0.0	17.5	5.6	11.9	10.9
LnGrp LOS	B		B	A	B	B
Approach Vol, veh/h	396			333	376	
Approach Delay, s/veh	10.1			7.6	11.8	
Approach LOS	B			A	B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.1	16.2				22.3		12.7
Change Period (Y+Rc), s	4.0	* 6.2				6.2		4.9
Max Green Setting (Gmax), s	20.0	* 35				35.0		23.0
Max Q Clear Time (g_c+I1), s	3.1	5.2				3.6		5.0
Green Ext Time (p_c), s	0.0	0.4				0.3		0.2

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

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

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)	1	0	6	12	1	51	4	319	15	50	331	2
Future Volume (veh/h)	1	0	6	12	1	51	4	319	15	50	331	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	1	0	0	14	1	0	5	362	7	57	376	2
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, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	292	0	29	278	2	0	14	617	523	108	1387	7
Arrive On Green	0.02	0.00	0.00	0.02	0.02	0.00	0.01	0.35	0.35	0.06	0.41	0.41
Sat Flow, veh/h	1526	0	1497	1279	91	0	1682	1767	1497	1682	3423	18
Grp Volume(v), veh/h	1	0	0	15	0	0	5	362	7	57	184	194
Grp Sat Flow(s),veh/h/ln	1527	0	1497	1371	0	0	1682	1767	1497	1682	1678	1763
Q Serve(g_s), s	0.0	0.0	0.0	0.3	0.0	0.0	0.1	4.6	0.1	0.9	2.0	2.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.3	0.0	0.0	0.1	4.6	0.1	0.9	2.0	2.0
Prop In Lane	1.00		1.00	0.93		0.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	292	0	29	280	0	0	14	617	523	108	680	714
V/C Ratio(X)	0.00	0.00	0.00	0.05	0.00	0.00	0.36	0.59	0.01	0.53	0.27	0.27
Avail Cap(c_a), veh/h	1481	0	1360	1984	0	0	1590	2761	2340	1529	2623	2756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	0.0	0.0	13.4	0.0	0.0	13.6	7.3	5.9	12.5	5.5	5.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	5.9	1.3	0.0	1.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.7	0.0	0.2	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	0.0	0.0	13.4	0.0	0.0	19.4	8.6	5.9	14.0	5.8	5.8
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		1			15			374			435	
Approach Delay, s/veh		13.2			13.4			8.7			6.8	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	15.8		5.2	4.9	17.3		5.2
Change Period (Y+Rc), s	* 4.7	6.2		* 4.7	* 4.7	6.2		* 4.7
Max Green Setting (Gmax), s	* 25	43.0		* 25	* 26	43.0		* 35
Max Q Clear Time (g_c+I1), s	2.9	6.6		2.0	2.1	4.0		2.3
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	2.9		0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

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)	0	0	0	23	0	6	0	332	27	11	359	0
Future Volume (veh/h)	0	0	0	23	0	6	0	332	27	11	359	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				1767	1811	1767	0	1767	1767	1767	1767	0
Adj Flow Rate, veh/h				25	0	7	0	361	29	12	390	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, %				9	6	9	0	9	9	9	9	0
Cap, veh/h				62	0	17	0	1175	94	32	990	0
Arrive On Green				0.05	0.00	0.05	0.00	0.37	0.37	0.02	0.56	0.00
Sat Flow, veh/h				1312	0	367	0	3236	252	1682	1767	0
Grp Volume(v), veh/h				32	0	0	0	192	198	12	390	0
Grp Sat Flow(s),veh/h/ln				1679	0	0	0	1678	1721	1682	1767	0
Q Serve(g_s), s				0.5	0.0	0.0	0.0	2.2	2.2	0.2	3.3	0.0
Cycle Q Clear(g_c), s				0.5	0.0	0.0	0.0	2.2	2.2	0.2	3.3	0.0
Prop In Lane				0.78		0.22	0.00		0.15	1.00		0.00
Lane Grp Cap(c), veh/h				80	0	0	0	627	643	32	990	0
V/C Ratio(X)				0.40	0.00	0.00	0.00	0.31	0.31	0.37	0.39	0.00
Avail Cap(c_a), veh/h				1943	0	0	0	3133	3212	1633	3297	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				12.4	0.0	0.0	0.0	5.9	5.9	13.0	3.3	0.0
Incr Delay (d2), s/veh				3.2	0.0	0.0	0.0	0.6	0.6	7.0	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				0.2	0.0	0.0	0.0	0.3	0.4	0.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				15.6	0.0	0.0	0.0	6.5	6.5	20.0	3.9	0.0
LnGrp LOS				B	A	A	A	A	A	B	A	A
Approach Vol, veh/h					32			390			402	
Approach Delay, s/veh					15.6			6.5			4.3	
Approach LOS					B			A			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	5.0	16.0		5.8		21.0
Change Period (Y+Rc), s	4.5	6.0		4.5		6.0
Max Green Setting (Gmax), s	26.0	50.0		31.0		50.0
Max Q Clear Time (g_c+I1), s	2.2	4.2		2.5		5.3
Green Ext Time (p_c), s	0.0	4.7		0.1		4.7

Intersection Summary	
HCM 6th Ctrl Delay	5.8
HCM 6th LOS	A

Intersection						
Int Delay, s/veh	0.5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	3	55	81	1
Future Vol, veh/h	1	5	3	55	81	1
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	87	87	87	87	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	1	6	3	63	93	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	163	94	94	0	-	0
Stage 1	94	-	-	-	-	-
Stage 2	69	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	830	966	1506	-	-	-
Stage 1	932	-	-	-	-	-
Stage 2	956	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	828	966	1506	-	-	-
Mov Cap-2 Maneuver	828	-	-	-	-	-
Stage 1	930	-	-	-	-	-
Stage 2	956	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1506	-	940	-	-
HCM Lane V/C Ratio	0.002	-	0.007	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	372	33	9	210	18	29	5	38	196	19	88
Future Volume (veh/h)	150	372	33	9	210	18	29	5	38	196	19	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	155	384	34	9	216	19	30	5	39	202	20	91
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, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	198	470	42	35	711	62	43	7	56	268	27	261
Arrive On Green	0.12	0.29	0.29	0.02	0.23	0.23	0.07	0.07	0.07	0.17	0.17	0.17
Sat Flow, veh/h	1682	1600	142	1682	3123	272	642	107	835	1538	152	1497
Grp Volume(v), veh/h	155	0	418	9	115	120	74	0	0	222	0	91
Grp Sat Flow(s),veh/h/ln	1682	0	1741	1682	1678	1718	1584	0	0	1690	0	1497
Q Serve(g_s), s	5.9	0.0	14.7	0.3	3.8	3.8	3.0	0.0	0.0	8.3	0.0	3.5
Cycle Q Clear(g_c), s	5.9	0.0	14.7	0.3	3.8	3.8	3.0	0.0	0.0	8.3	0.0	3.5
Prop In Lane	1.00		0.08	1.00		0.16	0.41		0.53	0.91		1.00
Lane Grp Cap(c), veh/h	198	0	512	35	382	391	107	0	0	295	0	261
V/C Ratio(X)	0.78	0.00	0.82	0.26	0.30	0.31	0.69	0.00	0.00	0.75	0.00	0.35
Avail Cap(c_a), veh/h	662	0	793	764	1066	1091	383	0	0	716	0	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.3	0.0	21.7	31.9	21.2	21.2	30.2	0.0	0.0	25.9	0.0	24.0
Incr Delay (d2), s/veh	6.6	0.0	5.4	3.8	0.7	0.7	7.8	0.0	0.0	3.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	5.7	0.2	1.3	1.4	1.3	0.0	0.0	3.3	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	0.0	27.0	35.7	21.9	21.9	37.9	0.0	0.0	29.8	0.0	24.8
LnGrp LOS	C	A	C	D	C	C	D	A	A	C	A	C
Approach Vol, veh/h		573			244			74			313	
Approach Delay, s/veh		29.2			22.4			37.9			28.4	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	26.4		21.4	13.3	22.0		9.4				
Change Period (Y+Rc), s	7.5	* 7		* 9.9	5.5	7.0		4.9				
Max Green Setting (Gmax), s	30.0	* 30		* 28	26.0	42.0		16.0				
Max Q Clear Time (g_c+I1), s	2.3	16.7		10.3	7.9	5.8		5.0				
Green Ext Time (p_c), s	0.0	2.7		1.3	0.3	1.9		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		28.1
HCM 6th LOS		C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	438	48	0	81	51	16	14	2	5	0	140
Future Volume (veh/h)	120	438	48	0	81	51	16	14	2	5	0	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	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	124	452	49	0	84	53	16	14	2	5	0	144
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, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	160	691	75	3	230	145	42	37	5	199	0	177
Arrive On Green	0.10	0.44	0.44	0.00	0.23	0.23	0.05	0.05	0.05	0.12	0.00	0.12
Sat Flow, veh/h	1682	1566	170	1682	1013	639	852	746	107	1682	0	1497
Grp Volume(v), veh/h	124	0	501	0	0	137	32	0	0	5	0	144
Grp Sat Flow(s),veh/h/ln	1682	0	1736	1682	0	1652	1705	0	0	1682	0	1497
Q Serve(g_s), s	3.8	0.0	12.0	0.0	0.0	3.7	1.0	0.0	0.0	0.1	0.0	5.0
Cycle Q Clear(g_c), s	3.8	0.0	12.0	0.0	0.0	3.7	1.0	0.0	0.0	0.1	0.0	5.0
Prop In Lane	1.00		0.10	1.00		0.39	0.50		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	160	0	766	3	0	375	85	0	0	199	0	177
V/C Ratio(X)	0.78	0.00	0.65	0.00	0.00	0.37	0.38	0.00	0.00	0.03	0.00	0.81
Avail Cap(c_a), veh/h	827	0	1050	859	0	1155	870	0	0	827	0	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	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	11.6	0.0	0.0	17.2	24.4	0.0	0.0	20.6	0.0	22.8
Incr Delay (d2), s/veh	3.0	0.0	0.4	0.0	0.0	0.2	1.0	0.0	0.0	0.0	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	3.0	0.0	0.0	1.3	0.4	0.0	0.0	0.0	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	0.0	12.0	0.0	0.0	17.5	25.4	0.0	0.0	20.7	0.0	26.2
LnGrp LOS	C	A	B	A	A	B	C	A	A	C	A	C
Approach Vol, veh/h		625			137			32			149	
Approach Delay, s/veh		14.8			17.5			25.4			26.0	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	30.3		14.2	11.3	19.0		8.4
Change Period (Y+Rc), s	* 6.3	* 7		7.9	* 6.3	7.0		5.8
Max Green Setting (Gmax), s	* 23	* 32		26.0	* 26	37.0		27.0
Max Q Clear Time (g_c+I1), s	0.0	14.0		7.0	5.8	5.7		3.0
Green Ext Time (p_c), s	0.0	0.3		0.1	0.0	0.3		0.0

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	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
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	
Adj Sat Flow, veh/h/ln							0	1811	0	0	1811	0
Adj Flow Rate, veh/h							0	0	0	0	0	0
Peak Hour Factor							0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %							0	6	0	0	6	0
Cap, veh/h							0	1449	0	0	1449	0
Arrive On Green							0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h							0	1811	0	0	1811	0
Grp Volume(v), veh/h							0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln							0	1811	0	0	1811	0
Q Serve(g_s), s							0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s							0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane							0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h							0	1449	0	0	1449	0
V/C Ratio(X)							0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h							0	1449	0	0	1449	0
HCM Platoon Ratio							1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)							0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh							0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh							0.0	0.0	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
%ile BackOfQ(50%),veh/ln							0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh							0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS							A	A	A	A	A	A
Approach Vol, veh/h								0			0	
Approach Delay, s/veh								0.0			0.0	
Approach LOS												

Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		22.5				22.5
Change Period (Y+Rc), s		4.5				4.5
Max Green Setting (Gmax), s		18.0				18.0
Max Q Clear Time (g_c+I1), s		0.0				0.0
Green Ext Time (p_c), s		0.0				0.0

Intersection Summary			
HCM 6th Ctrl Delay			0.0
HCM 6th LOS			A

Intersection	
Intersection Delay, s/veh	26.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	541	0	0	450	0	0	0	0	0	0	0
Future Vol, veh/h	0	541	0	0	450	0	0	0	0	0	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
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	588	0	0	489	0	0	0	0	0	0	0
Number of Lanes	1	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	3
HCM Control Delay	26	27	0	0
HCM LOS	D	D	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	541	0	450	0
LT Vol	0	0	0	0	0	0	0
Through Vol	0	0	0	541	0	450	0
RT Vol	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	588	0	489	0
Geometry Grp	8	8	7	7	7	8	8
Degree of Util (X)	0	0	0	0.816	0	0.79	0
Departure Headway (Hd)	7.701	7.701	4.998	4.998	4.998	5.816	7.701
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	723	0	621	0
Service Time	5.401	5.401	2.728	2.728	2.728	3.556	5.401
HCM Lane V/C Ratio	0	0	0	0.813	0	0.787	0
HCM Control Delay	10.4	10.4	7.7	26	7.7	27	10.4
HCM Lane LOS	N	N	N	D	N	D	N
HCM 95th-tile Q	0	0	0	8.7	0	7.7	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1093	0	0	714	0	0	0	5	0	0	47
Future Vol, veh/h	0	1093	0	0	714	0	0	0	5	0	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	1188	0	0	776	0	0	0	5	0	0	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	-	-	-	0	-	-	594	-	-	388
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.22	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.96	-	-	3.36
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	376	0	0	599
Stage 1	0	-	0	0	-	0	0	0	-	0	0	-
Stage 2	0	-	0	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-			-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	376	-	-	599
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14.7	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT	SBLn1
Capacity (veh/h)	376	-	-	599
HCM Lane V/C Ratio	0.014	-	-	0.085
HCM Control Delay (s)	14.7	-	-	11.6
HCM Lane LOS	B	-	-	B
HCM 95th %tile Q(veh)	0	-	-	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	230	100	110	360	170	100
Future Volume (veh/h)	230	100	110	360	170	100
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	1737	1737	1737	1737	1737	1737
Adj Flow Rate, veh/h	245	29	117	383	181	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	11	11	11	11	11	11
Cap, veh/h	450	381	150	858	359	320
Arrive On Green	0.26	0.26	0.09	0.49	0.22	0.22
Sat Flow, veh/h	1737	1472	1654	1737	1654	1472
Grp Volume(v), veh/h	245	29	117	383	181	21
Grp Sat Flow(s),veh/h/ln	1737	1472	1654	1737	1654	1472
Q Serve(g_s), s	5.1	0.6	2.9	5.9	4.0	0.5
Cycle Q Clear(g_c), s	5.1	0.6	2.9	5.9	4.0	0.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	450	381	150	858	359	320
V/C Ratio(X)	0.54	0.08	0.78	0.45	0.50	0.07
Avail Cap(c_a), veh/h	1672	1417	796	1672	796	708
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	13.3	11.6	18.5	6.8	14.3	12.9
Incr Delay (d2), s/veh	3.7	0.3	8.4	1.3	3.9	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	1.8	0.2	1.2	1.2	1.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.0	11.9	26.9	8.1	18.2	13.2
LnGrp LOS	B	B	C	A	B	B
Approach Vol, veh/h	274			500	202	
Approach Delay, s/veh	16.5			12.5	17.7	
Approach LOS	B			B	B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.8	16.8		15.0		26.5
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	20.0	40.0		20.0		40.0
Max Q Clear Time (g_c+I1), s	4.9	7.1		6.0		7.9
Green Ext Time (p_c), s	0.2	3.7		1.4		5.7

Intersection Summary			
HCM 6th Ctrl Delay			14.7
HCM 6th LOS			B

Intersection						
Int Delay, s/veh	3.1					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	60	60	230	150	80
Future Vol, veh/h	50	60	60	230	150	80
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	89	89	89	89	89	89
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	56	67	67	258	169	90

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	606	214	259	0	-	0
Stage 1	214	-	-	-	-	-
Stage 2	392	-	-	-	-	-
Critical Hdwy	6.48	6.28	4.18	-	-	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.372	2.272	-	-	-
Pot Cap-1 Maneuver	451	811	1271	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	670	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	423	811	1271	-	-	-
Mov Cap-2 Maneuver	423	-	-	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	670	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	1.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1271	-	572	-	-
HCM Lane V/C Ratio	0.053	-	0.216	-	-
HCM Control Delay (s)	8	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.8	-	-

Intersection												
Int Delay, s/veh	7.9											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	30	180	0	50	20	262	68	20	190	10
Future Vol, veh/h	10	0	30	180	0	50	20	262	68	20	190	10
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	100	100	-	-	140	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	92	87	92	92	92	87	87	92	92	87	87
Heavy Vehicles, %	7	6	7	6	6	6	7	7	6	6	7	7
Mvmt Flow	11	0	34	196	0	54	23	301	74	22	218	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	466	690	225	669	658	188	230	0	0	375	0	0
Stage 1	269	269	-	384	384	-	-	-	-	-	-	-
Stage 2	197	421	-	285	274	-	-	-	-	-	-	-
Critical Hdwy	7.405	6.59	6.305	7.39	6.59	6.99	4.205	-	-	4.19	-	-
Critical Hdwy Stg 1	6.205	5.59	-	6.59	5.59	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.605	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Follow-up Hdwy	3.5665	4.057	3.3665	3.557	4.057	3.357	2.2665	-	-	2.257	-	-
Pot Cap-1 Maneuver	483	361	800	350	377	812	1304	-	-	1157	-	-
Stage 1	723	677	-	602	602	-	-	-	-	-	-	-
Stage 2	774	580	-	711	674	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	438	347	799	326	363	812	1303	-	-	1157	-	-
Mov Cap-2 Maneuver	438	347	-	326	363	-	-	-	-	-	-	-
Stage 1	709	663	-	591	591	-	-	-	-	-	-	-
Stage 2	709	570	-	667	661	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	10.6			26.6			0.5			0.7		
HCM LOS	B			D								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1303	-	-	438	799	326	812	1157	-	-
HCM Lane V/C Ratio	0.018	-	-	0.026	0.043	0.6	0.067	0.019	-	-
HCM Control Delay (s)	7.8	-	-	13.4	9.7	31.3	9.8	8.2	-	-
HCM Lane LOS	A	-	-	B	A	D	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	3.7	0.2	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	50	80	10	20	30	300	50	10	370	10
Future Volume (veh/h)	10	0	50	80	10	20	30	300	50	10	370	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	12	0	0	98	12	1	37	366	50	12	451	11
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	33	6	0	190	50	4	91	1087	147	33	1109	27
Arrive On Green	0.02	0.00	0.00	0.11	0.03	0.03	0.05	0.36	0.36	0.02	0.32	0.32
Sat Flow, veh/h	1725	1811	0	1725	1649	137	1725	3045	413	1725	3431	84
Grp Volume(v), veh/h	12	0	0	98	0	13	37	206	210	12	226	236
Grp Sat Flow(s),veh/h/ln	1725	1811	0	1725	0	1786	1725	1721	1737	1725	1721	1794
Q Serve(g_s), s	0.2	0.0	0.0	1.7	0.0	0.2	0.6	2.7	2.8	0.2	3.2	3.2
Cycle Q Clear(g_c), s	0.2	0.0	0.0	1.7	0.0	0.2	0.6	2.7	2.8	0.2	3.2	3.2
Prop In Lane	1.00		0.00	1.00		0.08	1.00		0.24	1.00		0.05
Lane Grp Cap(c), veh/h	33	6	0	190	0	54	91	614	620	33	556	580
V/C Ratio(X)	0.37	0.00	0.00	0.52	0.00	0.24	0.41	0.33	0.34	0.37	0.41	0.41
Avail Cap(c_a), veh/h	1162	1337	0	1162	0	1318	1439	2209	2230	1439	2209	2302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	13.1	0.0	14.8	14.3	7.3	7.3	15.1	8.2	8.2
Incr Delay (d2), s/veh	6.7	0.0	0.0	2.2	0.0	2.2	2.9	0.5	0.5	6.7	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.6	0.0	0.1	0.2	0.5	0.6	0.1	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	0.0	0.0	15.2	0.0	17.0	17.2	7.8	7.8	21.8	8.9	8.9
LnGrp LOS	C	A	A	B	A	B	B	A	A	C	A	A
Approach Vol, veh/h		12			111			453			474	
Approach Delay, s/veh		21.8			15.4			8.5			9.2	
Approach LOS		C			B			A			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	16.4	7.4	2.7	5.6	15.4	4.6	5.5
Change Period (Y+Rc), s	4.0	5.3	4.0	4.6	4.0	5.3	4.0	4.6
Max Green Setting (Gmax), s	26.0	40.0	21.0	23.0	26.0	40.0	21.0	23.0
Max Q Clear Time (g_c+I1), s	2.2	4.8	3.7	0.0	2.6	5.2	2.2	2.2
Green Ext Time (p_c), s	0.0	3.5	0.2	0.0	0.1	3.9	0.0	0.0

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

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)	100	380	160	320	360	170	120	220	300	170	320	100
Future Volume (veh/h)	100	380	160	320	360	170	120	220	300	170	320	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		0.99	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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	114	432	25	364	409	152	136	250	121	193	364	89
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	148	674	301	414	862	317	175	402	188	240	588	142
Arrive On Green	0.09	0.20	0.20	0.24	0.35	0.35	0.10	0.18	0.18	0.14	0.21	0.21
Sat Flow, veh/h	1725	3441	1535	1725	2463	905	1725	2264	1059	1725	2739	661
Grp Volume(v), veh/h	114	432	25	364	284	277	136	188	183	193	227	226
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1725	1721	1648	1725	1721	1602	1725	1721	1679
Q Serve(g_s), s	4.7	8.4	1.0	14.8	9.3	9.5	5.6	7.3	7.7	7.9	8.7	8.9
Cycle Q Clear(g_c), s	4.7	8.4	1.0	14.8	9.3	9.5	5.6	7.3	7.7	7.9	8.7	8.9
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.66	1.00		0.39
Lane Grp Cap(c), veh/h	148	674	301	414	602	577	175	305	284	240	370	361
V/C Ratio(X)	0.77	0.64	0.08	0.88	0.47	0.48	0.78	0.62	0.64	0.81	0.61	0.63
Avail Cap(c_a), veh/h	570	1659	740	570	830	795	570	948	883	570	948	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	32.5	26.8	23.9	26.6	18.4	18.4	31.8	27.6	27.7	30.3	25.8	25.9
Incr Delay (d2), s/veh	8.2	1.5	0.2	11.4	0.8	0.9	7.2	2.9	3.5	6.3	2.4	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.3	0.3	6.7	3.4	3.3	2.5	3.0	3.0	3.4	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	28.3	24.0	38.0	19.2	19.3	39.0	30.4	31.2	36.6	28.1	28.4
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		571			925			507			646	
Approach Delay, s/veh		30.6			26.6			33.0			30.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.4	19.2	11.4	20.6	10.2	30.4	14.1	17.9
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	24.0	35.0	24.0	40.0	24.0	35.0	24.0	40.0
Max Q Clear Time (g_c+I1), s	16.8	10.4	7.6	10.9	6.7	11.5	9.9	9.7
Green Ext Time (p_c), s	0.7	3.8	0.3	3.8	0.2	4.6	0.4	3.2

Intersection Summary	
HCM 6th Ctrl Delay	29.7
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	11

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	60	30	150	40	0	0	0	0	230	0	40
Future Vol, veh/h	0	60	30	150	40	0	0	0	0	230	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	0	-	520
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	37	37	37	37	37	37	37	37	37	37	37	37
Mvmt Flow	0	69	34	172	46	0	0	0	0	264	0	46

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	103	0	0				425	493	23
Stage 1	-	-	-	-	-	-				390	390	-
Stage 2	-	-	-	-	-	-				35	103	-
Critical Hdwy	-	-	-	4.84	-	-				7.54	7.24	7.64
Critical Hdwy Stg 1	-	-	-	-	-	-				6.54	6.24	-
Critical Hdwy Stg 2	-	-	-	-	-	-				6.54	6.24	-
Follow-up Hdwy	-	-	-	2.57	-	-				3.87	4.37	3.67
Pot Cap-1 Maneuver	0	-	-	1265	-	0				476	406	945
Stage 1	0	-	-	-	-	0				561	526	-
Stage 2	0	-	-	-	-	0				889	733	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1265	-	-				411	0	945
Mov Cap-2 Maneuver	-	-	-	-	-	-				411	0	-
Stage 1	-	-	-	-	-	-				561	0	-
Stage 2	-	-	-	-	-	-				768	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	6.5	17.8
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1265	-	411	510
HCM Lane V/C Ratio	-	-	0.136	-	0.429	0.263
HCM Control Delay (s)	-	-	8.3	-	20.2	14.6
HCM Lane LOS	-	-	A	-	C	B
HCM 95th %tile Q(veh)	-	-	0.5	-	2.1	1

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	270	0	0	170	240	20	0	180	0	0	0
Future Vol, veh/h	20	270	0	0	170	240	20	0	180	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Stop	-	-	None
Storage Length	0	-	-	-	-	-	630	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	37	37	37	37	37	37	37	37	37	37	37	37
Mvmt Flow	23	310	0	0	195	276	23	0	207	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	195	0	-	-	-	0	454	551	155
Stage 1	-	-	-	-	-	-	356	356	-
Stage 2	-	-	-	-	-	-	98	195	-
Critical Hdwy	4.84	-	-	-	-	-	7.54	7.24	7.64
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	6.24	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	6.24	-
Follow-up Hdwy	2.57	-	-	-	-	-	3.87	4.37	3.67
Pot Cap-1 Maneuver	1154	-	0	0	-	0	454	373	763
Stage 1	-	-	0	0	-	0	586	547	-
Stage 2	-	-	0	0	-	0	820	660	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	1154	-	-	-	-	-	445	0	763
Mov Cap-2 Maneuver	-	-	-	-	-	-	445	0	-
Stage 1	-	-	-	-	-	-	574	0	-
Stage 2	-	-	-	-	-	-	820	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.6	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	445	763	1154	-	-
HCM Lane V/C Ratio	0.052	0.271	0.02	-	-
HCM Control Delay (s)	13.5	11.5	8.2	-	-
HCM Lane LOS	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	1.1	0.1	-	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	80	90	230	160	70
Future Volume (veh/h)	70	80	90	230	160	70
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	1604	1604	1604	1604	1604	1604
Adj Flow Rate, veh/h	74	7	96	245	170	74
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	20	20	20	20	20	20
Cap, veh/h	102	91	116	803	550	230
Arrive On Green	0.07	0.07	0.08	0.50	0.26	0.26
Sat Flow, veh/h	1527	1359	1527	1604	2175	875
Grp Volume(v), veh/h	74	7	96	245	122	122
Grp Sat Flow(s),veh/h/ln	1527	1359	1527	1604	1523	1446
Q Serve(g_s), s	1.3	0.1	1.7	2.5	1.8	1.9
Cycle Q Clear(g_c), s	1.3	0.1	1.7	2.5	1.8	1.9
Prop In Lane	1.00	1.00	1.00			0.61
Lane Grp Cap(c), veh/h	102	91	116	803	400	380
V/C Ratio(X)	0.72	0.08	0.82	0.31	0.30	0.32
Avail Cap(c_a), veh/h	1320	1175	1320	2253	2140	2031
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	12.7	12.1	12.6	4.1	8.2	8.2
Incr Delay (d2), s/veh	9.3	0.4	18.2	0.8	1.5	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	0.6	0.0	0.9	0.2	0.4	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.0	12.5	30.9	4.9	9.7	10.0
LnGrp LOS	C	B	C	A	A	B
Approach Vol, veh/h	81			341	244	
Approach Delay, s/veh	21.2			12.2	9.9	
Approach LOS	C			B	A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.6	13.3		7.9		19.9
Change Period (Y+Rc), s	4.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	24.0	39.0		24.0		39.0
Max Q Clear Time (g_c+I1), s	3.7	3.9		3.3		4.5
Green Ext Time (p_c), s	0.3	3.4		0.2		3.4

Intersection Summary		
HCM 6th Ctrl Delay		12.4
HCM 6th LOS		B

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)	0	490	90	310	630	0	0	0	0	240	0	100
Future Volume (veh/h)	0	490	90	310	630	0	0	0	0	240	0	100
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	0				1811	1811	1811
Adj Flow Rate, veh/h	0	557	72	352	716	0				273	0	114
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	6	6	6	6	0				6	6	6
Cap, veh/h	0	1004	128	408	984	0				321	0	134
Arrive On Green	0.00	0.23	0.23	0.24	0.54	0.00				0.27	0.00	0.27
Sat Flow, veh/h	0	4588	563	1725	1811	0				1174	0	490
Grp Volume(v), veh/h	0	413	216	352	716	0				387	0	0
Grp Sat Flow(s),veh/h/ln	0	1648	1692	1725	1811	0				1664	0	0
Q Serve(g_s), s	0.0	5.5	5.7	9.8	15.0	0.0				11.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.5	5.7	9.8	15.0	0.0				11.0	0.0	0.0
Prop In Lane	0.00		0.33	1.00		0.00				0.71		0.29
Lane Grp Cap(c), veh/h	0	748	384	408	984	0				455	0	0
V/C Ratio(X)	0.00	0.55	0.56	0.86	0.73	0.00				0.85	0.00	0.00
Avail Cap(c_a), veh/h	0	2960	1519	860	1626	0				1328	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)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.1	17.2	18.4	8.7	0.0				17.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	1.2	2.2	1.0	0.0				1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	1.9	3.4	3.6	0.0				3.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.7	18.3	20.5	9.6	0.0				19.0	0.0	0.0
LnGrp LOS	A	B	B	C	A	A				B	A	A
Approach Vol, veh/h		629			1068						387	
Approach Delay, s/veh		17.9			13.2						19.0	
Approach LOS		B			B						B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	15.8	16.0		18.3		31.8						
Change Period (Y+Rc), s	4.0	4.6		4.6		4.6						
Max Green Setting (Gmax), s	25.0	45.0		40.0		45.0						
Max Q Clear Time (g_c+I1), s	11.8	7.7		13.0		17.0						
Green Ext Time (p_c), s	0.1	3.7		0.7		4.5						
Intersection Summary												
HCM 6th Ctrl Delay			15.7									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	650	0	0	860	260	80	0	210	0	0	0
Future Volume (veh/h)	80	650	0	0	860	260	80	0	210	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1811	1811	0	0	1811	1811	1811	1811	1811			
Adj Flow Rate, veh/h	91	739	0	0	977	277	91	0	133			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	6	6	0	0	6	6	6	6	6			
Cap, veh/h	121	2237	0	0	1310	369	113	0	165			
Arrive On Green	0.07	0.65	0.00	0.00	0.50	0.50	0.17	0.00	0.17			
Sat Flow, veh/h	1725	3532	0	0	2697	735	653	0	954			
Grp Volume(v), veh/h	91	739	0	0	643	611	224	0	0			
Grp Sat Flow(s),veh/h/ln	1725	1721	0	0	1721	1620	1607	0	0			
Q Serve(g_s), s	2.7	5.0	0.0	0.0	15.4	15.7	7.0	0.0	0.0			
Cycle Q Clear(g_c), s	2.7	5.0	0.0	0.0	15.4	15.7	7.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.45	0.41		0.59			
Lane Grp Cap(c), veh/h	121	2237	0	0	865	815	278	0	0			
V/C Ratio(X)	0.75	0.33	0.00	0.00	0.74	0.75	0.80	0.00	0.00			
Avail Cap(c_a), veh/h	828	2974	0	0	1487	1401	1235	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	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	23.8	4.1	0.0	0.0	10.3	10.3	20.7	0.0	0.0			
Incr Delay (d2), s/veh	3.5	0.1	0.0	0.0	1.2	1.3	2.1	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			
%ile BackOfQ(50%),veh/ln	1.1	0.7	0.0	0.0	4.0	3.8	2.3	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	4.1	0.0	0.0	11.4	11.6	22.7	0.0	0.0			
LnGrp LOS	C	A	A	A	B	B	C	A	A			
Approach Vol, veh/h		830			1254			224				
Approach Delay, s/veh		6.7			11.5			22.7				
Approach LOS		A			B			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		38.4			7.7	30.8		13.6				
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6				
Max Green Setting (Gmax), s		45.0			25.0	45.0		40.0				
Max Q Clear Time (g_c+I1), s		7.0			4.7	17.7		9.0				
Green Ext Time (p_c), s		4.8			0.0	8.5		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			10.9									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	690	150	0	1000	0	0	0	20	0	0	120
Future Vol, veh/h	0	690	150	0	1000	0	0	0	20	0	0	120
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	784	170	0	1136	0	0	0	23	0	0	136

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	479	-	-	568
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.02	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.36	-	-	3.36
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	522	0	0	456
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	521	-	-	456
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.2	16.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	521	-	-	-	456
HCM Lane V/C Ratio	0.044	-	-	-	0.299
HCM Control Delay (s)	12.2	-	-	-	16.2
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	390	150	80	590	60	210	120	80	60	100	150
Future Volume (veh/h)	200	390	150	80	590	60	210	120	80	60	100	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		0.97	1.00		0.99	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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	227	443	142	91	670	62	239	136	16	68	114	170
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	257	988	314	117	965	89	270	839	97	103	299	264
Arrive On Green	0.15	0.38	0.38	0.07	0.30	0.30	0.16	0.27	0.27	0.06	0.17	0.17
Sat Flow, veh/h	1725	2566	815	1725	3176	294	1725	3105	360	1725	1721	1516
Grp Volume(v), veh/h	227	296	289	91	363	369	239	74	78	68	114	170
Grp Sat Flow(s),veh/h/ln	1725	1721	1661	1725	1721	1749	1725	1721	1744	1725	1721	1516
Q Serve(g_s), s	12.8	12.6	12.8	5.1	18.4	18.5	13.4	3.3	3.4	3.8	5.8	10.3
Cycle Q Clear(g_c), s	12.8	12.6	12.8	5.1	18.4	18.5	13.4	3.3	3.4	3.8	5.8	10.3
Prop In Lane	1.00		0.49	1.00		0.17	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	257	662	639	117	523	531	270	465	471	103	299	264
V/C Ratio(X)	0.88	0.45	0.45	0.78	0.69	0.70	0.89	0.16	0.16	0.66	0.38	0.64
Avail Cap(c_a), veh/h	348	695	671	348	695	706	383	660	669	313	677	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	41.3	22.6	22.7	45.4	30.4	30.4	40.9	27.6	27.6	45.6	36.2	38.1
Incr Delay (d2), s/veh	14.8	1.0	1.1	12.4	3.7	3.7	12.9	0.3	0.3	2.7	1.7	5.5
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	6.2	5.0	4.9	2.5	7.7	7.8	6.5	1.3	1.4	1.7	2.5	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	23.6	23.8	57.8	34.1	34.1	53.8	27.9	27.9	48.2	37.9	43.6
LnGrp LOS	E	C	C	E	C	C	D	C	C	D	D	D
Approach Vol, veh/h		812			823			391			352	
Approach Delay, s/veh		32.7			36.7			43.7			42.7	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	43.6	20.5	23.2	19.8	35.6	10.9	32.8
Change Period (Y+Rc), s	5.0	5.5	5.0	6.0	5.0	5.5	5.0	6.0
Max Green Setting (Gmax), s	20.0	40.0	22.0	39.0	20.0	40.0	18.0	38.0
Max Q Clear Time (g_c+I1), s	7.1	14.8	15.4	12.3	14.8	20.5	5.8	5.4
Green Ext Time (p_c), s	0.2	6.6	0.0	3.1	0.0	7.5	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	37.4
HCM 6th LOS	D

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)	100	320	110	70	440	70	150	170	60	50	160	70
Future Volume (veh/h)	100	320	110	70	440	70	150	170	60	50	160	70
Initial Q (Qb), 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	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	115	368	80	80	506	77	172	195	69	57	184	4
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, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	147	757	641	103	600	91	213	288	102	76	268	222
Arrive On Green	0.09	0.42	0.42	0.06	0.40	0.40	0.13	0.23	0.23	0.04	0.15	0.15
Sat Flow, veh/h	1697	1781	1510	1697	1505	229	1697	1248	442	1697	1781	1476
Grp Volume(v), veh/h	115	368	80	80	0	583	172	0	264	57	184	4
Grp Sat Flow(s),veh/h/ln	1697	1781	1510	1697	0	1734	1697	0	1689	1697	1781	1476
Q Serve(g_s), s	5.4	12.1	2.6	3.8	0.0	24.6	8.0	0.0	11.5	2.7	7.9	0.2
Cycle Q Clear(g_c), s	5.4	12.1	2.6	3.8	0.0	24.6	8.0	0.0	11.5	2.7	7.9	0.2
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	147	757	641	103	0	691	213	0	391	76	268	222
V/C Ratio(X)	0.78	0.49	0.12	0.77	0.00	0.84	0.81	0.00	0.68	0.75	0.69	0.02
Avail Cap(c_a), veh/h	524	815	690	524	0	900	524	0	835	524	1145	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00
Uniform Delay (d), s/veh	36.2	16.9	14.1	37.4	0.0	22.0	34.5	0.0	28.3	38.2	32.6	29.3
Incr Delay (d2), s/veh	8.6	1.0	0.2	11.5	0.0	7.8	7.2	0.0	3.2	13.9	4.9	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	4.6	0.8	1.8	0.0	10.2	3.5	0.0	4.6	1.3	3.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	17.9	14.3	49.0	0.0	29.9	41.6	0.0	31.6	52.1	37.4	29.3
LnGrp LOS	D	B	B	D	A	C	D	A	C	D	D	C
Approach Vol, veh/h		563			663			436			245	
Approach Delay, s/veh		22.9			32.2			35.5			40.7	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	40.4	7.6	24.0	11.0	38.3	14.1	17.5
Change Period (Y+Rc), s	4.0	6.0	4.0	5.3	4.0	6.0	4.0	5.3
Max Green Setting (Gmax), s	25.0	37.0	25.0	40.0	25.0	42.0	25.0	52.0
Max Q Clear Time (g_c+I1), s	5.8	14.1	4.7	13.5	7.4	26.6	10.0	9.9
Green Ext Time (p_c), s	0.2	4.5	0.1	2.3	0.2	5.6	0.4	1.7

Intersection Summary	
HCM 6th Ctrl Delay	31.3
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	1.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	580	510	20	40	20
Future Vol, veh/h	20	580	510	20	40	20
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	7	7	7	7	7	7
Mvmt Flow	23	674	593	23	47	23

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	617	0	-	0	989	309
Stage 1	-	-	-	-	606	-
Stage 2	-	-	-	-	383	-
Critical Hdwy	4.24	-	-	-	6.94	7.04
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.27	-	-	-	3.57	3.37
Pot Cap-1 Maneuver	926	-	-	-	235	672
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	644	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	925	-	-	-	229	671
Mov Cap-2 Maneuver	-	-	-	-	229	-
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	643	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	21.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	925	-	-	-	293
HCM Lane V/C Ratio	0.025	-	-	-	0.238
HCM Control Delay (s)	9	-	-	-	21.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	700	80	120	670	40	70	10	150	20	10	10
Future Volume (veh/h)	20	700	80	120	670	40	70	10	150	20	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	22	787	23	135	753	43	79	11	6	22	11	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	47	1429	434	178	1206	69	131	69	38	47	26	0
Arrive On Green	0.03	0.29	0.29	0.10	0.36	0.36	0.08	0.06	0.06	0.03	0.01	0.00
Sat Flow, veh/h	1725	4944	1502	1725	3304	189	1725	1102	601	1725	1811	0
Grp Volume(v), veh/h	22	787	23	135	392	404	79	0	17	22	11	0
Grp Sat Flow(s),veh/h/ln	1725	1648	1502	1725	1721	1772	1725	0	1703	1725	1811	0
Q Serve(g_s), s	0.4	4.8	0.4	2.7	6.7	6.7	1.6	0.0	0.3	0.4	0.2	0.0
Cycle Q Clear(g_c), s	0.4	4.8	0.4	2.7	6.7	6.7	1.6	0.0	0.3	0.4	0.2	0.0
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.35	1.00		0.00
Lane Grp Cap(c), veh/h	47	1429	434	178	628	647	131	0	107	47	26	0
V/C Ratio(X)	0.46	0.55	0.05	0.76	0.62	0.62	0.60	0.00	0.16	0.46	0.42	0.00
Avail Cap(c_a), veh/h	964	5529	1680	964	1924	1982	960	0	1904	964	2025	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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.1	10.8	9.2	15.6	9.3	9.3	16.0	0.0	15.9	17.1	17.5	0.0
Incr Delay (d2), s/veh	2.6	0.1	0.0	2.5	0.4	0.4	1.7	0.0	0.3	2.6	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	0.2	1.1	0.1	0.9	1.5	1.5	0.6	0.0	0.1	0.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	10.9	9.2	18.1	9.7	9.7	17.7	0.0	16.1	19.8	21.4	0.0
LnGrp LOS	B	B	A	B	A	A	B	A	B	B	C	A
Approach Vol, veh/h		832			931			96			33	
Approach Delay, s/veh		11.1			10.9			17.4			20.3	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.1	18.8	5.1	6.9	7.8	16.0	6.8	5.1				
Change Period (Y+Rc), s	4.1	5.7	4.1	4.6	4.1	5.7	4.1	4.6				
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.0	19.9	40.0				
Max Q Clear Time (g_c+I1), s	2.4	8.7	2.4	2.3	4.7	6.8	3.6	2.2				
Green Ext Time (p_c), s	0.0	0.6	0.0	0.0	0.1	3.5	0.1	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			11.5									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	780	90	100	510	70	100	0	370	50	290	220
Future Volume (veh/h)	0	780	90	100	510	70	100	0	370	50	290	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	1811	1811	0	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	876	23	112	573	6	112	0	416	56	326	26
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	6	6	6	6	6	6	0	6	6	6	6
Cap, veh/h	0	1656	563	208	1728	754	148	0	0	81	591	464
Arrive On Green	0.00	0.37	0.37	0.06	0.50	0.50	0.09	0.00	0.00	0.05	0.17	0.17
Sat Flow, veh/h	0	4781	1515	3346	3441	1502	1725	112		1725	3441	2701
Grp Volume(v), veh/h	0	876	23	112	573	6	112	43.6		56	326	26
Grp Sat Flow(s),veh/h/ln	0	1485	1515	1673	1721	1502	1725	D		1725	1721	1351
Q Serve(g_s), s	0.0	11.0	0.7	2.3	7.1	0.1	4.6			2.3	6.2	0.6
Cycle Q Clear(g_c), s	0.0	11.0	0.7	2.3	7.1	0.1	4.6			2.3	6.2	0.6
Prop In Lane	0.00		1.00	1.00		1.00	1.00			1.00		1.00
Lane Grp Cap(c), veh/h	0	1656	563	208	1728	754	148			81	591	464
V/C Ratio(X)	0.00	0.53	0.04	0.54	0.33	0.01	0.75			0.69	0.55	0.06
Avail Cap(c_a), veh/h	0	3790	1289	933	2927	1278	481			481	1775	1394
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	17.6	14.4	32.6	10.7	8.9	32.0			33.7	27.2	24.8
Incr Delay (d2), s/veh	0.0	0.5	0.1	3.4	0.2	0.0	11.6			15.5	1.8	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
%ile BackOfQ(50%),veh/ln	0.0	3.3	0.2	1.0	2.2	0.0	2.2			1.2	2.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	18.2	14.4	36.0	10.9	8.9	43.6			49.1	29.0	24.9
LnGrp LOS	A	B	B	D	B	A	D			D	C	C
Approach Vol, veh/h		899			691						408	
Approach Delay, s/veh		18.1			14.9						31.5	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2	3	4		6	7
Phs Duration (G+Y+Rc), s	9.4	32.7	10.9	18.8		42.0	8.1
Change Period (Y+Rc), s	4.9	* 6	* 4.7	6.5		6.0	* 4.7
Max Green Setting (Gmax), s	20.0	* 61	* 20	37.0		61.0	* 20
Max Q Clear Time (g_c+I1), s	4.3	13.0	6.6	8.2		9.1	4.3
Green Ext Time (p_c), s	0.4	13.6	0.4	4.1		8.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	310	460	80	330	350	30
Future Volume (veh/h)	310	460	80	330	350	30
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	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	348	0	90	371	393	5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	958		142	1625	731	335
Arrive On Green	0.28	0.00	0.08	0.47	0.22	0.22
Sat Flow, veh/h	3532	1535	1725	3532	3346	1535
Grp Volume(v), veh/h	348	0	90	371	393	5
Grp Sat Flow(s),veh/h/ln	1721	1535	1725	1721	1673	1535
Q Serve(g_s), s	2.9	0.0	1.8	2.3	3.7	0.1
Cycle Q Clear(g_c), s	2.9	0.0	1.8	2.3	3.7	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	958		142	1625	731	335
V/C Ratio(X)	0.36		0.63	0.23	0.54	0.01
Avail Cap(c_a), veh/h	3354		961	3354	2143	983
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	10.4	0.0	15.9	5.6	12.4	11.0
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.0	0.2	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	0.7	0.0	0.6	0.4	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.5	0.0	17.7	5.6	12.7	11.0
LnGrp LOS	B		B	A	B	B
Approach Vol, veh/h	348			461	398	
Approach Delay, s/veh	10.5			8.0	12.6	
Approach LOS	B			A	B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	7.0	16.2				23.2		12.7
Change Period (Y+Rc), s	4.0	* 6.2				6.2		4.9
Max Green Setting (Gmax), s	20.0	* 35				35.0		23.0
Max Q Clear Time (g_c+I1), s	3.8	4.9				4.3		5.7
Green Ext Time (p_c), s	0.0	0.4				0.4		0.2

Intersection Summary	
HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
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)	10	10	10	70	20	60	10	250	60	50	170	10
Future Volume (veh/h)	10	10	10	70	20	60	10	250	60	50	170	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693
Adj Flow Rate, veh/h	11	11	1	80	23	43	11	284	23	57	193	11
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, %	14	14	14	14	14	14	14	14	14	14	14	14
Cap, veh/h	246	153	195	277	31	52	28	486	412	101	1027	58
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.02	0.29	0.29	0.06	0.33	0.33
Sat Flow, veh/h	500	1122	1434	688	228	382	1612	1693	1434	1612	3090	175
Grp Volume(v), veh/h	22	0	1	146	0	0	11	284	23	57	100	104
Grp Sat Flow(s),veh/h/ln	1622	0	1434	1298	0	0	1612	1693	1434	1612	1608	1657
Q Serve(g_s), s	0.0	0.0	0.0	3.0	0.0	0.0	0.2	4.4	0.4	1.0	1.3	1.4
Cycle Q Clear(g_c), s	0.3	0.0	0.0	3.4	0.0	0.0	0.2	4.4	0.4	1.0	1.3	1.4
Prop In Lane	0.50		1.00	0.55		0.29	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	399	0	195	360	0	0	28	486	412	101	535	551
V/C Ratio(X)	0.06	0.00	0.01	0.41	0.00	0.00	0.39	0.58	0.06	0.56	0.19	0.19
Avail Cap(c_a), veh/h	1368	0	1181	1753	0	0	1381	2398	2032	1328	2278	2347
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	0.0	11.3	12.9	0.0	0.0	14.8	9.3	7.8	13.8	7.2	7.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	3.2	1.6	0.1	1.8	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.6	0.0	0.0	0.1	0.9	0.1	0.3	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	0.0	11.3	13.2	0.0	0.0	18.0	10.9	7.9	15.6	7.4	7.5
LnGrp LOS	B	A	B	B	A	A	B	B	A	B	A	A
Approach Vol, veh/h		23			146			318			261	
Approach Delay, s/veh		11.5			13.2			10.9			9.2	
Approach LOS		B			B			B			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.6	14.9		8.8	5.2	16.3		8.8
Change Period (Y+Rc), s	* 4.7	6.2		* 4.7	* 4.7	6.2		* 4.7
Max Green Setting (Gmax), s	* 25	43.0		* 25	* 26	43.0		* 35
Max Q Clear Time (g_c+I1), s	3.0	6.4		2.3	2.2	3.4		5.4
Green Ext Time (p_c), s	0.0	2.4		0.0	0.0	1.5		0.5

Intersection Summary	
HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

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)	0	0	0	50	0	40	0	270	20	10	230	0
Future Volume (veh/h)	0	0	0	50	0	40	0	270	20	10	230	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1722	1811	1722	0	1722	1722	1722	1722	0
Adj Flow Rate, veh/h				61	0	0	0	329	19	12	280	0
Peak Hour Factor				0.82	0.92	0.82	0.92	0.82	0.82	0.82	0.82	0.92
Percent Heavy Veh, %				12	6	12	0	12	12	12	12	0
Cap, veh/h				140	0	0	0	1125	65	31	930	0
Arrive On Green				0.08	0.00	0.00	0.00	0.36	0.36	0.02	0.54	0.00
Sat Flow, veh/h				1725	0	0	0	3227	181	1640	1722	0
Grp Volume(v), veh/h				61	0	0	0	171	177	12	280	0
Grp Sat Flow(s),veh/h/ln				1725	0	0	0	1636	1685	1640	1722	0
Q Serve(g_s), s				0.9	0.0	0.0	0.0	2.1	2.1	0.2	2.5	0.0
Cycle Q Clear(g_c), s				0.9	0.0	0.0	0.0	2.1	2.1	0.2	2.5	0.0
Prop In Lane				1.00		0.00	0.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h				140	0	0	0	586	604	31	930	0
V/C Ratio(X)				0.44	0.00	0.00	0.00	0.29	0.29	0.38	0.30	0.00
Avail Cap(c_a), veh/h				1931	0	0	0	2954	3042	1540	3109	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				12.1	0.0	0.0	0.0	6.4	6.4	13.4	3.5	0.0
Incr Delay (d2), s/veh				2.1	0.0	0.0	0.0	0.6	0.6	7.5	0.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.3	0.0	0.0	0.0	0.4	0.4	0.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				14.2	0.0	0.0	0.0	7.0	6.9	20.9	3.9	0.0
LnGrp LOS				B	A	A	A	A	A	C	A	A
Approach Vol, veh/h					61			348			292	
Approach Delay, s/veh					14.2			7.0			4.6	
Approach LOS					B			A			A	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	5.0	15.9		6.7		20.9						
Change Period (Y+Rc), s	4.5	6.0		4.5		6.0						
Max Green Setting (Gmax), s	26.0	50.0		31.0		50.0						
Max Q Clear Time (g_c+I1), s	2.2	4.1		2.9		4.5						
Green Ext Time (p_c), s	0.0	4.1		0.3		3.2						
Intersection Summary												
HCM 6th Ctrl Delay			6.6									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	10	70	40	10
Future Vol, veh/h	10	10	10	70	40	10
Conflicting Peds, #/hr	0	0	1	0	0	1
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	89	89	89	89	89	89
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	11	11	11	79	45	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	153	52	57	0	-	0
Stage 1	52	-	-	-	-	-
Stage 2	101	-	-	-	-	-
Critical Hdwy	6.49	6.29	4.19	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.381	2.281	-	-	-
Pot Cap-1 Maneuver	823	996	1504	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	906	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	815	995	1503	-	-	-
Mov Cap-2 Maneuver	815	-	-	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	905	-	-	-	-	-

Approach	EB		NB		SB	
HCM Control Delay, s	9.1		0.9		0	
HCM LOS	A					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1503	-	896	-	-
HCM Lane V/C Ratio	0.007	-	0.025	-	-
HCM Control Delay (s)	7.4	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	190	20	20	340	20	20	10	20	70	40	110
Future Volume (veh/h)	120	190	20	20	340	20	20	10	20	70	40	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	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	133	211	22	22	378	19	22	11	2	78	44	122
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	170	359	37	74	668	33	45	23	4	136	77	187
Arrive On Green	0.11	0.24	0.24	0.05	0.22	0.22	0.05	0.05	0.05	0.13	0.13	0.13
Sat Flow, veh/h	1584	1481	154	1584	3062	153	1003	502	91	1030	581	1409
Grp Volume(v), veh/h	133	0	233	22	194	203	35	0	0	122	0	122
Grp Sat Flow(s),veh/h/ln	1584	0	1635	1584	1580	1635	1596	0	0	1611	0	1409
Q Serve(g_s), s	4.5	0.0	6.9	0.7	6.0	6.1	1.2	0.0	0.0	3.9	0.0	4.5
Cycle Q Clear(g_c), s	4.5	0.0	6.9	0.7	6.0	6.1	1.2	0.0	0.0	3.9	0.0	4.5
Prop In Lane	1.00		0.09	1.00		0.09	0.63		0.06	0.64		1.00
Lane Grp Cap(c), veh/h	170	0	397	74	345	357	72	0	0	213	0	187
V/C Ratio(X)	0.78	0.00	0.59	0.30	0.56	0.57	0.49	0.00	0.00	0.57	0.00	0.65
Avail Cap(c_a), veh/h	749	0	895	864	1207	1250	465	0	0	821	0	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.9	0.0	18.4	25.3	19.1	19.2	25.6	0.0	0.0	22.4	0.0	22.6
Incr Delay (d2), s/veh	7.6	0.0	2.1	2.2	2.2	2.2	5.0	0.0	0.0	2.4	0.0	3.8
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	1.8	0.0	2.3	0.3	2.0	2.0	0.5	0.0	0.0	1.4	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	0.0	20.5	27.5	21.4	21.3	30.6	0.0	0.0	24.8	0.0	26.5
LnGrp LOS	C	A	C	C	C	C	C	A	A	C	A	C
Approach Vol, veh/h		366			419			35			244	
Approach Delay, s/veh		24.5			21.7			30.6			25.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	20.3		17.2	11.4	19.0		7.4				
Change Period (Y+Rc), s	7.5	* 7		* 9.9	5.5	7.0		4.9				
Max Green Setting (Gmax), s	30.0	* 30		* 28	26.0	42.0		16.0				
Max Q Clear Time (g_c+I1), s	2.7	8.9		6.5	6.5	8.1		3.2				
Green Ext Time (p_c), s	0.0	1.7		0.9	0.3	3.3		0.1				

Intersection Summary			
HCM 6th Ctrl Delay			23.8
HCM 6th LOS			C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	120	20	10	190	160	20	30	10	10	0	170
Future Volume (veh/h)	140	120	20	10	190	160	20	30	10	10	0	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	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	156	133	19	11	211	158	22	33	4	11	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	191	542	77	31	247	185	46	69	8	27	0	24
Arrive On Green	0.12	0.38	0.38	0.02	0.28	0.28	0.08	0.08	0.08	0.02	0.00	0.00
Sat Flow, veh/h	1584	1423	203	1584	883	661	602	902	109	1584	0	1409
Grp Volume(v), veh/h	156	0	152	11	0	369	59	0	0	11	0	0
Grp Sat Flow(s),veh/h/ln	1584	0	1626	1584	0	1544	1613	0	0	1584	0	1409
Q Serve(g_s), s	5.1	0.0	3.4	0.4	0.0	12.1	1.9	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	5.1	0.0	3.4	0.4	0.0	12.1	1.9	0.0	0.0	0.4	0.0	0.0
Prop In Lane	1.00		0.13	1.00		0.43	0.37		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	191	0	620	31	0	432	123	0	0	27	0	24
V/C Ratio(X)	0.81	0.00	0.25	0.35	0.00	0.85	0.48	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	771	0	975	801	0	1070	816	0	0	771	0	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.9	0.0	11.3	25.8	0.0	18.2	23.6	0.0	0.0	26.0	0.0	0.0
Incr Delay (d2), s/veh	3.2	0.0	0.1	2.5	0.0	1.9	1.1	0.0	0.0	3.7	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	1.7	0.0	0.9	0.2	0.0	4.0	0.7	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	0.0	11.4	28.3	0.0	20.1	24.7	0.0	0.0	29.7	0.0	0.0
LnGrp LOS	C	A	B	C	A	C	C	A	A	C	A	A
Approach Vol, veh/h		308			380			59			11	
Approach Delay, s/veh		18.8			20.3			24.7			29.7	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.4	27.4		8.8	12.8	22.0		9.9
Change Period (Y+Rc), s	* 6.3	* 7		7.9	* 6.3	7.0		5.8
Max Green Setting (Gmax), s	* 27	* 32		26.0	* 26	37.0		27.0
Max Q Clear Time (g_c+I1), s	2.4	5.4		2.4	7.1	14.1		3.9
Green Ext Time (p_c), s	0.0	0.1		0.0	0.0	0.9		0.1

Intersection Summary	
HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Notes

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

Intersection						
Int Delay, s/veh	0.4					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	22	300	22	0	220
Future Vol, veh/h	0	22	300	22	0	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	24	326	24	0	239

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	175	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.99	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.357	-	-	-	-
Pot Cap-1 Maneuver	0	827	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	827	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	827	-
HCM Lane V/C Ratio	-	-	0.029	-
HCM Control Delay (s)	-	-	9.5	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.4					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	290	32	30	220
Future Vol, veh/h	0	0	290	32	30	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	315	35	33	239

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	638	333	0	0	350	0
Stage 1	333	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.46	6.26	-	-	4.16	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	-	-	2.254	-
Pot Cap-1 Maneuver	435	700	-	-	1187	-
Stage 1	717	-	-	-	-	-
Stage 2	739	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	421	700	-	-	1187	-
Mov Cap-2 Maneuver	421	-	-	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1187	-
HCM Lane V/C Ratio	-	-	-	0.027	-
HCM Control Delay (s)	-	-	0	8.1	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	290	0	0	250
Future Vol, veh/h	0	0	290	0	0	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	315	0	0	272

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	587	315	0	0	315	0
Stage 1	315	-	-	-	-	-
Stage 2	272	-	-	-	-	-
Critical Hdwy	6.46	6.26	-	-	4.16	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	-	-	2.254	-
Pot Cap-1 Maneuver	465	716	-	-	1223	-
Stage 1	731	-	-	-	-	-
Stage 2	765	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	465	716	-	-	1223	-
Mov Cap-2 Maneuver	465	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	765	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1223	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	0.6					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	10	70	40	0
Future Vol, veh/h	0	0	10	70	40	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	120	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	11	76	43	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	141	43	43	0	-	0
Stage 1	43	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.254	-	-	-
Pot Cap-1 Maneuver	843	1016	1540	-	-	0
Stage 1	969	-	-	-	-	0
Stage 2	916	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	837	1016	1540	-	-	-
Mov Cap-2 Maneuver	837	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	916	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1540	-	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-	-
HCM Control Delay (s)	7.4	-	0	0	-
HCM Lane LOS	A	-	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Intersection Delay, s/veh	18.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	450	0	0	410	0	0	0	0	0	0	0
Future Vol, veh/h	0	450	0	0	410	0	0	0	0	0	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
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	489	0	0	446	0	0	0	0	0	0	0
Number of Lanes	1	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	3
HCM Control Delay	17.3	20.1	0	0
HCM LOS	C	C	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	450	0	410	0
LT Vol	0	0	0	0	0	0	0
Through Vol	0	0	0	450	0	410	0
RT Vol	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	489	0	446	0
Geometry Grp	8	8	7	7	7	8	8
Degree of Util (X)	0	0	0	0.673	0	0.694	0
Departure Headway (Hd)	7.287	7.287	4.954	4.954	4.954	5.607	7.287
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	729	0	646	0
Service Time	4.987	4.987	2.676	2.676	2.676	3.337	4.987
HCM Lane V/C Ratio	0	0	0	0.671	0	0.69	0
HCM Control Delay	10	10	7.7	17.3	7.7	20.1	10
HCM Lane LOS	N	N	N	C	N	C	N
HCM 95th-tile Q	0	0	0	5.2	0	5.5	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	710	0	0	1010	0	0	0	30	0	0	0
Future Vol, veh/h	0	710	0	0	1010	0	0	0	30	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	772	0	0	1098	0	0	0	33	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	-	-	-	0	-	-	386	-	-	549
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.22	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.96	-	-	3.36
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	514	0	0	469
Stage 1	0	-	0	0	-	0	0	0	-	0	0	-
Stage 2	0	-	0	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-			-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	514	-	-	469
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.5	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT	SBLn1
Capacity (veh/h)	514	-	-	-
HCM Lane V/C Ratio	0.063	-	-	-
HCM Control Delay (s)	12.5	-	-	0
HCM Lane LOS	B	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	480	200	100	290	160	70
Future Volume (veh/h)	480	200	100	290	160	70
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	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	511	86	106	309	170	74
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	755	639	138	1097	305	272
Arrive On Green	0.42	0.42	0.08	0.61	0.18	0.18
Sat Flow, veh/h	1811	1535	1725	1811	1725	1535
Grp Volume(v), veh/h	511	86	106	309	170	74
Grp Sat Flow(s),veh/h/ln	1811	1535	1725	1811	1725	1535
Q Serve(g_s), s	12.7	1.9	3.3	4.5	5.0	2.3
Cycle Q Clear(g_c), s	12.7	1.9	3.3	4.5	5.0	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	755	639	138	1097	305	272
V/C Ratio(X)	0.68	0.13	0.77	0.28	0.56	0.27
Avail Cap(c_a), veh/h	1313	1113	625	1313	625	556
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	13.1	9.9	24.9	5.2	20.7	19.6
Incr Delay (d2), s/veh	3.8	0.3	8.5	0.5	5.7	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	4.3	0.5	1.5	0.9	2.1	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.9	10.3	33.4	5.7	26.4	21.6
LnGrp LOS	B	B	C	A	C	C
Approach Vol, veh/h	597			415	244	
Approach Delay, s/veh	16.0			12.8	24.9	
Approach LOS	B			B	C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.4	29.0		15.8		39.4
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	20.0	40.0		20.0		40.0
Max Q Clear Time (g_c+I1), s	5.3	14.7		7.0		6.5
Green Ext Time (p_c), s	0.2	8.3		1.6		4.4

Intersection Summary			
HCM 6th Ctrl Delay			16.6
HCM 6th LOS			B

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	60	50	230	290	20
Future Vol, veh/h	20	60	50	230	290	20
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	86	86	86	86	86	86
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	23	70	58	267	337	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	732	349	360	0	-	0
Stage 1	349	-	-	-	-	-
Stage 2	383	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	385	690	1188	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	363	690	1188	-	-	-
Mov Cap-2 Maneuver	363	-	-	-	-	-
Stage 1	670	-	-	-	-	-
Stage 2	685	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1188	-	563	-	-
HCM Lane V/C Ratio	0.049	-	0.165	-	-
HCM Control Delay (s)	8.2	0	12.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	30	100	0	40	30	300	120	70	300	20
Future Vol, veh/h	10	0	30	100	0	40	30	300	120	70	300	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	100	100	-	-	140	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	92	89	92	92	92	89	89	92	92	89	89
Heavy Vehicles, %	3	6	3	6	6	6	3	3	6	6	3	3
Mvmt Flow	11	0	34	109	0	43	34	337	130	76	337	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	737	1035	348	987	981	234	359	0	0	467	0	0
Stage 1	500	500	-	470	470	-	-	-	-	-	-	-
Stage 2	237	535	-	517	511	-	-	-	-	-	-	-
Critical Hdwy	7.345	6.59	6.245	7.39	6.59	6.99	4.145	-	-	4.19	-	-
Critical Hdwy Stg 1	6.145	5.59	-	6.59	5.59	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.545	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Follow-up Hdwy	3.5285	4.057	3.3285	3.557	4.057	3.357	2.2285	-	-	2.257	-	-
Pot Cap-1 Maneuver	319	226	692	209	243	758	1192	-	-	1068	-	-
Stage 1	550	534	-	535	551	-	-	-	-	-	-	-
Stage 2	743	515	-	531	528	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	278	204	692	184	219	758	1192	-	-	1068	-	-
Mov Cap-2 Maneuver	278	204	-	184	219	-	-	-	-	-	-	-
Stage 1	534	496	-	519	535	-	-	-	-	-	-	-
Stage 2	680	500	-	469	491	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.5	38.1	0.5	1.5
HCM LOS	B	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1192	-	-	278	692	184	758	1068	-	-
HCM Lane V/C Ratio	0.028	-	-	0.04	0.049	0.591	0.057	0.071	-	-
HCM Control Delay (s)	8.1	-	-	18.5	10.5	49.4	10	8.6	-	-
HCM Lane LOS	A	-	-	C	B	E	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.2	3.2	0.2	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	60	50	10	20	60	420	60	20	360	10
Future Volume (veh/h)	10	10	60	50	10	20	60	420	60	20	360	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		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	11	11	2	54	11	2	65	452	56	22	387	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	31	45	8	126	127	23	144	1085	134	59	1036	29
Arrive On Green	0.02	0.03	0.03	0.07	0.08	0.08	0.08	0.34	0.34	0.03	0.29	0.29
Sat Flow, veh/h	1781	1540	280	1781	1540	280	1781	3176	391	1781	3527	100
Grp Volume(v), veh/h	11	0	13	54	0	13	65	252	256	22	195	203
Grp Sat Flow(s),veh/h/ln	1781	0	1820	1781	0	1820	1781	1777	1790	1781	1777	1850
Q Serve(g_s), s	0.2	0.0	0.2	1.0	0.0	0.2	1.2	3.7	3.7	0.4	3.0	3.0
Cycle Q Clear(g_c), s	0.2	0.0	0.2	1.0	0.0	0.2	1.2	3.7	3.7	0.4	3.0	3.0
Prop In Lane	1.00		0.15	1.00		0.15	1.00		0.22	1.00		0.05
Lane Grp Cap(c), veh/h	31	0	53	126	0	150	144	607	611	59	522	543
V/C Ratio(X)	0.35	0.00	0.24	0.43	0.00	0.09	0.45	0.41	0.42	0.37	0.37	0.37
Avail Cap(c_a), veh/h	785	0	802	785	0	802	1046	1566	1577	1046	1513	1576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	16.2	15.2	0.0	14.4	14.9	8.6	8.6	16.1	9.5	9.5
Incr Delay (d2), s/veh	6.7	0.0	2.4	2.3	0.0	0.2	2.2	0.6	0.7	3.9	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	0.4	0.0	0.1	0.4	0.9	0.9	0.2	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	0.0	18.5	17.5	0.0	14.7	17.1	9.2	9.3	20.0	10.2	10.2
LnGrp LOS	C	A	B	B	A	B	B	A	A	B	B	B
Approach Vol, veh/h		24			67			573			420	
Approach Delay, s/veh		20.7			16.9			10.1			10.7	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	16.9	6.4	5.6	6.8	15.3	4.6	7.4
Change Period (Y+Rc), s	4.0	5.3	4.0	4.6	4.0	5.3	4.0	4.6
Max Green Setting (Gmax), s	20.0	30.0	15.0	15.0	20.0	29.0	15.0	15.0
Max Q Clear Time (g_c+I1), s	2.4	5.7	3.0	2.2	3.2	5.0	2.2	2.2
Green Ext Time (p_c), s	0.0	4.0	0.1	0.0	0.1	3.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.0
HCM 6th LOS	B

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)	170	550	160	250	420	200	110	310	260	200	250	90
Future Volume (veh/h)	170	550	160	250	420	200	110	310	260	200	250	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	179	579	72	263	442	171	116	326	152	211	263	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	223	851	375	311	723	277	151	489	223	257	686	241
Arrive On Green	0.13	0.24	0.24	0.18	0.29	0.29	0.09	0.21	0.21	0.15	0.27	0.27
Sat Flow, veh/h	1767	3526	1552	1767	2482	951	1767	2341	1067	1767	2547	896
Grp Volume(v), veh/h	179	579	72	263	313	300	116	244	234	211	180	178
Grp Sat Flow(s),veh/h/ln	1767	1763	1552	1767	1763	1670	1767	1763	1645	1767	1763	1680
Q Serve(g_s), s	7.8	11.8	2.9	11.4	12.1	12.3	5.1	10.0	10.4	9.1	6.5	6.8
Cycle Q Clear(g_c), s	7.8	11.8	2.9	11.4	12.1	12.3	5.1	10.0	10.4	9.1	6.5	6.8
Prop In Lane	1.00		1.00	1.00		0.57	1.00		0.65	1.00		0.53
Lane Grp Cap(c), veh/h	223	851	375	311	513	486	151	369	344	257	475	452
V/C Ratio(X)	0.80	0.68	0.19	0.85	0.61	0.62	0.77	0.66	0.68	0.82	0.38	0.39
Avail Cap(c_a), veh/h	538	1565	689	538	782	741	538	894	835	538	894	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	27.1	23.8	31.5	24.1	24.2	35.3	28.6	28.8	32.7	23.4	23.6
Incr Delay (d2), s/veh	6.6	1.4	0.4	6.3	1.7	1.8	8.0	2.9	3.4	6.4	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	4.7	1.0	5.0	4.8	4.6	2.4	4.2	4.1	4.1	2.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	28.5	24.1	37.8	25.7	26.0	43.3	31.5	32.1	39.1	24.2	24.3
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		830			876			594			569	
Approach Delay, s/veh		30.6			29.5			34.0			29.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.9	24.0	10.7	26.2	13.9	28.0	15.5	21.5				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	24.0	35.0	24.0	40.0	24.0	35.0	24.0	40.0				
Max Q Clear Time (g_c+I1), s	13.4	13.8	7.1	8.8	9.8	14.3	11.1	12.4				
Green Ext Time (p_c), s	0.5	5.3	0.2	2.9	0.4	4.9	0.4	4.1				
Intersection Summary												
HCM 6th Ctrl Delay			30.8									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	13.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	130	40	200	50	0	0	0	0	290	0	30
Future Vol, veh/h	0	130	40	200	50	0	0	0	0	290	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	0	-	520
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	25	25	25	25	25	25	25	25	25	25	25	25
Mvmt Flow	0	138	43	213	53	0	0	0	0	309	0	32

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	181	0	0				548	660	27
Stage 1	-	-	-	-	-	-				479	479	-
Stage 2	-	-	-	-	-	-				69	181	-
Critical Hdwy	-	-	-	4.6	-	-				7.3	7	7.4
Critical Hdwy Stg 1	-	-	-	-	-	-				6.3	6	-
Critical Hdwy Stg 2	-	-	-	-	-	-				6.3	6	-
Follow-up Hdwy	-	-	-	2.45	-	-				3.75	4.25	3.55
Pot Cap-1 Maneuver	0	-	-	1239	-	0				415	338	972
Stage 1	0	-	-	-	-	0				527	499	-
Stage 2	0	-	-	-	-	0				882	696	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1239	-	-				344	0	972
Mov Cap-2 Maneuver	-	-	-	-	-	-				344	0	-
Stage 1	-	-	-	-	-	-				527	0	-
Stage 2	-	-	-	-	-	-				730	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	6.8	25.3
HCM LOS			D

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1239	-	344	406
HCM Lane V/C Ratio	-	-	0.172	-	0.598	0.332
HCM Control Delay (s)	-	-	8.5	-	29.9	18.2
HCM Lane LOS	-	-	A	-	D	C
HCM 95th %tile Q(veh)	-	-	0.6	-	3.7	1.4

Intersection												
Int Delay, s/veh	3.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	390	0	0	220	270	30	0	180	0	0	0
Future Vol, veh/h	30	390	0	0	220	270	30	0	180	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Stop	-	-	None
Storage Length	0	-	-	-	-	-	630	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	25	25	25	25	25	25	25	25	25	25	25	25
Mvmt Flow	32	415	0	0	234	287	32	0	191	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	234	0	-	-	-	0	596	713	208
Stage 1	-	-	-	-	-	-	479	479	-
Stage 2	-	-	-	-	-	-	117	234	-
Critical Hdwy	4.6	-	-	-	-	-	7.3	7	7.4
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	6	-
Follow-up Hdwy	2.45	-	-	-	-	-	3.75	4.25	3.55
Pot Cap-1 Maneuver	1179	-	0	0	-	0	385	313	731
Stage 1	-	-	0	0	-	0	527	499	-
Stage 2	-	-	0	0	-	0	831	656	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	1179	-	-	-	-	-	375	0	731
Mov Cap-2 Maneuver	-	-	-	-	-	-	375	0	-
Stage 1	-	-	-	-	-	-	513	0	-
Stage 2	-	-	-	-	-	-	831	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.6	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	375	731	1179	-	-
HCM Lane V/C Ratio	0.085	0.262	0.027	-	-
HCM Control Delay (s)	15.5	11.7	8.1	-	-
HCM Lane LOS	C	B	A	-	-
HCM 95th %tile Q(veh)	0.3	1	0.1	-	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	130	150	90	300	260	90
Future Volume (veh/h)	130	150	90	300	260	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	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	151	12	105	349	302	105
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	15	15	15	15	15	15
Cap, veh/h	202	180	134	894	750	256
Arrive On Green	0.13	0.13	0.08	0.53	0.32	0.32
Sat Flow, veh/h	1598	1422	1598	1678	2417	795
Grp Volume(v), veh/h	151	12	105	349	204	203
Grp Sat Flow(s),veh/h/ln	1598	1422	1598	1678	1594	1535
Q Serve(g_s), s	3.2	0.3	2.3	4.3	3.5	3.6
Cycle Q Clear(g_c), s	3.2	0.3	2.3	4.3	3.5	3.6
Prop In Lane	1.00	1.00	1.00			0.52
Lane Grp Cap(c), veh/h	202	180	134	894	513	494
V/C Ratio(X)	0.75	0.07	0.79	0.39	0.40	0.41
Avail Cap(c_a), veh/h	907	807	907	1667	1584	1525
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	14.8	13.6	15.8	4.8	9.3	9.3
Incr Delay (d2), s/veh	5.5	0.2	13.4	1.0	1.8	2.0
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	0.1	1.1	0.5	0.9	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.3	13.7	29.2	5.9	11.1	11.3
LnGrp LOS	C	B	C	A	B	B
Approach Vol, veh/h	163			454	407	
Approach Delay, s/veh	19.8			11.3	11.2	
Approach LOS	B			B	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.4	17.3		10.4		24.8
Change Period (Y+Rc), s	4.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	20.0	35.0		20.0		35.0
Max Q Clear Time (g_c+I1), s	4.3	5.6		5.2		6.3
Green Ext Time (p_c), s	0.3	5.7		0.4		4.9
Intersection Summary						
HCM 6th Ctrl Delay			12.6			
HCM 6th LOS			B			

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)	0	620	70	260	390	0	0	0	0	370	0	100
Future Volume (veh/h)	0	620	70	260	390	0	0	0	0	370	0	100
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1841	1841	0				1841	1841	1841
Adj Flow Rate, veh/h	0	689	61	289	433	0				411	0	69
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	4	4	4	4	0				4	4	4
Cap, veh/h	0	1300	114	342	978	0				490	0	82
Arrive On Green	0.00	0.28	0.28	0.19	0.53	0.00				0.33	0.00	0.33
Sat Flow, veh/h	0	4850	411	1753	1841	0				1475	0	248
Grp Volume(v), veh/h	0	491	259	289	433	0				480	0	0
Grp Sat Flow(s),veh/h/ln	0	1675	1746	1753	1841	0				1722	0	0
Q Serve(g_s), s	0.0	8.4	8.5	10.7	9.7	0.0				17.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	8.4	8.5	10.7	9.7	0.0				17.4	0.0	0.0
Prop In Lane	0.00		0.24	1.00		0.00				0.86		0.14
Lane Grp Cap(c), veh/h	0	929	484	342	978	0				572	0	0
V/C Ratio(X)	0.00	0.53	0.53	0.85	0.44	0.00				0.84	0.00	0.00
Avail Cap(c_a), veh/h	0	1736	904	519	978	0				892	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)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	20.7	20.7	26.2	9.7	0.0				20.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	1.8	7.9	0.6	0.0				4.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	3.3	4.7	3.1	0.0				6.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.6	22.5	34.1	10.3	0.0				25.7	0.0	0.0
LnGrp LOS	A	C	C	C	B	A				C	A	A
Approach Vol, veh/h		750			722						480	
Approach Delay, s/veh		21.9			19.8						25.7	
Approach LOS		C			B						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	17.2	23.3		27.0		40.5						
Change Period (Y+Rc), s	4.0	4.6		4.6		4.6						
Max Green Setting (Gmax), s	20.0	35.0		35.0		35.0						
Max Q Clear Time (g_c+I1), s	12.7	10.5		19.4		11.7						
Green Ext Time (p_c), s	0.5	8.2		3.0		4.5						
Intersection Summary												
HCM 6th Ctrl Delay			22.1									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	910	0	0	600	250	50	0	450	0	0	0
Future Volume (veh/h)	80	910	0	0	600	250	50	0	450	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1841	0	0	1841	1841	1841	1841	1841			
Adj Flow Rate, veh/h	89	1011	0	0	667	231	56	0	500			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	4	4	0	0	4	4	4	4	4			
Cap, veh/h	116	1694	0	0	911	315	62	0	557			
Arrive On Green	0.07	0.48	0.00	0.00	0.36	0.36	0.39	0.00	0.39			
Sat Flow, veh/h	1753	3589	0	0	2591	865	159	0	1419			
Grp Volume(v), veh/h	89	1011	0	0	467	431	556	0	0			
Grp Sat Flow(s),veh/h/ln	1753	1749	0	0	1749	1615	1577	0	0			
Q Serve(g_s), s	3.7	15.7	0.0	0.0	17.3	17.3	24.7	0.0	0.0			
Cycle Q Clear(g_c), s	3.7	15.7	0.0	0.0	17.3	17.3	24.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.54	0.10		0.90			
Lane Grp Cap(c), veh/h	116	1694	0	0	637	589	619	0	0			
V/C Ratio(X)	0.77	0.60	0.00	0.00	0.73	0.73	0.90	0.00	0.00			
Avail Cap(c_a), veh/h	469	1694	0	0	819	756	738	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	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	34.3	14.0	0.0	0.0	20.6	20.6	21.3	0.0	0.0			
Incr Delay (d2), s/veh	10.0	0.8	0.0	0.0	3.8	4.1	12.7	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			
%ile BackOfQ(50%),veh/ln	1.8	5.3	0.0	0.0	6.8	6.3	9.9	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	14.8	0.0	0.0	24.4	24.7	34.0	0.0	0.0			
LnGrp LOS	D	B	A	A	C	C	C	A	A			
Approach Vol, veh/h		1100			898			556				
Approach Delay, s/veh		17.2			24.5			34.0				
Approach LOS		B			C			C				

Timer - Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		40.8			9.0	31.8		34.0
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6
Max Green Setting (Gmax), s		35.0			20.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		17.7			5.7	19.3		26.7
Green Ext Time (p_c), s		9.8			0.1	7.9		2.6

Intersection Summary		
HCM 6th Ctrl Delay		23.4
HCM 6th LOS		C

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1100	260	0	780	0	0	0	40	0	0	70
Future Vol, veh/h	0	1100	260	0	780	0	0	0	40	0	0	70
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	1222	289	0	867	0	0	0	44	0	0	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	758	-	-	434
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.98	-	-	6.98
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.34	-	-	3.34
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	345	0	0	564
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	344	-	-	564
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	17	12.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	344	-	-	-	564
HCM Lane V/C Ratio	0.129	-	-	-	0.138
HCM Control Delay (s)	17	-	-	-	12.4
HCM Lane LOS	C	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	760	180	110	380	110	240	210	110	120	130	130
Future Volume (veh/h)	210	760	180	110	380	110	240	210	110	120	130	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	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	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	233	844	181	122	422	96	267	233	46	133	144	144
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	267	933	200	154	740	167	290	742	144	163	319	275
Arrive On Green	0.15	0.33	0.33	0.09	0.26	0.26	0.17	0.25	0.25	0.09	0.18	0.18
Sat Flow, veh/h	1753	2851	611	1753	2815	634	1753	2916	565	1753	1749	1509
Grp Volume(v), veh/h	233	518	507	122	260	258	267	138	141	133	144	144
Grp Sat Flow(s),veh/h/ln	1753	1749	1714	1753	1749	1700	1753	1749	1733	1753	1749	1509
Q Serve(g_s), s	11.8	25.6	25.7	6.2	11.7	11.9	13.6	5.8	6.0	6.7	6.7	7.8
Cycle Q Clear(g_c), s	11.8	25.6	25.7	6.2	11.7	11.9	13.6	5.8	6.0	6.7	6.7	7.8
Prop In Lane	1.00		0.36	1.00		0.37	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	267	572	561	154	460	447	290	445	441	163	319	275
V/C Ratio(X)	0.87	0.90	0.90	0.79	0.57	0.58	0.92	0.31	0.32	0.81	0.45	0.52
Avail Cap(c_a), veh/h	290	579	567	290	579	563	290	579	573	213	579	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	37.6	29.2	29.2	40.5	28.9	29.0	37.2	27.4	27.4	40.3	33.0	33.5
Incr Delay (d2), s/veh	21.6	18.5	18.8	10.4	2.3	2.5	32.3	0.8	0.9	13.0	2.1	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	12.8	12.6	3.0	4.9	4.9	8.2	2.4	2.5	3.4	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	47.7	48.0	50.9	31.3	31.5	69.5	28.2	28.3	53.3	35.2	36.8
LnGrp LOS	E	D	D	D	C	C	E	C	C	D	D	D
Approach Vol, veh/h		1258			640			546			421	
Approach Delay, s/veh		49.9			35.1			48.4			41.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.2	20.0	22.5	18.8	29.3	13.4	29.1
Change Period (Y+Rc), s	5.0	5.5	5.0	6.0	5.0	5.5	5.0	6.0
Max Green Setting (Gmax), s	15.0	30.0	15.0	30.0	15.0	30.0	11.0	30.0
Max Q Clear Time (g_c+I1), s	8.2	27.7	15.6	9.8	13.8	13.9	8.7	8.0
Green Ext Time (p_c), s	0.2	1.8	0.0	2.8	0.0	4.6	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	45.1
HCM 6th LOS	D

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)	70	500	170	60	350	70	110	230	110	100	230	100
Future Volume (veh/h)	70	500	170	60	350	70	110	230	110	100	230	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		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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	71	505	113	61	354	66	111	232	97	101	232	25
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	93	623	528	86	505	94	144	302	126	131	441	374
Arrive On Green	0.05	0.34	0.34	0.05	0.34	0.34	0.08	0.25	0.25	0.08	0.24	0.24
Sat Flow, veh/h	1725	1811	1535	1725	1484	277	1725	1204	503	1725	1811	1535
Grp Volume(v), veh/h	71	505	113	61	0	420	111	0	329	101	232	25
Grp Sat Flow(s),veh/h/ln	1725	1811	1535	1725	0	1761	1725	0	1707	1725	1811	1535
Q Serve(g_s), s	2.8	17.5	3.6	2.4	0.0	14.3	4.4	0.0	12.4	4.0	7.7	0.9
Cycle Q Clear(g_c), s	2.8	17.5	3.6	2.4	0.0	14.3	4.4	0.0	12.4	4.0	7.7	0.9
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	93	623	528	86	0	599	144	0	428	131	441	374
V/C Ratio(X)	0.76	0.81	0.21	0.71	0.00	0.70	0.77	0.00	0.77	0.77	0.53	0.07
Avail Cap(c_a), veh/h	499	786	666	499	0	765	499	0	988	499	1048	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00
Uniform Delay (d), s/veh	32.3	20.6	16.1	32.3	0.0	19.8	31.0	0.0	24.0	31.3	22.7	20.1
Incr Delay (d2), s/veh	12.2	7.0	0.4	10.2	0.0	3.5	8.4	0.0	4.6	9.1	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	7.5	1.2	1.2	0.0	5.6	2.0	0.0	4.9	1.8	3.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.5	27.7	16.5	42.5	0.0	23.3	39.4	0.0	28.6	40.4	24.2	20.2
LnGrp LOS	D	C	B	D	A	C	D	A	C	D	C	C
Approach Vol, veh/h		689			481			440			358	
Approach Delay, s/veh		27.6			25.8			31.3			28.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	29.8	9.3	22.6	7.7	29.5	9.8	22.1
Change Period (Y+Rc), s	4.0	6.0	4.0	5.3	4.0	6.0	4.0	5.3
Max Green Setting (Gmax), s	20.0	30.0	20.0	40.0	20.0	30.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	4.4	19.5	6.0	14.4	4.8	16.3	6.4	9.7
Green Ext Time (p_c), s	0.1	4.2	0.2	3.0	0.1	3.6	0.2	2.1

Intersection Summary	
HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	780	580	50	30	20
Future Vol, veh/h	20	780	580	50	30	20
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	821	611	53	32	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	665	0	-	0	1092	333
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	453	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	913	-	-	-	207	660
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	604	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	912	-	-	-	202	659
Mov Cap-2 Maneuver	-	-	-	-	202	-
Stage 1	-	-	-	-	473	-
Stage 2	-	-	-	-	603	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	20.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	912	-	-	-	280
HCM Lane V/C Ratio	0.023	-	-	-	0.188
HCM Control Delay (s)	9	-	-	-	20.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	810	110	160	710	30	70	20	140	40	30	20
Future Volume (veh/h)	10	810	110	160	710	30	70	20	140	40	30	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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	11	853	41	168	747	31	74	21	12	42	32	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	25	1405	436	218	1332	55	119	102	58	166	213	7
Arrive On Green	0.01	0.28	0.28	0.12	0.39	0.39	0.07	0.09	0.09	0.09	0.12	0.12
Sat Flow, veh/h	1767	5066	1572	1767	3449	143	1767	1108	633	1767	1790	56
Grp Volume(v), veh/h	11	853	41	168	382	396	74	0	33	42	0	33
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1763	1830	1767	0	1742	1767	0	1845
Q Serve(g_s), s	0.3	6.6	0.9	4.1	7.6	7.6	1.8	0.0	0.8	1.0	0.0	0.7
Cycle Q Clear(g_c), s	0.3	6.6	0.9	4.1	7.6	7.6	1.8	0.0	0.8	1.0	0.0	0.7
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.36	1.00		0.03
Lane Grp Cap(c), veh/h	25	1405	436	218	681	707	119	0	160	166	0	220
V/C Ratio(X)	0.44	0.61	0.09	0.77	0.56	0.56	0.62	0.00	0.21	0.25	0.00	0.15
Avail Cap(c_a), veh/h	789	4526	1405	789	1575	1635	789	0	1556	789	0	1649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	21.9	14.1	12.0	19.0	10.8	10.8	20.3	0.0	18.8	18.8	0.0	17.7
Incr Delay (d2), s/veh	4.3	0.2	0.0	2.2	0.3	0.3	5.3	0.0	0.2	0.8	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.9	0.2	1.5	2.0	2.1	0.8	0.0	0.3	0.4	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	14.2	12.0	21.2	11.0	11.0	25.6	0.0	19.0	19.6	0.0	17.8
LnGrp LOS	C	B	B	C	B	B	C	A	B	B	A	B
Approach Vol, veh/h		905			946			107			75	
Approach Delay, s/veh		14.3			12.8			23.6			18.8	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	23.0	8.3	8.7	9.6	18.1	7.1	9.9
Change Period (Y+Rc), s	4.1	5.7	4.1	4.6	4.1	5.7	4.1	4.6
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	2.3	9.6	3.0	2.8	6.1	8.6	3.8	2.7
Green Ext Time (p_c), s	0.0	0.5	0.1	0.1	0.2	3.9	0.1	0.1

Intersection Summary		
HCM 6th Ctrl Delay		14.3
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	880	110	80	500	30	130	0	340	70	340	270
Future Volume (veh/h)	0	880	110	80	500	30	130	0	340	70	340	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	926	33	84	526	-11	137	0	222	74	358	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	0	1683	580	190	1729	771	177	0	691	97	625	490
Arrive On Green	0.00	0.37	0.37	0.06	0.49	0.00	0.10	0.00	0.22	0.06	0.18	0.18
Sat Flow, veh/h	0	4899	1572	3428	3526	1572	1767	0	3104	1767	3526	2768
Grp Volume(v), veh/h	0	926	33	84	526	-11	137	0	222	74	358	49
Grp Sat Flow(s),veh/h/ln	0	1522	1572	1714	1763	1572	1767	0	1552	1767	1763	1384
Q Serve(g_s), s	0.0	11.9	1.0	1.8	6.6	0.0	5.6	0.0	4.4	3.1	6.9	1.1
Cycle Q Clear(g_c), s	0.0	11.9	1.0	1.8	6.6	0.0	5.6	0.0	4.4	3.1	6.9	1.1
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	1683	580	190	1729	771	177	0	691	97	625	490
V/C Ratio(X)	0.00	0.55	0.06	0.44	0.30	-0.01	0.77	0.00	0.32	0.76	0.57	0.10
Avail Cap(c_a), veh/h	0	3079	1061	694	2378	1061	358	0	691	358	1427	1120
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.5	15.1	33.9	11.3	0.0	32.5	0.0	24.1	34.5	27.9	25.5
Incr Delay (d2), s/veh	0.0	0.6	0.1	2.5	0.2	0.0	10.7	0.0	0.5	17.3	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	0.0	3.7	0.3	0.8	2.2	0.0	2.7	0.0	1.5	1.7	2.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.1	15.2	36.4	11.5	0.0	43.2	0.0	24.6	51.9	29.8	25.7
LnGrp LOS	A	B	B	D	B	A	D	A	C	D	C	C
Approach Vol, veh/h		959			599			359			481	
Approach Delay, s/veh		19.0			15.2			31.7			32.8	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	9.0	33.3	12.1	19.6		42.4	8.8	23.0
Change Period (Y+Rc), s	4.9	* 6	* 4.7	6.5		6.0	* 4.7	* 6.5
Max Green Setting (Gmax), s	15.0	* 50	* 15	30.0		50.0	* 15	* 14
Max Q Clear Time (g_c+I1), s	3.8	13.9	7.6	8.9		8.6	5.1	6.4
Green Ext Time (p_c), s	0.2	13.4	0.3	4.2		6.9	0.2	0.9

Intersection Summary

HCM 6th Ctrl Delay 22.7

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.

User approved changes to right turn type.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	380	490	60	270	340	40
Future Volume (veh/h)	380	490	60	270	340	40
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	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	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	400	131	63	284	358	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1002	438	115	1634	758	348
Arrive On Green	0.28	0.28	0.07	0.46	0.22	0.22
Sat Flow, veh/h	3618	1539	1767	3618	3428	1572
Grp Volume(v), veh/h	400	131	63	284	358	8
Grp Sat Flow(s),veh/h/ln	1763	1539	1767	1763	1714	1572
Q Serve(g_s), s	3.2	2.3	1.2	1.7	3.2	0.1
Cycle Q Clear(g_c), s	3.2	2.3	1.2	1.7	3.2	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1002	438	115	1634	758	348
V/C Ratio(X)	0.40	0.30	0.55	0.17	0.47	0.02
Avail Cap(c_a), veh/h	2506	1094	754	2506	1462	671
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	10.2	9.8	15.9	5.5	11.9	10.7
Incr Delay (d2), s/veh	0.3	0.4	4.0	0.1	0.5	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	0.5	0.5	0.3	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.4	10.3	19.9	5.6	12.4	10.8
LnGrp LOS	B	B	B	A	B	B
Approach Vol, veh/h	531			347	366	
Approach Delay, s/veh	10.4			8.2	12.3	
Approach LOS	B			A	B	

Timer - Assigned Phs	1	2	6	8
Phs Duration (G+Y+Rc), s	6.3	16.2	22.5	12.7
Change Period (Y+Rc), s	4.0	* 6.2	6.2	4.9
Max Green Setting (Gmax), s	15.0	* 25	25.0	15.0
Max Q Clear Time (g_c+I1), s	3.2	5.2	3.7	5.2
Green Ext Time (p_c), s	0.1	2.9	1.7	0.9

Intersection Summary	
HCM 6th Ctrl Delay	10.3
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)	10	0	10	30	10	70	10	330	20	50	370	10
Future Volume (veh/h)	10	0	10	30	10	70	10	330	20	50	370	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	11	0	0	34	11	0	11	375	9	57	420	11
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, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	328	0	78	275	19	0	30	614	520	107	1314	34
Arrive On Green	0.05	0.00	0.00	0.05	0.05	0.00	0.02	0.35	0.35	0.06	0.39	0.39
Sat Flow, veh/h	1528	0	1497	1100	356	0	1682	1767	1497	1682	3342	87
Grp Volume(v), veh/h	11	0	0	45	0	0	11	375	9	57	211	220
Grp Sat Flow(s),veh/h/ln	1528	0	1497	1456	0	0	1682	1767	1497	1682	1678	1751
Q Serve(g_s), s	0.0	0.0	0.0	0.7	0.0	0.0	0.2	5.1	0.1	1.0	2.5	2.5
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.9	0.0	0.0	0.2	5.1	0.1	1.0	2.5	2.5
Prop In Lane	1.00		1.00	0.76		0.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	328	0	78	294	0	0	30	614	520	107	660	688
V/C Ratio(X)	0.03	0.00	0.00	0.15	0.00	0.00	0.37	0.61	0.02	0.53	0.32	0.32
Avail Cap(c_a), veh/h	1171	0	1030	1199	0	0	1158	2128	1803	1158	2021	2109
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	0.0	0.0	13.4	0.0	0.0	14.1	7.9	6.2	13.2	6.1	6.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.0	2.9	1.4	0.0	1.5	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.2	0.0	0.0	0.1	0.8	0.0	0.3	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.1	0.0	0.0	13.5	0.0	0.0	17.0	9.3	6.2	14.7	6.5	6.5
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		11			45			395			488	
Approach Delay, s/veh		13.1			13.5			9.4			7.5	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	16.3		6.2	5.2	17.6		6.2
Change Period (Y+Rc), s	* 4.7	6.2		* 4.7	* 4.7	6.2		* 4.7
Max Green Setting (Gmax), s	* 20	35.0		* 20	* 20	35.0		* 20
Max Q Clear Time (g_c+I1), s	3.0	7.1		2.2	2.2	4.5		2.9
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	3.3		0.1

Intersection Summary	
HCM 6th Ctrl Delay	8.6
HCM 6th LOS	A

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)	0	0	0	30	0	20	0	340	60	20	400	0
Future Volume (veh/h)	0	0	0	30	0	20	0	340	60	20	400	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				1767	1811	1767	0	1767	1767	1767	1767	0
Adj Flow Rate, veh/h				33	0	0	0	370	49	22	435	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, %				9	6	9	0	9	9	9	9	0
Cap, veh/h				84	0	0	0	1096	144	57	1000	0
Arrive On Green				0.05	0.00	0.00	0.00	0.37	0.37	0.03	0.57	0.00
Sat Flow, veh/h				1725	0	0	0	3070	392	1682	1767	0
Grp Volume(v), veh/h				33	0	0	0	207	212	22	435	0
Grp Sat Flow(s),veh/h/ln				1725	0	0	0	1678	1695	1682	1767	0
Q Serve(g_s), s				0.5	0.0	0.0	0.0	2.4	2.5	0.3	3.9	0.0
Cycle Q Clear(g_c), s				0.5	0.0	0.0	0.0	2.4	2.5	0.3	3.9	0.0
Prop In Lane				1.00		0.00	0.00		0.23	1.00		0.00
Lane Grp Cap(c), veh/h				84	0	0	0	617	623	57	1000	0
V/C Ratio(X)				0.39	0.00	0.00	0.00	0.34	0.34	0.39	0.43	0.00
Avail Cap(c_a), veh/h				1581	0	0	0	2462	2487	1234	2592	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				12.6	0.0	0.0	0.0	6.2	6.2	12.9	3.4	0.0
Incr Delay (d2), s/veh				3.0	0.0	0.0	0.0	0.7	0.7	4.3	0.6	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.2	0.0	0.0	0.0	0.4	0.4	0.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				15.5	0.0	0.0	0.0	6.9	6.9	17.2	4.0	0.0
LnGrp LOS				B	A	A	A	A	A	B	A	A
Approach Vol, veh/h					33			419			457	
Approach Delay, s/veh					15.5			6.9			4.7	
Approach LOS					B			A			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	5.4	16.0	5.8	21.4
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0
Max Green Setting (Gmax), s	20.0	40.0	25.0	40.0
Max Q Clear Time (g_c+I1), s	2.3	4.5	2.5	5.9
Green Ext Time (p_c), s	0.0	4.9	0.1	5.2

Intersection Summary	
HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Intersection						
Int Delay, s/veh	1.4					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	10	60	90	10
Future Vol, veh/h	10	10	10	60	90	10
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	87	87	87	87	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	11	11	11	69	103	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	200	109	114	0	-	0
Stage 1	109	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	791	947	1481	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	935	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	785	947	1481	-	-	-
Mov Cap-2 Maneuver	785	-	-	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	935	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1481	-	858	-	-
HCM Lane V/C Ratio	0.008	-	0.027	-	-
HCM Control Delay (s)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	380	40	10	230	20	30	10	40	200	20	140
Future Volume (veh/h)	150	380	40	10	230	20	30	10	40	200	20	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	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	155	392	38	10	237	16	31	10	13	206	21	25
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	198	477	46	38	753	51	54	17	23	266	27	259
Arrive On Green	0.12	0.30	0.30	0.02	0.24	0.24	0.06	0.06	0.06	0.17	0.17	0.17
Sat Flow, veh/h	1682	1585	154	1682	3192	214	946	305	397	1534	156	1497
Grp Volume(v), veh/h	155	0	430	10	124	129	54	0	0	227	0	25
Grp Sat Flow(s),veh/h/ln	1682	0	1739	1682	1678	1728	1648	0	0	1690	0	1497
Q Serve(g_s), s	6.0	0.0	15.3	0.4	4.1	4.1	2.1	0.0	0.0	8.6	0.0	0.9
Cycle Q Clear(g_c), s	6.0	0.0	15.3	0.4	4.1	4.1	2.1	0.0	0.0	8.6	0.0	0.9
Prop In Lane	1.00		0.09	1.00		0.12	0.57		0.24	0.91		1.00
Lane Grp Cap(c), veh/h	198	0	523	38	396	408	94	0	0	293	0	259
V/C Ratio(X)	0.78	0.00	0.82	0.26	0.31	0.32	0.58	0.00	0.00	0.78	0.00	0.10
Avail Cap(c_a), veh/h	655	0	784	756	1056	1087	383	0	0	709	0	628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.6	0.0	21.7	32.1	21.0	21.1	30.7	0.0	0.0	26.4	0.0	23.2
Incr Delay (d2), s/veh	6.7	0.0	5.9	3.5	0.7	0.7	5.5	0.0	0.0	4.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	6.0	0.2	1.4	1.5	0.9	0.0	0.0	3.4	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	0.0	27.6	35.6	21.7	21.7	36.2	0.0	0.0	30.7	0.0	23.4
LnGrp LOS	D	A	C	D	C	C	D	A	A	C	A	C
Approach Vol, veh/h		585			263			54			252	
Approach Delay, s/veh		29.6			22.3			36.2			30.0	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	27.1		21.5	13.3	22.7		9.2				
Change Period (Y+Rc), s	7.5	* 7		* 9.9	5.5	7.0		5.4				
Max Green Setting (Gmax), s	30.0	* 30		* 28	26.0	42.0		15.5				
Max Q Clear Time (g_c+I1), s	2.4	17.3		10.6	8.0	6.1		4.1				
Green Ext Time (p_c), s	0.0	2.7		1.1	0.3	2.0		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			28.3									
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)	120	450	50	10	90	60	20	20	10	10	0	150
Future Volume (veh/h)	120	450	50	10	90	60	20	20	10	10	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	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	124	464	49	10	93	42	21	21	2	10	0	12
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, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	163	567	60	30	325	147	52	52	5	53	0	47
Arrive On Green	0.10	0.36	0.36	0.02	0.28	0.28	0.06	0.06	0.06	0.03	0.00	0.03
Sat Flow, veh/h	1682	1571	166	1682	1152	520	817	817	78	1682	0	1497
Grp Volume(v), veh/h	124	0	513	10	0	135	44	0	0	10	0	12
Grp Sat Flow(s),veh/h/ln	1682	0	1737	1682	0	1673	1712	0	0	1682	0	1497
Q Serve(g_s), s	3.7	0.0	13.8	0.3	0.0	3.2	1.3	0.0	0.0	0.3	0.0	0.4
Cycle Q Clear(g_c), s	3.7	0.0	13.8	0.3	0.0	3.2	1.3	0.0	0.0	0.3	0.0	0.4
Prop In Lane	1.00		0.10	1.00		0.31	0.48		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	163	0	627	30	0	472	109	0	0	53	0	47
V/C Ratio(X)	0.76	0.00	0.82	0.33	0.00	0.29	0.40	0.00	0.00	0.19	0.00	0.25
Avail Cap(c_a), veh/h	656	0	846	656	0	815	667	0	0	656	0	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	14.9	24.9	0.0	14.4	23.1	0.0	0.0	24.2	0.0	24.3
Incr Delay (d2), s/veh	7.1	0.0	5.7	6.1	0.0	0.5	2.4	0.0	0.0	1.7	0.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	4.7	0.2	0.0	1.1	0.5	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.7	0.0	20.6	31.0	0.0	14.9	25.5	0.0	0.0	25.9	0.0	27.1
LnGrp LOS	C	A	C	C	A	B	C	A	A	C	A	C
Approach Vol, veh/h		637			145			44			22	
Approach Delay, s/veh		22.4			16.0			25.5			26.5	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.2	25.5		9.5	11.3	21.5		9.1
Change Period (Y+Rc), s	* 6.3	* 7		7.9	* 6.3	7.0		5.8
Max Green Setting (Gmax), s	* 20	* 25		20.0	* 20	25.0		20.0
Max Q Clear Time (g_c+I1), s	2.3	15.8		2.4	5.7	5.2		3.3
Green Ext Time (p_c), s	0.0	2.8		0.0	0.2	1.0		0.1

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	40	310	40	0	390
Future Vol, veh/h	0	40	310	40	0	390
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	43	337	43	0	424

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	359	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.26	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.354	-	-	-	-
Pot Cap-1 Maneuver	0	676	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	676	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	676	-
HCM Lane V/C Ratio	-	-	0.064	-
HCM Control Delay (s)	-	-	10.7	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Intersection						
Int Delay, s/veh	0					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	310	40	0	390
Future Vol, veh/h	0	0	310	40	0	390
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	337	43	0	424

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	783	359	0	0	380	0
Stage 1	359	-	-	-	-	-
Stage 2	424	-	-	-	-	-
Critical Hdwy	6.46	6.26	-	-	4.16	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	-	-	2.254	-
Pot Cap-1 Maneuver	357	676	-	-	1157	-
Stage 1	698	-	-	-	-	-
Stage 2	652	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	357	676	-	-	1157	-
Mov Cap-2 Maneuver	357	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	652	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1157	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	10	270	40	0	370
Future Vol, veh/h	20	10	270	40	0	370
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	22	11	293	43	0	402

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	717	315	0	0	336	0
Stage 1	315	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Critical Hdwy	6.46	6.26	-	-	4.16	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	-	-	2.254	-
Pot Cap-1 Maneuver	390	716	-	-	1201	-
Stage 1	731	-	-	-	-	-
Stage 2	667	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	390	716	-	-	1201	-
Mov Cap-2 Maneuver	390	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	667	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	460	1201	-
HCM Lane V/C Ratio	-	-	0.071	-	-
HCM Control Delay (s)	-	-	13.4	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	60	90	0
Future Vol, veh/h	0	0	0	60	90	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	120	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	0	65	98	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	163	98	98	0	-	0
Stage 1	98	-	-	-	-	-
Stage 2	65	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.254	-	-	-
Pot Cap-1 Maneuver	819	947	1470	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	819	947	1470	-	-	-
Mov Cap-2 Maneuver	819	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	948	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1470	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Intersection Delay, s/veh	33.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	570	0	0	490	0	0	0	0	0	0	0
Future Vol, veh/h	0	570	0	0	490	0	0	0	0	0	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
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	620	0	0	533	0	0	0	0	0	0	0
Number of Lanes	1	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	3
HCM Control Delay	31.5	35.9	0	0
HCM LOS	D	E	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	570	0	490	0
LT Vol	0	0	0	0	0	0	0
Through Vol	0	0	0	570	0	490	0
RT Vol	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	620	0	533	0
Geometry Grp	8	8	7	7	7	8	8
Degree of Util (X)	0	0	0	0.867	0	0.871	0
Departure Headway (Hd)	7.922	7.922	5.036	5.036	5.036	5.887	7.922
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	719	0	613	0
Service Time	5.622	5.622	2.771	2.771	2.771	3.635	5.622
HCM Lane V/C Ratio	0	0	0	0.862	0	0.869	0
HCM Control Delay	10.6	10.6	7.8	31.5	7.8	35.9	10.6
HCM Lane LOS	N	N	N	D	N	E	N
HCM 95th-tile Q	0	0	0	10.4	0	10	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1140	0	0	750	0	0	0	10	0	0	30
Future Vol, veh/h	0	1140	0	0	750	0	0	0	10	0	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	1239	0	0	815	0	0	0	11	0	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	-	-	-	0	-	-	620	-	-	408
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.22	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.96	-	-	3.36
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	362	0	0	581
Stage 1	0	-	0	0	-	0	0	0	-	0	0	-
Stage 2	0	-	0	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-			-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	362	-	-	581
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	15.3	11.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT	SBLn1
Capacity (veh/h)	362	-	-	581
HCM Lane V/C Ratio	0.03	-	-	0.056
HCM Control Delay (s)	15.3	-	-	11.6
HCM Lane LOS	C	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	30	180	0	50	20	262	68	20	190	10
Future Volume (veh/h)	10	0	30	180	0	50	20	262	68	20	190	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1811	1796	1811	1811	1811	1796	1796	1811	1811	1796	1796
Adj Flow Rate, veh/h	11	0	0	196	0	9	23	301	46	22	218	9
Peak Hour Factor	0.87	0.92	0.87	0.92	0.92	0.92	0.87	0.87	0.92	0.92	0.87	0.87
Percent Heavy Veh, %	7	6	7	6	6	6	7	7	6	6	7	7
Cap, veh/h	213	192	0	245	0	190	49	614	93	47	352	15
Arrive On Green	0.12	0.00	0.00	0.14	0.00	0.12	0.03	0.21	0.21	0.03	0.21	0.21
Sat Flow, veh/h	1711	1811	0	1725	0	1535	1711	2971	449	1725	1711	71
Grp Volume(v), veh/h	11	0	0	196	0	9	23	171	176	22	0	227
Grp Sat Flow(s),veh/h/ln	1711	1811	0	1725	0	1535	1711	1706	1714	1725	0	1781
Q Serve(g_s), s	0.2	0.0	0.0	3.8	0.0	0.2	0.5	3.1	3.1	0.4	0.0	4.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	3.8	0.0	0.2	0.5	3.1	3.1	0.4	0.0	4.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.26	1.00		0.04
Lane Grp Cap(c), veh/h	213	192	0	245	0	190	49	353	354	47	0	366
V/C Ratio(X)	0.05	0.00	0.00	0.80	0.00	0.05	0.47	0.49	0.50	0.46	0.00	0.62
Avail Cap(c_a), veh/h	246	1458	0	248	0	1236	246	1178	1183	248	0	1230
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.4	0.0	0.0	14.4	0.0	13.4	16.6	12.2	12.2	16.7	0.0	12.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	16.5	0.0	0.1	6.8	1.0	1.1	6.9	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	2.4	0.0	0.1	0.2	0.9	0.9	0.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	0.0	0.0	31.0	0.0	13.5	23.5	13.2	13.3	23.5	0.0	14.3
LnGrp LOS	B	A	A	C	A	B	C	B	B	C	A	B
Approach Vol, veh/h		11			205			370			249	
Approach Delay, s/veh		13.5			30.2			13.9			15.1	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	11.7	9.4	8.2	5.5	11.6	8.8	8.8
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	5.0	24.0	5.0	28.0	5.0	24.0	5.0	28.0
Max Q Clear Time (g_c+I1), s	2.4	5.1	5.8	0.0	2.5	6.0	2.2	2.2
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	0.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
3: Union Rd & Shady Pine St/Shady Pines St

Existing + Project + improvements
PM Peak hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	30	100	0	40	30	300	120	70	300	20
Future Volume (veh/h)	10	0	30	100	0	40	30	300	120	70	300	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		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	1856	1811	1856	1811	1811	1811	1856	1856	1811	1811	1856	1856
Adj Flow Rate, veh/h	11	0	0	109	0	6	34	337	80	76	337	20
Peak Hour Factor	0.89	0.92	0.89	0.92	0.92	0.92	0.89	0.89	0.92	0.92	0.89	0.89
Percent Heavy Veh, %	3	6	3	6	6	6	3	3	6	6	3	3
Cap, veh/h	171	180	0	158	0	145	71	680	159	127	474	28
Arrive On Green	0.10	0.00	0.00	0.09	0.00	0.09	0.04	0.24	0.24	0.07	0.27	0.27
Sat Flow, veh/h	1767	1811	0	1725	0	1535	1767	2835	664	1725	1732	103
Grp Volume(v), veh/h	11	0	0	109	0	6	34	208	209	76	0	357
Grp Sat Flow(s),veh/h/ln	1767	1811	0	1725	0	1535	1767	1763	1736	1725	0	1834
Q Serve(g_s), s	0.2	0.0	0.0	2.2	0.0	0.1	0.7	3.7	3.8	1.6	0.0	6.4
Cycle Q Clear(g_c), s	0.2	0.0	0.0	2.2	0.0	0.1	0.7	3.7	3.8	1.6	0.0	6.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.38	1.00		0.06
Lane Grp Cap(c), veh/h	171	180	0	158	0	145	71	423	416	127	0	502
V/C Ratio(X)	0.06	0.00	0.00	0.69	0.00	0.04	0.48	0.49	0.50	0.60	0.00	0.71
Avail Cap(c_a), veh/h	243	1396	0	237	0	1183	243	1164	1147	237	0	1212
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.9	0.0	0.0	16.0	0.0	15.0	17.1	11.9	11.9	16.3	0.0	11.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	5.2	0.0	0.1	5.0	0.9	0.9	4.4	0.0	1.9
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	0.1	0.0	0.0	1.0	0.0	0.0	0.3	1.1	1.1	0.6	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	0.0	0.0	21.2	0.0	15.1	22.1	12.8	12.9	20.7	0.0	13.8
LnGrp LOS	B	A	A	C	A	B	C	B	B	C	A	B
Approach Vol, veh/h		11			115			451			433	
Approach Delay, s/veh		15.1			20.9			13.5			15.0	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	13.2	7.8	8.1	6.0	14.4	8.0	7.9
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	5.0	24.0	5.0	28.0	5.0	24.0	5.0	28.0
Max Q Clear Time (g_c+I1), s	3.6	5.8	4.2	0.0	2.7	8.4	2.2	2.1
Green Ext Time (p_c), s	0.0	2.0	0.0	0.0	0.0	1.6	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		15.0
HCM 6th LOS		B

Lane Group	EBT	WBL	WBT	SBT
Lane Group Flow (vph)	659	352	716	387
v/c Ratio	0.60	0.62	0.65	0.83
Control Delay	27.6	29.5	14.0	38.4
Queue Delay	0.0	0.0	0.1	0.0
Total Delay	27.6	29.5	14.1	38.4
Queue Length 50th (ft)	94	132	185	146
Queue Length 95th (ft)	148	#304	395	260
Internal Link Dist (ft)	1067		499	1231
Turn Bay Length (ft)				
Base Capacity (vph)	2962	585	1695	937
Starvation Cap Reductn	0	0	115	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.22	0.60	0.45	0.41

Intersection Summary

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

Lane Group	EBL	EBT	WBT	NBT
Lane Group Flow (vph)	91	739	1272	330
v/c Ratio	0.53	0.31	0.69	0.84
Control Delay	48.9	6.0	17.3	39.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	48.9	6.0	17.3	39.5
Queue Length 50th (ft)	45	64	227	108
Queue Length 95th (ft)	99	127	421	205
Internal Link Dist (ft)		499	110	1373
Turn Bay Length (ft)				
Base Capacity (vph)	540	3059	1841	865
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.24	0.69	0.38

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	876	101	112	573	79	112	416	56	326	247
v/c Ratio	0.64	0.19	0.30	0.36	0.11	0.45	0.57	0.30	0.50	0.35
Control Delay	31.0	6.5	44.7	17.0	4.1	46.2	35.8	47.6	38.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	6.5	44.7	17.0	4.1	46.2	35.8	47.6	38.5	6.3
Queue Length 50th (ft)	177	0	31	107	0	61	125	31	91	0
Queue Length 95th (ft)	276	37	70	181	26	135	217	81	162	35
Internal Link Dist (ft)	477			173					1565	
Turn Bay Length (ft)		380	500		150	700	575	550		800
Base Capacity (vph)	2955	1041	726	3042	1340	374	1123	374	1385	1237
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.10	0.15	0.19	0.06	0.30	0.37	0.15	0.24	0.20

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	348	517	90	371	393	34
v/c Ratio	0.34	0.64	0.31	0.25	0.48	0.08
Control Delay	13.2	6.1	19.0	6.7	15.6	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	6.1	19.0	6.7	15.6	6.8
Queue Length 50th (ft)	32	0	18	20	39	0
Queue Length 95th (ft)	71	56	54	44	80	16
Internal Link Dist (ft)	511			633	1003	
Turn Bay Length (ft)		165	325		550	675
Base Capacity (vph)	3046	1399	949	3406	2116	988
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.37	0.09	0.11	0.19	0.03

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	133	233	22	400	55	122	122
v/c Ratio	0.51	0.35	0.11	0.56	0.31	0.49	0.38
Control Delay	39.9	22.3	38.9	31.0	31.7	39.9	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	22.3	38.9	31.0	31.7	39.9	10.7
Queue Length 50th (ft)	58	66	9	87	16	53	0
Queue Length 95th (ft)	136	189	38	166	60	127	48
Internal Link Dist (ft)		1678		931	134	1504	
Turn Bay Length (ft)	200		155				550
Base Capacity (vph)	566	824	652	1815	354	621	619
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.28	0.03	0.22	0.16	0.20	0.20

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	156	155	11	389	66	11	189
v/c Ratio	0.68	0.17	0.08	0.72	0.38	0.08	0.63
Control Delay	50.9	11.2	43.0	31.4	43.0	41.1	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.9	11.2	43.0	31.4	43.0	41.1	17.0
Queue Length 50th (ft)	74	31	5	152	29	5	0
Queue Length 95th (ft)	166	100	26	325	83	25	68
Internal Link Dist (ft)		931		1550	630	1917	
Turn Bay Length (ft)	236		170				400
Base Capacity (vph)	545	944	566	774	576	545	610
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.16	0.02	0.50	0.11	0.02	0.31

Intersection Summary

Lane Group	EBT	WBL	WBT	SBT
Lane Group Flow (vph)	767	289	433	522
v/c Ratio	0.60	0.74	0.44	0.83
Control Delay	28.5	44.8	14.0	34.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	28.5	44.8	14.0	34.7
Queue Length 50th (ft)	128	140	130	220
Queue Length 95th (ft)	179	#298	225	#418
Internal Link Dist (ft)	1067		499	1231
Turn Bay Length (ft)				
Base Capacity (vph)	2195	442	1373	794
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.65	0.32	0.66

Intersection Summary

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

Lane Group	EBL	EBT	WBT	NBT
Lane Group Flow (vph)	89	1011	945	556
v/c Ratio	0.42	0.58	0.77	0.83
Control Delay	44.2	15.6	27.7	33.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	44.2	15.6	27.7	33.7
Queue Length 50th (ft)	49	199	236	237
Queue Length 95th (ft)	98	255	335	#466
Internal Link Dist (ft)		499	110	1373
Turn Bay Length (ft)				
Base Capacity (vph)	453	2499	1499	787
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.40	0.63	0.71

Intersection Summary

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

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	926	116	84	526	32	137	179	179	74	358	284
v/c Ratio	0.64	0.20	0.23	0.34	0.04	0.52	0.28	0.28	0.34	0.50	0.36
Control Delay	29.1	5.9	43.4	16.8	0.5	46.9	1.1	1.1	45.1	35.9	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	5.9	43.4	16.8	0.5	46.9	1.1	1.1	45.1	35.9	5.7
Queue Length 50th (ft)	188	0	23	98	0	73	0	0	40	98	0
Queue Length 95th (ft)	269	39	53	152	3	159	0	0	95	164	37
Internal Link Dist (ft)	464			214			1058			1601	
Turn Bay Length (ft)		380	500		150	700		575	550		800
Base Capacity (vph)	2688	976	603	2754	1246	311	743	743	311	1245	1164
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.12	0.14	0.19	0.03	0.44	0.24	0.24	0.24	0.29	0.24

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	400	516	63	284	358	42
v/c Ratio	0.37	0.62	0.20	0.18	0.41	0.10
Control Delay	13.7	5.6	19.0	6.4	15.9	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.7	5.6	19.0	6.4	15.9	6.8
Queue Length 50th (ft)	42	0	14	16	38	0
Queue Length 95th (ft)	84	58	45	36	81	19
Internal Link Dist (ft)	482			632	1003	
Turn Bay Length (ft)		165	325		550	675
Base Capacity (vph)	2308	1195	692	3317	1343	645
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.43	0.09	0.09	0.27	0.07

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	155	433	10	258	82	227	144
v/c Ratio	0.55	0.62	0.05	0.43	0.41	0.63	0.33
Control Delay	41.9	28.6	41.8	34.3	33.9	40.0	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	28.6	41.8	34.3	33.9	40.0	8.0
Queue Length 50th (ft)	72	164	5	60	25	105	0
Queue Length 95th (ft)	164	#477	24	123	82	219	49
Internal Link Dist (ft)		1628		931	136	1501	
Turn Bay Length (ft)			155				550
Base Capacity (vph)	563	828	649	1800	346	610	634
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.52	0.02	0.14	0.24	0.37	0.23

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	124	516	10	155	52	10	155
v/c Ratio	0.45	0.61	0.05	0.31	0.24	0.05	0.50
Control Delay	31.2	20.3	31.7	21.8	27.8	29.8	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	20.3	31.7	21.8	27.8	29.8	12.0
Queue Length 50th (ft)	43	138	4	42	15	4	0
Queue Length 95th (ft)	107	#440	20	112	53	19	51
Internal Link Dist (ft)		931		1558	725	1917	
Turn Bay Length (ft)	236		170				400
Base Capacity (vph)	551	841	551	732	560	551	598
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.61	0.02	0.21	0.09	0.02	0.26

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	220	90	60	360	170	60
Future Volume (veh/h)	220	90	60	360	170	60
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	1737	1737	1737	1737	1737	1737
Adj Flow Rate, veh/h	234	36	64	383	181	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	11	11	11	11	11	11
Cap, veh/h	511	433	110	857	400	356
Arrive On Green	0.29	0.29	0.07	0.49	0.24	0.24
Sat Flow, veh/h	1737	1472	1654	1737	1654	1472
Grp Volume(v), veh/h	234	36	64	383	181	2
Grp Sat Flow(s),veh/h/ln	1737	1472	1654	1737	1654	1472
Q Serve(g_s), s	3.7	0.6	1.3	4.9	3.2	0.0
Cycle Q Clear(g_c), s	3.7	0.6	1.3	4.9	3.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	511	433	110	857	400	356
V/C Ratio(X)	0.46	0.08	0.58	0.45	0.45	0.01
Avail Cap(c_a), veh/h	613	520	316	1175	633	563
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	9.8	8.7	15.4	5.6	11.0	9.8
Incr Delay (d2), s/veh	2.3	0.3	4.7	1.3	2.9	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	1.0	0.1	0.5	0.7	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.1	9.0	20.1	6.9	13.9	9.8
LnGrp LOS	B	A	C	A	B	A
Approach Vol, veh/h	270			447	183	
Approach Delay, s/veh	11.7			8.8	13.8	
Approach LOS	B			A	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.8	14.5		12.7		21.3
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	6.5	12.0		13.0		23.0
Max Q Clear Time (g_c+I1), s	3.3	5.7		5.2		6.9
Green Ext Time (p_c), s	0.0	1.4		0.8		4.2
Intersection Summary						
HCM 6th Ctrl Delay			10.7			
HCM 6th LOS			B			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	60	10	5	10	90	190	10	10	150	30
Future Volume (veh/h)	20	10	60	10	5	10	90	190	10	10	150	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	1781	1811	1781	1811	1811	1811	1781	1781	1811	1811	1781	1781
Adj Flow Rate, veh/h	22	11	-91	11	5	1	101	213	4	11	169	7
Peak Hour Factor	0.89	0.92	0.89	0.92	0.92	0.92	0.89	0.89	0.92	0.92	0.89	0.89
Percent Heavy Veh, %	8	6	8	6	6	6	8	8	6	6	8	8
Cap, veh/h	5	541	237	25	869	388	157	442	381	25	303	257
Arrive On Green	0.00	0.16	0.00	0.01	0.25	0.25	0.09	0.25	0.25	0.01	0.17	0.17
Sat Flow, veh/h	1697	3441	1510	1725	3441	1535	1697	1781	1535	1725	1781	1510
Grp Volume(v), veh/h	22	11	-91	11	5	1	101	213	4	11	169	7
Grp Sat Flow(s),veh/h/ln	1697	1721	1510	1725	1721	1535	1697	1781	1535	1725	1781	1510
Q Serve(g_s), s	0.1	0.1	0.0	0.2	0.0	0.0	1.8	3.2	0.1	0.2	2.8	0.1
Cycle Q Clear(g_c), s	0.1	0.1	0.0	0.2	0.0	0.0	1.8	3.2	0.1	0.2	2.8	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	5	541	237	25	869	388	157	442	381	25	303	257
V/C Ratio(X)	4.13	0.02	-0.38	0.44	0.01	0.00	0.64	0.48	0.01	0.44	0.56	0.03
Avail Cap(c_a), veh/h	960	3352	1471	271	2271	1013	426	1175	1013	271	1175	996
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	15.9	11.3	0.0	15.6	8.9	8.9	13.9	10.2	9.0	15.6	12.1	11.0
Incr Delay (d2), s/veh	1497.5	0.0	0.0	11.5	0.0	0.0	4.3	0.8	0.0	11.5	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	2.2	0.0	0.0	0.1	0.0	0.0	0.6	0.7	0.0	0.1	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1513.4	11.4	0.0	27.1	8.9	8.9	18.2	11.0	9.0	27.1	13.7	11.1
LnGrp LOS	F	B	A	C	A	A	B	B	A	C	B	B
Approach Vol, veh/h		-58			17			318			187	
Approach Delay, s/veh		0.0			20.7			13.3			14.4	
Approach LOS		A			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	9.5	7.5	9.9	1.9	12.5	5.0	12.4
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	5.0	31.0	8.0	21.0	18.0	21.0	5.0	21.0
Max Q Clear Time (g_c+I1), s	2.2	2.1	3.8	4.8	2.1	2.0	2.2	5.2
Green Ext Time (p_c), s	0.0	0.0	0.1	0.6	0.0	0.0	0.0	0.8

Intersection Summary		
HCM 6th Ctrl Delay		15.7
HCM 6th LOS		B

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	0	90	0	0	0	40	470	0	0	340	20
Future Vol, veh/h	30	0	90	0	0	0	40	470	0	0	340	20
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	100	100	-	-	140	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	92	87	92	92	92	87	87	92	92	87	87
Heavy Vehicles, %	7	6	7	6	6	6	7	7	6	6	7	7
Mvmt Flow	34	0	103	0	0	0	46	540	0	0	391	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	766	1036	208	828	1047	270	415	0	0	540	0	0
Stage 1	404	404	-	632	632	-	-	-	-	-	-	-
Stage 2	362	632	-	196	415	-	-	-	-	-	-	-
Critical Hdwy	7.64	6.62	7.04	7.62	6.62	7.02	4.24	-	-	4.22	-	-
Critical Hdwy Stg 1	6.64	5.62	-	6.62	5.62	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.64	5.62	-	6.62	5.62	-	-	-	-	-	-	-
Follow-up Hdwy	3.57	4.06	3.37	3.56	4.06	3.36	2.27	-	-	2.26	-	-
Pot Cap-1 Maneuver	283	224	783	257	220	716	1106	-	-	997	-	-
Stage 1	581	588	-	425	462	-	-	-	-	-	-	-
Stage 2	616	462	-	776	581	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	274	214	782	216	211	716	1105	-	-	997	-	-
Mov Cap-2 Maneuver	274	214	-	216	211	-	-	-	-	-	-	-
Stage 1	556	587	-	407	443	-	-	-	-	-	-	-
Stage 2	590	443	-	673	580	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	0	0.7	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1105	-	-	274	782	-	-	997	-	-
HCM Lane V/C Ratio	0.042	-	-	0.126	0.132	-	-	-	-	-
HCM Control Delay (s)	8.4	-	-	20	10.3	0	0	0	-	-
HCM Lane LOS	A	-	-	C	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.5	-	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	10	110	80	5	20	80	470	50	5	400	20
Future Volume (veh/h)	40	10	110	80	5	20	80	470	50	5	400	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		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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	49	12	0	98	6	1	98	573	54	6	488	22
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	111	45	0	178	97	16	178	1200	113	17	951	43
Arrive On Green	0.06	0.03	0.00	0.10	0.06	0.06	0.10	0.38	0.38	0.01	0.28	0.28
Sat Flow, veh/h	1725	1811	0	1725	1513	252	1725	3179	299	1725	3349	151
Grp Volume(v), veh/h	49	12	0	98	0	7	98	310	317	6	250	260
Grp Sat Flow(s),veh/h/ln	1725	1811	0	1725	0	1765	1725	1721	1757	1725	1721	1780
Q Serve(g_s), s	1.0	0.2	0.0	2.0	0.0	0.1	2.0	5.0	5.1	0.1	4.5	4.5
Cycle Q Clear(g_c), s	1.0	0.2	0.0	2.0	0.0	0.1	2.0	5.0	5.1	0.1	4.5	4.5
Prop In Lane	1.00		0.00	1.00		0.14	1.00		0.17	1.00		0.08
Lane Grp Cap(c), veh/h	111	45	0	178	0	113	178	649	663	17	489	505
V/C Ratio(X)	0.44	0.26	0.00	0.55	0.00	0.06	0.55	0.48	0.48	0.36	0.51	0.51
Avail Cap(c_a), veh/h	280	1324	0	280	0	1291	280	1309	1337	280	1309	1354
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	17.7	0.0	15.7	0.0	16.2	15.7	8.7	8.7	18.2	11.1	11.1
Incr Delay (d2), s/veh	2.8	3.0	0.0	2.7	0.0	0.2	2.7	0.8	0.8	12.5	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	0.8	0.0	0.1	0.7	1.2	1.2	0.1	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	20.7	0.0	18.4	0.0	16.5	18.4	9.5	9.5	30.6	12.3	12.2
LnGrp LOS	B	C	A	B	A	B	B	A	A	C	B	B
Approach Vol, veh/h		61			105			725			516	
Approach Delay, s/veh		19.7			18.3			10.7			12.5	
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	19.2	7.8	5.5	7.8	15.8	6.4	7.0
Change Period (Y+Rc), s	4.0	5.3	4.0	4.6	4.0	5.3	4.0	4.6
Max Green Setting (Gmax), s	6.0	28.1	6.0	27.0	6.0	28.1	6.0	27.0
Max Q Clear Time (g_c+I1), s	2.1	7.1	4.0	2.2	4.0	6.5	3.0	2.1
Green Ext Time (p_c), s	0.0	4.9	0.0	0.0	0.0	3.9	0.0	0.0

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

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)	180	890	170	310	820	300	120	250	380	230	360	150
Future Volume (veh/h)	180	890	170	310	820	300	120	250	380	230	360	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		0.99	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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	205	1011	94	352	932	305	136	284	237	261	409	131
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	228	1095	488	374	1027	335	160	328	265	287	656	208
Arrive On Green	0.13	0.32	0.32	0.22	0.40	0.40	0.09	0.18	0.18	0.17	0.26	0.26
Sat Flow, veh/h	1725	3441	1535	1725	2551	831	1725	1796	1450	1725	2560	810
Grp Volume(v), veh/h	205	1011	94	352	627	610	136	272	249	261	273	267
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1725	1721	1661	1725	1721	1525	1725	1721	1650
Q Serve(g_s), s	16.1	39.1	6.1	27.7	47.2	47.7	10.7	21.1	22.0	20.5	19.3	19.7
Cycle Q Clear(g_c), s	16.1	39.1	6.1	27.7	47.2	47.7	10.7	21.1	22.0	20.5	19.3	19.7
Prop In Lane	1.00		1.00	1.00		0.50	1.00		0.95	1.00		0.49
Lane Grp Cap(c), veh/h	228	1095	488	374	692	669	160	314	278	287	441	423
V/C Ratio(X)	0.90	0.92	0.19	0.94	0.91	0.91	0.85	0.87	0.90	0.91	0.62	0.63
Avail Cap(c_a), veh/h	251	1125	502	388	700	676	226	337	299	388	500	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	58.8	45.3	34.1	53.1	38.7	38.8	61.5	54.6	55.0	56.3	45.2	45.4
Incr Delay (d2), s/veh	30.1	12.5	0.3	30.7	15.7	16.9	18.9	20.2	27.1	20.3	2.4	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	18.0	2.3	14.9	22.0	21.7	5.5	10.8	10.4	10.3	8.4	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.9	57.8	34.4	83.8	54.4	55.7	80.4	74.8	82.1	76.6	47.7	48.2
LnGrp LOS	F	E	C	F	D	E	F	E	F	E	D	D
Approach Vol, veh/h		1310			1589			657			801	
Approach Delay, s/veh		61.0			61.4			78.7			57.3	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.8	47.8	16.8	39.3	22.2	59.4	26.9	29.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	31.0	45.0	18.0	40.0	20.0	56.0	31.0	27.0
Max Q Clear Time (g_c+I1), s	29.7	41.1	12.7	21.7	18.1	49.7	22.5	24.0
Green Ext Time (p_c), s	0.2	2.7	0.1	4.0	0.1	4.5	0.5	1.1

Intersection Summary	
HCM 6th Ctrl Delay	63.1
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	100	50	220	130	0	0	0	0	260	0	60
Future Volume (veh/h)	0	100	50	220	130	0	0	0	0	260	0	60
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1352	1352	1352	1352	0				1352	1352	1352
Adj Flow Rate, veh/h	0	115	1	253	149	0				299	0	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	37	37	37	37	0				37	37	37
Cap, veh/h	0	522	5	293	1416	0				424	223	0
Arrive On Green	0.00	0.20	0.20	0.23	0.55	0.00				0.16	0.00	0.00
Sat Flow, veh/h	0	2677	23	1287	2636	0				2575	1352	0
Grp Volume(v), veh/h	0	57	59	253	149	0				299	0	0
Grp Sat Flow(s),veh/h/ln	0	1284	1348	1287	1284	0				1287	1352	0
Q Serve(g_s), s	0.0	1.2	1.2	6.1	0.9	0.0				3.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.2	1.2	6.1	0.9	0.0				3.6	0.0	0.0
Prop In Lane	0.00		0.02	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	257	270	293	1416	0				424	223	0
V/C Ratio(X)	0.00	0.22	0.22	0.86	0.11	0.00				0.70	0.00	0.00
Avail Cap(c_a), veh/h	0	400	420	834	2782	0				1248	655	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)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	10.8	10.8	12.0	3.5	0.0				12.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.4	3.0	0.0	0.0				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
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.3	1.4	0.1	0.0				0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.3	11.3	15.0	3.5	0.0				13.6	0.0	0.0
LnGrp LOS	A	B	B	B	A	A				B	A	A
Approach Vol, veh/h		116			402						299	
Approach Delay, s/veh		11.3			10.7						13.6	
Approach LOS		B			B						B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.4	11.1		9.9		22.5
Change Period (Y+Rc), s	4.0	4.6		4.6		4.6
Max Green Setting (Gmax), s	21.0	10.1		15.7		35.1
Max Q Clear Time (g_c+I1), s	8.1	3.2		5.6		2.9
Green Ext Time (p_c), s	0.1	0.2		0.2		0.9

Intersection Summary	
HCM 6th Ctrl Delay	11.8
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	330	0	0	280	250	70	0	260	0	0	0
Future Volume (veh/h)	30	330	0	0	280	250	70	0	260	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1352	1352	0	0	1352	1352	1352	1352	1352			
Adj Flow Rate, veh/h	34	379	0	0	322	0	80	0	14			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87			
Percent Heavy Veh, %	37	37	0	0	37	37	37	37	37			
Cap, veh/h	54	1447	0	0	504		121	0	108			
Arrive On Green	0.04	0.56	0.00	0.00	0.37	0.00	0.09	0.00	0.09			
Sat Flow, veh/h	1287	2636	0	0	1352	0	1287	0	1145			
Grp Volume(v), veh/h	34	379	0	0	322	0	80	0	14			
Grp Sat Flow(s),veh/h/ln	1287	1284	0	0	1352	0	1287	0	1145			
Q Serve(g_s), s	0.7	2.0	0.0	0.0	5.3	0.0	1.6	0.0	0.3			
Cycle Q Clear(g_c), s	0.7	2.0	0.0	0.0	5.3	0.0	1.6	0.0	0.3			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	54	1447	0	0	504		121	0	108			
V/C Ratio(X)	0.63	0.26	0.00	0.00	0.64		0.66	0.00	0.13			
Avail Cap(c_a), veh/h	240	5971	0	0	2689		883	0	785			
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	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	12.7	3.0	0.0	0.0	6.9	0.0	11.7	0.0	11.2			
Incr Delay (d2), s/veh	4.5	0.1	0.0	0.0	1.4	0.0	2.3	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.0	0.8	0.0	0.3	0.0	0.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	3.1	0.0	0.0	8.3	0.0	14.0	0.0	11.4			
LnGrp LOS	B	A	A	A	A		B	A	B			
Approach Vol, veh/h		413			322			94				
Approach Delay, s/veh		4.3			8.3			13.6				
Approach LOS		A			A			B				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		19.7			5.1	14.6		7.1				
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6				
Max Green Setting (Gmax), s		62.4			5.0	53.4		18.4				
Max Q Clear Time (g_c+I1), s		4.0			2.7	7.3		3.6				
Green Ext Time (p_c), s		2.7			0.0	2.0		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			6.9									
HCM 6th LOS			A									

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)	100	90	70	10	190	20	80	330	10	10	310	90
Future Volume (veh/h)	100	90	70	10	190	20	80	330	10	10	310	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1811	1604	1811	1811	1811	1604	1604	1811	1811	1604	1604
Adj Flow Rate, veh/h	106	98	20	11	207	19	85	351	9	11	330	27
Peak Hour Factor	0.94	0.92	0.94	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.94	0.94
Percent Heavy Veh, %	20	6	20	6	6	6	20	20	6	6	20	20
Cap, veh/h	134	954	377	24	285	26	101	858	22	24	703	314
Arrive On Green	0.09	0.28	0.28	0.01	0.17	0.17	0.07	0.28	0.28	0.01	0.23	0.23
Sat Flow, veh/h	1527	3441	1359	1725	1634	150	1527	3035	78	1725	3047	1359
Grp Volume(v), veh/h	106	98	20	11	0	226	85	176	184	11	330	27
Grp Sat Flow(s),veh/h/ln	1527	1721	1359	1725	0	1784	1527	1523	1590	1725	1523	1359
Q Serve(g_s), s	3.5	1.1	0.6	0.3	0.0	6.1	2.8	4.8	4.8	0.3	4.8	0.8
Cycle Q Clear(g_c), s	3.5	1.1	0.6	0.3	0.0	6.1	2.8	4.8	4.8	0.3	4.8	0.8
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	134	954	377	24	0	311	101	431	449	24	703	314
V/C Ratio(X)	0.79	0.10	0.05	0.45	0.00	0.73	0.84	0.41	0.41	0.45	0.47	0.09
Avail Cap(c_a), veh/h	959	3038	1200	169	0	630	120	1016	1060	169	2092	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	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	22.8	13.7	13.5	24.9	0.0	19.9	23.5	14.8	14.8	24.9	16.9	15.4
Incr Delay (d2), s/veh	10.0	0.0	0.1	12.5	0.0	3.2	37.5	2.3	2.2	12.5	1.8	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	1.5	0.4	0.2	0.2	0.0	2.6	1.9	1.5	1.5	0.2	1.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	13.8	13.6	37.4	0.0	23.1	61.1	17.1	17.0	37.4	18.7	15.8
LnGrp LOS	C	B	B	D	A	C	E	B	B	D	B	B
Approach Vol, veh/h		224			237			445			368	
Approach Delay, s/veh		22.8			23.8			25.5			19.0	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	17.8	5.2	20.1	5.2	20.4	10.5	14.9
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	6.0	* 6
Max Green Setting (Gmax), s	4.0	35.0	5.0	45.0	5.0	34.0	32.0	* 18
Max Q Clear Time (g_c+I1), s	4.8	6.8	2.3	3.1	2.3	6.8	5.5	8.1
Green Ext Time (p_c), s	0.0	5.0	0.0	0.7	0.0	4.7	0.3	0.8

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

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)	0	1600	340	290	1620	0	0	0	0	230	0	400
Future Volume (veh/h)	0	1600	340	290	1620	0	0	0	0	230	0	400
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	0				1811	1811	1811
Adj Flow Rate, veh/h	0	1818	205	330	1841	0				261	0	365
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	6	6	6	6	0				6	6	6
Cap, veh/h	0	2099	636	374	2425	0				513	0	456
Arrive On Green	0.00	0.42	0.42	0.22	0.70	0.00				0.15	0.00	0.15
Sat Flow, veh/h	0	5107	1499	1725	3532	0				3450	0	3070
Grp Volume(v), veh/h	0	1818	205	330	1841	0				261	0	365
Grp Sat Flow(s),veh/h/ln	0	1648	1499	1725	1721	0				1725	0	1535
Q Serve(g_s), s	0.0	21.0	5.7	11.6	21.3	0.0				4.4	0.0	7.2
Cycle Q Clear(g_c), s	0.0	21.0	5.7	11.6	21.3	0.0				4.4	0.0	7.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2099	636	374	2425	0				513	0	456
V/C Ratio(X)	0.00	0.87	0.32	0.88	0.76	0.00				0.51	0.00	0.80
Avail Cap(c_a), veh/h	0	2158	654	385	2488	0				571	0	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.4	12.0	23.8	5.9	0.0				24.6	0.0	25.8
Incr Delay (d2), s/veh	0.0	3.9	0.3	19.6	1.3	0.0				0.3	0.0	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.0	1.6	6.2	3.6	0.0				1.6	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.3	12.3	43.4	7.2	0.0				24.9	0.0	32.9
LnGrp LOS	A	C	B	D	A	A				C	A	C
Approach Vol, veh/h		2023			2171						626	
Approach Delay, s/veh		19.5			12.7						29.6	
Approach LOS		B			B						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	17.6	31.3		13.9		48.9						
Change Period (Y+Rc), s	4.0	4.6		4.6		4.6						
Max Green Setting (Gmax), s	14.0	27.4		10.4		45.4						
Max Q Clear Time (g_c+I1), s	13.6	23.0		9.2		23.3						
Green Ext Time (p_c), s	0.0	3.6		0.1		13.6						
Intersection Summary												
HCM 6th Ctrl Delay			17.8									
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)	590	1240	0	0	1420	250	490	0	260	0	0	0
Future Volume (veh/h)	590	1240	0	0	1420	250	490	0	260	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1811	1811	0	0	1811	1811	1811	1811	1811			
Adj Flow Rate, veh/h	670	1409	0	0	1614	244	557	0	154			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	6	6	0	0	6	6	6	6	6			
Cap, veh/h	704	2543	0	0	1693	726	610	0	543			
Arrive On Green	0.21	0.74	0.00	0.00	0.49	0.49	0.18	0.00	0.18			
Sat Flow, veh/h	3346	3532	0	0	3532	1476	3450	0	3070			
Grp Volume(v), veh/h	670	1409	0	0	1614	244	557	0	154			
Grp Sat Flow(s),veh/h/ln	1673	1721	0	0	1721	1476	1725	0	1535			
Q Serve(g_s), s	21.6	19.8	0.0	0.0	49.1	11.0	17.3	0.0	4.8			
Cycle Q Clear(g_c), s	21.6	19.8	0.0	0.0	49.1	11.0	17.3	0.0	4.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	704	2543	0	0	1693	726	610	0	543			
V/C Ratio(X)	0.95	0.55	0.00	0.00	0.95	0.34	0.91	0.00	0.28			
Avail Cap(c_a), veh/h	704	2562	0	0	1712	734	612	0	545			
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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.6	6.3	0.0	0.0	26.6	16.9	44.2	0.0	39.0			
Incr Delay (d2), s/veh	22.6	0.2	0.0	0.0	12.4	0.2	17.8	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.8	5.3	0.0	0.0	21.0	3.5	8.6	0.0	1.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.2	6.5	0.0	0.0	39.0	17.1	61.9	0.0	39.1			
LnGrp LOS	E	A	A	A	D	B	E	A	D			
Approach Vol, veh/h		2079			1858			711				
Approach Delay, s/veh		25.4			36.1			57.0				
Approach LOS		C			D			E				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		85.4			27.0	58.4		23.9				
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6				
Max Green Setting (Gmax), s		81.4			23.0	54.4		19.4				
Max Q Clear Time (g_c+I1), s		21.8			23.6	51.1		19.3				
Green Ext Time (p_c), s		13.0			0.0	2.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		34.5
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1350	150	0	1550	0	0	0	20	0	0	120
Future Vol, veh/h	0	1350	150	0	1550	0	0	0	20	0	0	120
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	1534	170	0	1761	0	0	0	23	0	0	136

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	854	-	-	881
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.02	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.36	-	-	3.36
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	294	0	0	282
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	293	-	-	282
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	18.3	29.2
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	293	-	-	-	282
HCM Lane V/C Ratio	0.078	-	-	-	0.484
HCM Control Delay (s)	18.3	-	-	-	29.2
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	910	170	80	1020	60	240	120	90	70	100	210
Future Volume (veh/h)	300	910	170	80	1020	60	240	120	90	70	100	210
Initial Q (Qb), 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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	341	1034	184	91	1159	65	273	136	-4	80	114	12
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	306	1538	273	113	1373	77	278	690	0	100	307	32
Arrive On Green	0.18	0.53	0.53	0.07	0.42	0.42	0.16	0.20	0.00	0.06	0.10	0.10
Sat Flow, veh/h	1725	2919	518	1725	3309	185	1725	3532	0	1725	3139	325
Grp Volume(v), veh/h	341	609	609	91	602	622	273	132	0	80	62	64
Grp Sat Flow(s),veh/h/ln	1725	1721	1716	1725	1721	1774	1725	1721	0	1725	1721	1744
Q Serve(g_s), s	21.5	31.4	31.5	6.3	38.1	38.2	19.1	3.9	0.0	5.5	4.1	4.2
Cycle Q Clear(g_c), s	21.5	31.4	31.5	6.3	38.1	38.2	19.1	3.9	0.0	5.5	4.1	4.2
Prop In Lane	1.00		0.30	1.00		0.10	1.00		0.00	1.00		0.19
Lane Grp Cap(c), veh/h	306	907	905	113	714	736	278	690	0	100	168	170
V/C Ratio(X)	1.11	0.67	0.67	0.80	0.84	0.84	0.98	0.19	0.00	0.80	0.37	0.38
Avail Cap(c_a), veh/h	306	945	943	135	774	798	278	1151	0	221	519	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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	21.0	21.0	55.8	31.9	31.9	50.6	40.2	0.0	56.3	51.1	51.2
Incr Delay (d2), s/veh	85.5	2.5	2.5	26.1	9.1	9.0	49.0	0.3	0.0	5.3	2.8	2.9
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	16.2	12.3	12.3	3.5	16.8	17.3	11.8	1.6	0.0	2.5	1.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	135.3	23.4	23.5	81.9	41.0	40.9	99.6	40.5	0.0	61.7	54.0	54.1
LnGrp LOS	F	C	C	F	D	D	F	D	A	E	D	D
Approach Vol, veh/h		1559			1315			405			206	
Approach Delay, s/veh		47.9			43.8			80.3			57.0	
Approach LOS		D			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	68.3	24.0	16.3	26.0	54.8	11.5	28.8
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	9.5	66.5	19.5	36.5	21.5	54.5	15.5	40.5
Max Q Clear Time (g_c+I1), s	8.3	33.5	21.1	6.2	23.5	40.2	7.5	5.9
Green Ext Time (p_c), s	0.0	18.0	0.0	1.2	0.0	10.0	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	50.7
HCM 6th LOS	D

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)	70	790	130	230	910	130	230	280	230	80	270	60
Future Volume (veh/h)	70	790	130	230	910	130	230	280	230	80	270	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	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	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	80	908	35	264	1046	66	264	322	46	92	310	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, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	101	1144	510	284	1510	664	275	659	290	193	574	253
Arrive On Green	0.06	0.34	0.34	0.17	0.45	0.45	0.08	0.19	0.19	0.06	0.17	0.17
Sat Flow, veh/h	1697	3385	1510	1697	3385	1490	3291	3385	1488	3291	3385	1490
Grp Volume(v), veh/h	80	908	35	264	1046	66	264	322	46	92	310	7
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1490	1646	1692	1488	1646	1692	1490
Q Serve(g_s), s	3.3	17.4	1.1	11.0	17.8	1.8	5.7	6.1	1.8	1.9	6.0	0.3
Cycle Q Clear(g_c), s	3.3	17.4	1.1	11.0	17.8	1.8	5.7	6.1	1.8	1.9	6.0	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	101	1144	510	284	1510	664	275	659	290	193	574	253
V/C Ratio(X)	0.79	0.79	0.07	0.93	0.69	0.10	0.96	0.49	0.16	0.48	0.54	0.03
Avail Cap(c_a), veh/h	118	1261	562	284	1591	700	275	1383	608	275	1322	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	33.3	21.5	16.1	29.4	15.9	11.5	32.7	25.7	24.0	32.7	27.2	24.8
Incr Delay (d2), s/veh	26.5	4.1	0.1	35.2	1.7	0.1	42.8	0.9	0.4	1.8	1.3	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	2.0	6.6	0.4	6.8	6.0	0.5	3.7	2.3	0.6	0.8	2.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	25.5	16.2	64.7	17.6	11.6	75.5	26.6	24.4	34.5	28.5	24.9
LnGrp LOS	E	C	B	E	B	B	E	C	C	C	C	C
Approach Vol, veh/h		1023			1376			632			409	
Approach Delay, s/veh		27.9			26.3			46.9			29.8	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	28.2	8.2	19.3	8.3	36.0	10.0	17.5
Change Period (Y+Rc), s	4.0	4.0	4.0	* 5.3	4.0	4.0	4.0	5.3
Max Green Setting (Gmax), s	12.0	26.7	6.0	* 29	5.0	33.7	6.0	28.0
Max Q Clear Time (g_c+I1), s	13.0	19.4	3.9	8.1	5.3	19.8	7.7	8.0
Green Ext Time (p_c), s	0.0	4.8	0.0	3.0	0.0	9.2	0.0	2.6

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.

Intersection	
Int Delay, s/veh	36.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	90	1210	1130	20	40	110
Future Vol, veh/h	90	1210	1130	20	40	110
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	7	7	7	7	7	7
Mvmt Flow	105	1407	1314	23	47	128

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1338	0	-	0	2241	670
Stage 1	-	-	-	-	1327	-
Stage 2	-	-	-	-	914	-
Critical Hdwy	4.24	-	-	-	6.94	7.04
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.27	-	-	-	3.57	3.37
Pot Cap-1 Maneuver	486	-	-	-	~ 33	388
Stage 1	-	-	-	-	203	-
Stage 2	-	-	-	-	339	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	486	-	-	-	~ 26	388
Mov Cap-2 Maneuver	-	-	-	-	~ 26	-
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	339	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	$ 628.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	486	-	-	-	82
HCM Lane V/C Ratio	0.215	-	-	-	2.127
HCM Control Delay (s)	14.4	-	-	-	$ 628.6
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.8	-	-	-	15.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1370	70	120	1300	40	70	10	150	20	10	5
Future Volume (veh/h)	20	1370	70	120	1300	40	70	10	150	20	10	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	22	1539	8	135	1461	43	79	11	-4	22	11	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	45	2208	671	173	1775	52	115	99	0	45	26	0
Arrive On Green	0.03	0.45	0.45	0.10	0.52	0.52	0.07	0.05	0.00	0.03	0.01	0.00
Sat Flow, veh/h	1725	4944	1503	1725	3411	100	1725	1811	0	1725	1811	0
Grp Volume(v), veh/h	22	1539	8	135	736	768	79	7	0	22	11	0
Grp Sat Flow(s),veh/h/ln	1725	1648	1503	1725	1721	1790	1725	1811	0	1725	1811	0
Q Serve(g_s), s	0.6	12.4	0.1	3.8	17.8	17.9	2.2	0.2	0.0	0.6	0.3	0.0
Cycle Q Clear(g_c), s	0.6	12.4	0.1	3.8	17.8	17.9	2.2	0.2	0.0	0.6	0.3	0.0
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	45	2208	671	173	895	932	115	99	0	45	26	0
V/C Ratio(X)	0.48	0.70	0.01	0.78	0.82	0.82	0.69	0.07	0.00	0.48	0.43	0.00
Avail Cap(c_a), veh/h	177	3801	1155	462	1648	1715	427	1093	0	174	827	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.9	11.0	7.6	21.8	10.0	10.0	22.7	22.3	0.0	23.9	24.3	0.0
Incr Delay (d2), s/veh	2.9	0.2	0.0	2.9	0.7	0.7	2.7	0.1	0.0	2.9	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	0.3	3.1	0.0	1.4	4.1	4.3	0.9	0.1	0.0	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	11.2	7.7	24.7	10.7	10.7	25.4	22.4	0.0	26.8	28.4	0.0
LnGrp LOS	C	B	A	C	B	B	C	C	A	C	C	A
Approach Vol, veh/h		1569			1639			86			33	
Approach Delay, s/veh		11.4			11.9			25.1			27.4	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	31.6	5.4	7.3	9.1	27.9	7.4	5.3
Change Period (Y+Rc), s	4.1	* 5.7	4.1	4.6	4.1	5.7	4.1	4.6
Max Green Setting (Gmax), s	5.1	* 48	5.0	30.0	13.3	38.2	12.3	22.7
Max Q Clear Time (g_c+I1), s	2.6	19.9	2.6	2.2	5.8	14.4	4.2	2.3
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.1	7.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.1
HCM 6th LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1470	90	100	740	60	260	0	370	50	300	460
Future Volume (veh/h)	0	1470	90	100	740	60	260	0	370	50	300	460
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	1811	1811	0	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	1652	31	112	831	27	292	0	416	56	337	406
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	6	6	6	6	6	6	0	6	6	6	6
Cap, veh/h	0	1752	596	138	1632	712	284	0	0	72	763	599
Arrive On Green	0.00	0.39	0.39	0.04	0.47	0.47	0.16	0.00	0.00	0.04	0.22	0.22
Sat Flow, veh/h	0	4781	1516	3346	3441	1502	1725	292		1725	3441	2701
Grp Volume(v), veh/h	0	1652	31	112	831	27	292	112.5		56	337	406
Grp Sat Flow(s),veh/h/ln	0	1485	1516	1673	1721	1502	1725	F		1725	1721	1351
Q Serve(g_s), s	0.0	44.1	1.6	4.1	20.6	1.2	20.3			4.0	10.4	17.0
Cycle Q Clear(g_c), s	0.0	44.1	1.6	4.1	20.6	1.2	20.3			4.0	10.4	17.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00			1.00		1.00
Lane Grp Cap(c), veh/h	0	1752	596	138	1632	712	284			72	763	599
V/C Ratio(X)	0.00	0.94	0.05	0.81	0.51	0.04	1.03			0.78	0.44	0.68
Avail Cap(c_a), veh/h	0	1759	598	138	1632	712	284			147	1367	1073
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	36.1	23.2	58.6	22.5	17.4	51.5			58.5	41.4	44.0
Incr Delay (d2), s/veh	0.0	11.0	0.1	30.6	0.5	0.0	61.0			24.4	0.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.9	0.6	2.3	8.0	0.4	13.3			2.2	4.4	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	47.1	23.2	89.2	23.0	17.4	112.5			82.9	42.3	47.0
LnGrp LOS	A	D	C	F	C	B	F			F	D	D
Approach Vol, veh/h		1683			970						799	
Approach Delay, s/veh		46.7			30.5						47.5	
Approach LOS		D			C						D	

Timer - Assigned Phs	1	2	3	4	6	7
Phs Duration (G+Y+Rc), s	10.0	54.5	25.0	33.8	64.5	9.8
Change Period (Y+Rc), s	4.9	* 6	* 4.7	6.5	6.0	* 4.7
Max Green Setting (Gmax), s	5.1	* 49	* 20	49.0	58.5	* 11
Max Q Clear Time (g_c+I1), s	6.1	46.1	22.3	19.0	22.6	6.0
Green Ext Time (p_c), s	0.0	2.4	0.0	8.4	12.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	47.8
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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	310	790	80	360	540	20
Future Volume (veh/h)	310	790	80	360	540	20
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	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	348	0	90	404	607	4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	938		141	1595	783	359
Arrive On Green	0.27	0.00	0.08	0.46	0.23	0.23
Sat Flow, veh/h	3532	1535	1725	3532	3346	1535
Grp Volume(v), veh/h	348	0	90	404	607	4
Grp Sat Flow(s),veh/h/ln	1721	1535	1725	1721	1673	1535
Q Serve(g_s), s	3.0	0.0	1.9	2.6	6.2	0.1
Cycle Q Clear(g_c), s	3.0	0.0	1.9	2.6	6.2	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	938		141	1595	783	359
V/C Ratio(X)	0.37		0.64	0.25	0.78	0.01
Avail Cap(c_a), veh/h	1904		235	2711	1824	837
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	10.8	0.0	16.3	6.0	13.1	10.8
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.0	0.6	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	0.8	0.0	0.6	0.4	1.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.9	0.0	18.1	6.0	13.8	10.8
LnGrp LOS	B		B	A	B	B
Approach Vol, veh/h	348			494	611	
Approach Delay, s/veh	10.9			8.2	13.8	
Approach LOS	B			A	B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	7.0	16.2				23.2		13.5
Change Period (Y+Rc), s	4.0	* 6.2				6.2		4.9
Max Green Setting (Gmax), s	5.0	* 20				28.9		20.0
Max Q Clear Time (g_c+I1), s	3.9	5.0				4.6		8.2
Green Ext Time (p_c), s	0.0	0.3				0.4		0.4

Intersection Summary	
HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

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

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)	5	5	5	30	20	60	5	370	20	40	370	5
Future Volume (veh/h)	5	5	5	30	20	60	5	370	20	40	370	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		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	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693
Adj Flow Rate, veh/h	6	6	0	34	23	0	6	420	9	45	420	5
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, %	14	14	14	14	14	14	14	14	14	14	14	14
Cap, veh/h	13	13	23	101	106	90	16	931	415	162	1079	13
Arrive On Green	0.02	0.02	0.00	0.06	0.06	0.00	0.01	0.29	0.29	0.05	0.33	0.33
Sat Flow, veh/h	826	826	1434	1612	1693	1434	1612	3216	1434	3127	3254	39
Grp Volume(v), veh/h	12	0	0	34	23	0	6	420	9	45	207	218
Grp Sat Flow(s),veh/h/ln	1651	0	1434	1612	1693	1434	1612	1608	1434	1564	1608	1685
Q Serve(g_s), s	0.2	0.0	0.0	0.6	0.4	0.0	0.1	3.3	0.1	0.4	3.1	3.1
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.6	0.4	0.0	0.1	3.3	0.1	0.4	3.1	3.1
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	26	0	23	101	106	90	16	931	415	162	533	559
V/C Ratio(X)	0.46	0.00	0.00	0.34	0.22	0.00	0.38	0.45	0.02	0.28	0.39	0.39
Avail Cap(c_a), veh/h	1597	0	1387	1569	1648	1397	322	3764	1679	555	1845	1933
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	13.9	13.8	0.0	15.3	9.0	7.9	14.1	8.0	8.0
Incr Delay (d2), s/veh	4.6	0.0	0.0	0.7	0.4	0.0	5.6	0.5	0.0	0.3	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.2	0.1	0.0	0.1	0.6	0.0	0.1	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	0.0	0.0	14.6	14.2	0.0	20.8	9.5	7.9	14.5	8.6	8.6
LnGrp LOS	B	A	A	B	B	A	C	A	A	B	A	A
Approach Vol, veh/h		12			57			435			470	
Approach Delay, s/veh		19.7			14.5			9.6			9.2	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	13.5		5.0	4.8	14.8		6.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	36.3		30.0	6.2	35.6		30.2				
Max Q Clear Time (g_c+I1), s	2.4	5.3		2.2	2.1	5.1		2.6				
Green Ext Time (p_c), s	0.0	3.7		0.0	0.0	3.3		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		9.8
HCM 6th LOS		A

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	50	20	380	20	5	310
Future Volume (veh/h)	50	20	380	20	5	310
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	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	1722	1722	1722	1722	1722	1722
Adj Flow Rate, veh/h	61	0	463	18	6	378
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	12	12	12	12	12	12
Cap, veh/h	113	0	1256	49	16	1889
Arrive On Green	0.07	0.00	0.39	0.39	0.01	0.58
Sat Flow, veh/h	1615	0	3295	125	1640	3358
Grp Volume(v), veh/h	62	0	236	245	6	378
Grp Sat Flow(s),veh/h/ln	1641	0	1636	1698	1640	1636
Q Serve(g_s), s	0.9	0.0	2.6	2.6	0.1	1.4
Cycle Q Clear(g_c), s	0.9	0.0	2.6	2.6	0.1	1.4
Prop In Lane	0.98	0.00		0.07	1.00	
Lane Grp Cap(c), veh/h	114	0	640	664	16	1889
V/C Ratio(X)	0.54	0.00	0.37	0.37	0.37	0.20
Avail Cap(c_a), veh/h	1384	0	1507	1564	418	4426
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	11.5	0.0	5.5	5.5	12.5	2.6
Incr Delay (d2), s/veh	3.9	0.0	0.8	0.7	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	0.4	0.0	0.3	0.3	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.4	0.0	6.3	6.3	26.3	2.7
LnGrp LOS	B	A	A	A	C	A
Approach Vol, veh/h	62		481			384
Approach Delay, s/veh	15.4		6.3			3.1
Approach LOS	B		A			A

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	4.7	14.5		6.3		19.2
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	6.5	23.5		21.5		34.5
Max Q Clear Time (g_c+I1), s	2.1	4.6		2.9		3.4
Green Ext Time (p_c), s	0.0	4.6		0.1		4.4

Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	5	5	70	40	10
Future Vol, veh/h	10	5	5	70	40	10
Conflicting Peds, #/hr	0	0	1	0	0	1
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	89	89	89	89	89	89
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	11	6	6	79	45	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	143	52	57	0	-	0
Stage 1	52	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.49	6.29	4.19	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.381	2.281	-	-	-
Pot Cap-1 Maneuver	833	996	1504	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	915	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	828	995	1503	-	-	-
Mov Cap-2 Maneuver	828	-	-	-	-	-
Stage 1	948	-	-	-	-	-
Stage 2	914	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1503	-	877	-	-
HCM Lane V/C Ratio	0.004	-	0.019	-	-
HCM Control Delay (s)	7.4	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	140	20	20	340	30	20	5	20	70	40	70
Future Volume (veh/h)	120	140	20	20	340	30	20	5	20	70	40	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	133	156	22	22	378	23	22	6	0	78	44	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	181	530	75	77	888	54	50	14	0	115	65	157
Arrive On Green	0.11	0.37	0.37	0.05	0.29	0.29	0.04	0.04	0.00	0.11	0.11	0.11
Sat Flow, veh/h	1584	1426	201	1584	3026	183	1257	343	0	1030	581	1409
Grp Volume(v), veh/h	133	0	178	22	197	204	28	0	0	122	0	4
Grp Sat Flow(s),veh/h/ln	1584	0	1627	1584	1580	1630	1600	0	0	1611	0	1409
Q Serve(g_s), s	3.3	0.0	3.2	0.5	4.1	4.1	0.7	0.0	0.0	3.0	0.0	0.1
Cycle Q Clear(g_c), s	3.3	0.0	3.2	0.5	4.1	4.1	0.7	0.0	0.0	3.0	0.0	0.1
Prop In Lane	1.00		0.12	1.00		0.11	0.79		0.00	0.64		1.00
Lane Grp Cap(c), veh/h	181	0	604	77	464	479	64	0	0	180	0	157
V/C Ratio(X)	0.73	0.00	0.29	0.29	0.42	0.43	0.44	0.00	0.00	0.68	0.00	0.03
Avail Cap(c_a), veh/h	271	0	604	484	568	586	270	0	0	528	0	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	9.1	18.8	11.6	11.7	19.2	0.0	0.0	17.4	0.0	16.2
Incr Delay (d2), s/veh	5.7	0.0	0.4	2.0	0.9	0.9	4.6	0.0	0.0	4.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.7	0.2	1.0	1.1	0.3	0.0	0.0	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.2	0.0	9.5	20.8	12.6	12.6	23.8	0.0	0.0	21.9	0.0	16.2
LnGrp LOS	C	A	A	C	B	B	C	A	A	C	A	B
Approach Vol, veh/h		311			423			28			126	
Approach Delay, s/veh		15.3			13.0			23.8			21.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	19.7		9.1	9.2	16.5		6.1				
Change Period (Y+Rc), s	4.0	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	9.7		13.4	7.0	14.7		6.9				
Max Q Clear Time (g_c+I1), s	2.5	5.2		5.0	5.3	6.1		2.7				
Green Ext Time (p_c), s	0.0	0.4		0.3	0.0	1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			15.4
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	120	20	5	200	160	20	30	5	30	0	170
Future Volume (veh/h)	90	120	20	5	200	160	20	30	5	30	0	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	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	100	133	14	6	222	137	22	33	0	33	0	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	161	590	62	18	296	183	53	79	0	75	0	67
Arrive On Green	0.10	0.40	0.40	0.01	0.31	0.31	0.08	0.08	0.00	0.05	0.00	0.05
Sat Flow, veh/h	1584	1479	156	1584	962	594	652	978	0	1584	0	1409
Grp Volume(v), veh/h	100	0	147	6	0	359	55	0	0	33	0	1
Grp Sat Flow(s),veh/h/ln	1584	0	1635	1584	0	1556	1630	0	0	1584	0	1409
Q Serve(g_s), s	2.4	0.0	2.3	0.1	0.0	8.1	1.3	0.0	0.0	0.8	0.0	0.0
Cycle Q Clear(g_c), s	2.4	0.0	2.3	0.1	0.0	8.1	1.3	0.0	0.0	0.8	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.38	0.40		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	0	652	18	0	479	131	0	0	75	0	67
V/C Ratio(X)	0.62	0.00	0.23	0.34	0.00	0.75	0.42	0.00	0.00	0.44	0.00	0.01
Avail Cap(c_a), veh/h	321	0	652	358	0	651	347	0	0	386	0	344
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	7.7	19.1	0.0	12.1	17.0	0.0	0.0	18.0	0.0	17.7
Incr Delay (d2), s/veh	1.4	0.0	0.1	4.0	0.0	1.9	0.8	0.0	0.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.4	0.1	0.0	2.4	0.4	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	0.0	7.8	23.1	0.0	14.0	17.8	0.0	0.0	19.5	0.0	17.7
LnGrp LOS	B	A	A	C	A	B	B	A	A	B	A	B
Approach Vol, veh/h		247			365			55			34	
Approach Delay, s/veh		12.0			14.2			17.8			19.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.9	20.0		6.3	8.5	16.5		7.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.8	15.4		9.5	7.9	16.3		8.3				
Max Q Clear Time (g_c+I1), s	4.4	4.3		2.8	4.4	10.1		3.3				
Green Ext Time (p_c), s	0.0	0.1		0.0	0.0	0.5		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		14.0
HCM 6th LOS		B

Intersection						
Int Delay, s/veh	0					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	535	0	0	445
Future Vol, veh/h	0	0	535	0	0	445
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	582	0	0	484

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	291	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.02	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.36	-	-	-	-
Pot Cap-1 Maneuver	0	694	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	694	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection						
Int Delay, s/veh	0					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	540	0	0	445
Future Vol, veh/h	0	0	540	0	0	445
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	-	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	587	0	0	484

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	829	294	0	0	587	0
Stage 1	587	-	-	-	-	-
Stage 2	242	-	-	-	-	-
Critical Hdwy	6.92	7.02	-	-	4.22	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	-	-	2.26	-
Pot Cap-1 Maneuver	301	691	-	-	957	-
Stage 1	508	-	-	-	-	-
Stage 2	764	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	301	691	-	-	957	-
Mov Cap-2 Maneuver	301	-	-	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	764	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	957	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	540	0	0	310
Future Vol, veh/h	0	0	540	0	0	310
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	-	-	-	300	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	587	0	0	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	756	294	0	0	587	0
Stage 1	587	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.92	7.02	-	-	4.22	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	-	-	2.26	-
Pot Cap-1 Maneuver	336	691	-	-	957	-
Stage 1	508	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	336	691	-	-	957	-
Mov Cap-2 Maneuver	336	-	-	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	832	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	957	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	0					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	80	50	0
Future Vol, veh/h	0	0	0	80	50	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	120	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	0	87	54	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	141	54	54	0	-	0
Stage 1	54	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.254	-	-	-
Pot Cap-1 Maneuver	843	1002	1526	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	843	1002	1526	-	-	-
Mov Cap-2 Maneuver	843	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	926	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1526	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Intersection Delay, s/veh	118.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	750	0	0	660	0	0	0	0	0	0	0
Future Vol, veh/h	0	750	0	0	660	0	0	0	0	0	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
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	815	0	0	717	0	0	0	0	0	0	0
Number of Lanes	1	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	3
HCM Control Delay	105.3	133.4	0	0
HCM LOS	F	F	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	750	0	660	0
LT Vol	0	0	0	0	0	0	0
Through Vol	0	0	0	750	0	660	0
RT Vol	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	815	0	717	0
Geometry Grp	8	8	7	7	7	8	8
Degree of Util (X)	0	0	0	1.154	0	1.214	0
Departure Headway (Hd)	8.909	8.909	5.256	5.256	5.256	6.376	8.909
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	701	0	574	0
Service Time	6.609	6.609	2.956	2.956	2.956	4.076	6.609
HCM Lane V/C Ratio	0	0	0	1.163	0	1.249	0
HCM Control Delay	11.6	11.6	8	105.3	8	133.4	11.6
HCM Lane LOS	N	N	N	F	N	F	N
HCM 95th-tile Q	0	0	0	25	0	25.3	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	694	0	0	889	0	0	0	22	0	0	66
Future Vol, veh/h	0	694	0	0	889	0	0	0	22	0	0	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	754	0	0	966	0	0	0	24	0	0	72

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	-	-	-	0	-	-	377	-	-	483
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.22	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.96	-	-	3.36
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	521	0	0	519
Stage 1	0	-	0	0	-	0	0	0	-	0	0	-
Stage 2	0	-	0	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-			-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	521	-	-	519
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.2	13
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT	SBLn1
Capacity (veh/h)	521	-	-	519
HCM Lane V/C Ratio	0.046	-	-	0.138
HCM Control Delay (s)	12.2	-	-	13
HCM Lane LOS	B	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	480	210	70	330	170	110
Future Volume (veh/h)	480	210	70	330	170	110
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	1737	1737	1737	1737	1737	1737
Adj Flow Rate, veh/h	511	112	74	351	181	5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	11	11	11	11	11	11
Cap, veh/h	763	647	113	1046	346	308
Arrive On Green	0.44	0.44	0.07	0.60	0.21	0.21
Sat Flow, veh/h	1737	1472	1654	1737	1654	1472
Grp Volume(v), veh/h	511	112	74	351	181	5
Grp Sat Flow(s),veh/h/ln	1737	1472	1654	1737	1654	1472
Q Serve(g_s), s	9.9	2.0	1.9	4.3	4.1	0.1
Cycle Q Clear(g_c), s	9.9	2.0	1.9	4.3	4.1	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	763	647	113	1046	346	308
V/C Ratio(X)	0.67	0.17	0.65	0.34	0.52	0.02
Avail Cap(c_a), veh/h	1146	971	273	1596	507	451
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	9.5	7.2	19.3	4.2	14.9	13.3
Incr Delay (d2), s/veh	3.7	0.5	6.2	0.7	4.4	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	2.7	0.4	0.7	0.5	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.1	7.7	25.5	4.9	19.3	13.4
LnGrp LOS	B	A	C	A	B	B
Approach Vol, veh/h	623			425	186	
Approach Delay, s/veh	12.1			8.5	19.1	
Approach LOS	B			A	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.9	22.6		12.9		29.6
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	7.0	28.0		13.0		39.0
Max Q Clear Time (g_c+I1), s	3.9	11.9		6.1		6.3
Green Ext Time (p_c), s	0.0	6.7		0.7		5.2
Intersection Summary						
HCM 6th Ctrl Delay			11.9			
HCM 6th LOS			B			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	60	160	10	40	5	50	240	10	10	310	5
Future Volume (veh/h)	60	60	160	10	40	5	50	240	10	10	310	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	1781	1811	1781	1811	1811	1811	1781	1781	1811	1811	1781	1781
Adj Flow Rate, veh/h	67	65	52	11	43	-5	56	270	3	11	348	2
Peak Hour Factor	0.89	0.92	0.89	0.92	0.92	0.92	0.89	0.89	0.92	0.92	0.89	0.89
Percent Heavy Veh, %	8	6	8	6	6	6	8	8	6	6	8	8
Cap, veh/h	187	756	332	25	427	190	98	544	468	25	466	395
Arrive On Green	0.11	0.22	0.22	0.01	0.12	0.00	0.06	0.31	0.31	0.01	0.26	0.26
Sat Flow, veh/h	1697	3441	1510	1725	3441	1535	1697	1781	1535	1725	1781	1510
Grp Volume(v), veh/h	67	65	52	11	43	-5	56	270	3	11	348	2
Grp Sat Flow(s),veh/h/ln	1697	1721	1510	1725	1721	1535	1697	1781	1535	1725	1781	1510
Q Serve(g_s), s	1.5	0.6	1.1	0.3	0.4	0.0	1.3	5.0	0.1	0.3	7.2	0.0
Cycle Q Clear(g_c), s	1.5	0.6	1.1	0.3	0.4	0.0	1.3	5.0	0.1	0.3	7.2	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	187	756	332	25	427	190	98	544	468	25	466	395
V/C Ratio(X)	0.36	0.09	0.16	0.44	0.10	-0.03	0.57	0.50	0.01	0.44	0.75	0.01
Avail Cap(c_a), veh/h	757	2961	1299	214	1852	826	265	985	849	214	928	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	12.5	12.7	19.7	15.7	0.0	18.5	11.5	9.8	19.7	13.7	11.0
Incr Delay (d2), s/veh	1.2	0.0	0.2	11.9	0.1	0.0	5.1	0.7	0.0	11.9	2.4	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	0.5	0.2	0.3	0.2	0.2	0.0	0.5	1.3	0.0	0.2	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	12.6	12.9	31.7	15.8	0.0	23.7	12.2	9.8	31.7	16.1	11.0
LnGrp LOS	B	B	B	C	B	A	C	B	A	C	B	B
Approach Vol, veh/h		184			49			329			361	
Approach Delay, s/veh		14.6			20.9			14.1			16.5	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	13.4	6.8	15.1	8.9	9.5	5.1	16.8
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	5.0	34.7	6.3	21.0	18.0	21.7	5.0	22.3
Max Q Clear Time (g_c+I1), s	2.3	3.1	3.3	9.2	3.5	2.4	2.3	7.0
Green Ext Time (p_c), s	0.0	0.5	0.0	1.3	0.1	0.1	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	60	0	0	0	80	310	0	0	450	40
Future Vol, veh/h	20	0	60	0	0	0	80	310	0	0	450	40
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	100	100	-	-	140	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	92	87	92	92	92	87	87	92	92	87	87
Heavy Vehicles, %	7	6	7	6	6	6	7	7	6	6	7	7
Mvmt Flow	23	0	69	0	0	0	92	356	0	0	517	46

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	903	1081	283	799	1104	178	564	0	0	356	0	0
Stage 1	541	541	-	540	540	-	-	-	-	-	-	-
Stage 2	362	540	-	259	564	-	-	-	-	-	-	-
Critical Hdwy	7.64	6.62	7.04	7.62	6.62	7.02	4.24	-	-	4.22	-	-
Critical Hdwy Stg 1	6.64	5.62	-	6.62	5.62	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.64	5.62	-	6.62	5.62	-	-	-	-	-	-	-
Follow-up Hdwy	3.57	4.06	3.37	3.56	4.06	3.36	2.27	-	-	2.26	-	-
Pot Cap-1 Maneuver	225	210	699	270	204	822	970	-	-	1171	-	-
Stage 1	480	509	-	484	510	-	-	-	-	-	-	-
Stage 2	616	510	-	712	497	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	208	190	698	226	184	822	969	-	-	1171	-	-
Mov Cap-2 Maneuver	208	190	-	226	184	-	-	-	-	-	-	-
Stage 1	434	508	-	438	462	-	-	-	-	-	-	-
Stage 2	558	462	-	642	497	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	0	1.9	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	969	-	-	208	698	-	-	1171	-	-
HCM Lane V/C Ratio	0.095	-	-	0.111	0.099	-	-	-	-	-
HCM Control Delay (s)	9.1	-	-	24.4	10.7	0	0	0	-	-
HCM Lane LOS	A	-	-	C	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.4	0.3	-	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	5	140	50	5	20	150	350	70	20	450	50
Future Volume (veh/h)	30	5	140	50	5	20	150	350	70	20	450	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		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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	37	6	0	61	6	0	183	427	67	24	549	50
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	88	23	0	130	67	0	235	1259	196	61	1022	93
Arrive On Green	0.05	0.01	0.00	0.08	0.04	0.00	0.14	0.42	0.42	0.04	0.32	0.32
Sat Flow, veh/h	1725	1811	0	1725	1811	0	1725	2983	465	1725	3182	289
Grp Volume(v), veh/h	37	6	0	61	6	0	183	245	249	24	296	303
Grp Sat Flow(s),veh/h/ln	1725	1811	0	1725	1811	0	1725	1721	1727	1725	1721	1751
Q Serve(g_s), s	0.8	0.1	0.0	1.3	0.1	0.0	3.8	3.6	3.6	0.5	5.3	5.3
Cycle Q Clear(g_c), s	0.8	0.1	0.0	1.3	0.1	0.0	3.8	3.6	3.6	0.5	5.3	5.3
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.27	1.00		0.17
Lane Grp Cap(c), veh/h	88	23	0	130	67	0	235	726	729	61	552	562
V/C Ratio(X)	0.42	0.26	0.00	0.47	0.09	0.00	0.78	0.34	0.34	0.39	0.54	0.54
Avail Cap(c_a), veh/h	277	1312	0	277	1312	0	323	1329	1334	277	1283	1305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	18.3	0.0	16.6	17.4	0.0	15.6	7.3	7.3	17.7	10.4	10.4
Incr Delay (d2), s/veh	3.1	5.6	0.0	2.6	0.6	0.0	8.0	0.4	0.4	4.1	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.0	0.5	0.1	0.0	1.6	0.8	0.8	0.2	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	23.9	0.0	19.2	18.0	0.0	23.6	7.7	7.7	21.7	11.6	11.6
LnGrp LOS	C	C	A	B	B	A	C	A	A	C	B	B
Approach Vol, veh/h		43			67			677			623	
Approach Delay, s/veh		20.8			19.1			12.0			12.0	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	20.3	6.8	5.0	9.1	16.5	5.9	5.9
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5
Max Green Setting (Gmax), s	6.0	28.9	6.0	27.1	7.0	27.9	6.0	27.1
Max Q Clear Time (g_c+I1), s	2.5	5.6	3.3	2.1	5.8	7.3	2.8	2.1
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.1	4.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

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)	180	1120	150	310	1010	240	140	330	290	290	360	90
Future Volume (veh/h)	180	1120	150	310	1010	240	140	330	290	290	360	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	205	1273	89	352	1148	251	159	375	218	330	409	83
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	228	1204	537	320	1135	246	182	389	223	259	655	132
Arrive On Green	0.13	0.35	0.35	0.19	0.40	0.40	0.11	0.19	0.19	0.15	0.23	0.23
Sat Flow, veh/h	1725	3441	1535	1725	2811	610	1725	2096	1199	1725	2846	572
Grp Volume(v), veh/h	205	1273	89	352	699	700	159	307	286	330	246	246
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1725	1721	1701	1725	1721	1575	1725	1721	1697
Q Serve(g_s), s	16.4	49.0	5.6	26.0	56.5	56.5	12.7	24.7	25.3	21.0	18.0	18.3
Cycle Q Clear(g_c), s	16.4	49.0	5.6	26.0	56.5	56.5	12.7	24.7	25.3	21.0	18.0	18.3
Prop In Lane	1.00		1.00	1.00		0.36	1.00		0.76	1.00		0.34
Lane Grp Cap(c), veh/h	228	1204	537	320	695	687	182	320	292	259	396	391
V/C Ratio(X)	0.90	1.06	0.17	1.10	1.01	1.02	0.87	0.96	0.98	1.28	0.62	0.63
Avail Cap(c_a), veh/h	246	1204	537	320	695	687	209	320	292	259	396	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	59.9	45.5	31.4	57.0	41.7	41.7	61.7	56.5	56.7	59.5	48.4	48.5
Incr Delay (d2), s/veh	31.1	42.4	0.2	79.5	35.8	39.1	28.4	39.7	46.9	150.5	3.5	3.7
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	9.0	27.2	2.1	18.1	29.8	30.0	6.9	14.1	13.7	19.8	7.9	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.0	87.9	31.6	136.5	77.5	80.8	90.1	96.2	103.6	210.0	51.8	52.3
LnGrp LOS	F	F	C	F	F	F	F	F	F	F	D	D
Approach Vol, veh/h		1567			1751			752			822	
Approach Delay, s/veh		85.1			90.7			97.7			115.5	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	54.0	18.8	37.2	22.5	61.5	25.0	31.0
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	26.0	49.0	17.0	30.0	20.0	55.0	21.0	26.0
Max Q Clear Time (g_c+I1), s	28.0	51.0	14.7	20.3	18.4	58.5	23.0	27.3
Green Ext Time (p_c), s	0.0	0.0	0.1	2.5	0.1	0.0	0.0	0.0

Intersection Summary			
HCM 6th Ctrl Delay			94.2
HCM 6th LOS			F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	190	110	370	140	0	0	0	0	390	0	40
Future Volume (veh/h)	0	190	110	370	140	0	0	0	0	390	0	40
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1352	1352	1352	1352	0				1352	1352	1352
Adj Flow Rate, veh/h	0	218	6	425	161	0				448	0	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	37	37	37	37	0				37	37	37
Cap, veh/h	0	467	13	460	1582	0				539	283	0
Arrive On Green	0.00	0.18	0.18	0.36	0.62	0.00				0.21	0.00	0.00
Sat Flow, veh/h	0	2621	70	1287	2636	0				2575	1352	0
Grp Volume(v), veh/h	0	109	115	425	161	0				448	0	0
Grp Sat Flow(s),veh/h/ln	0	1284	1339	1287	1284	0				1287	1352	0
Q Serve(g_s), s	0.0	4.0	4.0	16.7	1.4	0.0				8.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	4.0	4.0	16.7	1.4	0.0				8.8	0.0	0.0
Prop In Lane	0.00		0.05	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	235	245	460	1582	0				539	283	0
V/C Ratio(X)	0.00	0.47	0.47	0.92	0.10	0.00				0.83	0.00	0.00
Avail Cap(c_a), veh/h	0	278	290	660	2069	0				900	472	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)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.2	19.2	16.2	4.1	0.0				19.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	1.4	12.1	0.0	0.0				1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	1.2	5.4	0.2	0.0				2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.7	20.6	28.4	4.2	0.0				21.2	0.0	0.0
LnGrp LOS	A	C	C	C	A	A				C	A	A
Approach Vol, veh/h		224			586						448	
Approach Delay, s/veh		20.6			21.7						21.2	
Approach LOS		C			C						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	22.8	14.2		15.6		37.0						
Change Period (Y+Rc), s	4.0	4.6		4.6		4.6						
Max Green Setting (Gmax), s	27.0	11.4		18.4		42.4						
Max Q Clear Time (g_c+I1), s	18.7	6.0		10.8		3.4						
Green Ext Time (p_c), s	0.2	0.5		0.3		1.0						

Intersection Summary			
HCM 6th Ctrl Delay			21.3
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)	50	530	0	0	430	290	80	0	230	0	0	0
Future Volume (veh/h)	50	530	0	0	430	290	80	0	230	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1352	1352	0	0	1352	1352	1352	1352	1352			
Adj Flow Rate, veh/h	57	609	0	0	494	0	92	0	0			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87			
Percent Heavy Veh, %	37	37	0	0	37	37	37	37	37			
Cap, veh/h	79	1656	0	0	630		110	0	98			
Arrive On Green	0.06	0.64	0.00	0.00	0.47	0.00	0.09	0.00	0.00			
Sat Flow, veh/h	1287	2636	0	0	1352	0	1287	0	1145			
Grp Volume(v), veh/h	57	609	0	0	494	0	92	0	0			
Grp Sat Flow(s),veh/h/ln	1287	1284	0	0	1352	0	1287	0	1145			
Q Serve(g_s), s	1.5	3.8	0.0	0.0	10.5	0.0	2.4	0.0	0.0			
Cycle Q Clear(g_c), s	1.5	3.8	0.0	0.0	10.5	0.0	2.4	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	79	1656	0	0	630		110	0	98			
V/C Ratio(X)	0.72	0.37	0.00	0.00	0.78		0.84	0.00	0.00			
Avail Cap(c_a), veh/h	189	4718	0	0	2126		688	0	612			
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	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	15.7	2.8	0.0	0.0	7.7	0.0	15.4	0.0	0.0			
Incr Delay (d2), s/veh	4.6	0.1	0.0	0.0	2.2	0.0	6.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.0	1.7	0.0	0.7	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	3.0	0.0	0.0	9.8	0.0	21.6	0.0	0.0			
LnGrp LOS	C	A	A	A	A		C	A	A			
Approach Vol, veh/h		666			494			92				
Approach Delay, s/veh		4.4			9.8			21.6				
Approach LOS		A			A			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		26.6			6.1	20.5		7.5				
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6				
Max Green Setting (Gmax), s		62.6			5.0	53.6		18.2				
Max Q Clear Time (g_c+I1), s		5.8			3.5	12.5		4.4				
Green Ext Time (p_c), s		4.6			0.0	3.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			7.8									
HCM 6th LOS			A									

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)	120	410	140	10	150	10	80	550	10	10	430	190
Future Volume (veh/h)	120	410	140	10	150	10	80	550	10	10	430	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1811	1604	1811	1811	1811	1604	1604	1811	1811	1604	1604
Adj Flow Rate, veh/h	128	446	50	11	163	9	85	585	11	11	457	62
Peak Hour Factor	0.94	0.92	0.94	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.94	0.94
Percent Heavy Veh, %	20	6	20	6	6	6	20	20	6	6	20	20
Cap, veh/h	163	817	323	24	246	14	100	1121	21	24	960	428
Arrive On Green	0.11	0.24	0.24	0.01	0.14	0.14	0.07	0.37	0.37	0.01	0.32	0.32
Sat Flow, veh/h	1527	3441	1359	1725	1700	94	1527	3059	57	1725	3047	1359
Grp Volume(v), veh/h	128	446	50	11	0	172	85	291	305	11	457	62
Grp Sat Flow(s),veh/h/ln	1527	1721	1359	1725	0	1794	1527	1523	1593	1725	1523	1359
Q Serve(g_s), s	4.0	5.6	1.4	0.3	0.0	4.4	2.7	7.3	7.3	0.3	5.9	1.6
Cycle Q Clear(g_c), s	4.0	5.6	1.4	0.3	0.0	4.4	2.7	7.3	7.3	0.3	5.9	1.6
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	163	817	323	24	0	260	100	558	584	24	960	428
V/C Ratio(X)	0.78	0.55	0.15	0.45	0.00	0.66	0.85	0.52	0.52	0.45	0.48	0.14
Avail Cap(c_a), veh/h	1045	3268	1291	176	0	660	125	1105	1155	176	2272	1013
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	21.3	16.4	14.8	23.9	0.0	19.8	22.6	12.1	12.1	23.9	13.5	12.0
Incr Delay (d2), s/veh	8.0	0.6	0.2	12.4	0.0	2.9	36.3	2.7	2.6	12.4	1.3	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	1.7	2.0	0.4	0.2	0.0	1.9	1.8	2.1	2.2	0.2	1.6	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	16.9	15.0	36.3	0.0	22.7	58.9	14.9	14.8	36.3	14.8	12.6
LnGrp LOS	C	B	B	D	A	C	E	B	B	D	B	B
Approach Vol, veh/h		624			183			681			530	
Approach Delay, s/veh		19.3			23.5			20.3			15.0	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	19.9	5.2	16.1	5.2	22.4	9.7	11.6
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	4.0	36.5	5.0	46.5	5.0	35.5	33.5	18.0
Max Q Clear Time (g_c+I1), s	4.7	7.9	2.3	7.6	2.3	9.3	6.0	6.4
Green Ext Time (p_c), s	0.0	7.5	0.0	3.5	0.0	8.3	0.3	0.6

Intersection Summary		
HCM 6th Ctrl Delay		18.9
HCM 6th LOS		B

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)	0	1670	380	230	1650	0	0	0	0	370	0	610
Future Volume (veh/h)	0	1670	380	230	1650	0	0	0	0	370	0	610
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	0				1811	1811	1811
Adj Flow Rate, veh/h	0	1898	282	261	1875	0				420	0	624
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	6	6	6	6	0				6	6	6
Cap, veh/h	0	2092	634	285	2215	0				792	0	705
Arrive On Green	0.00	0.42	0.42	0.17	0.64	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	5107	1499	1725	3532	0				3450	0	3070
Grp Volume(v), veh/h	0	1898	282	261	1875	0				420	0	624
Grp Sat Flow(s),veh/h/ln	0	1648	1499	1725	1721	0				1725	0	1535
Q Serve(g_s), s	0.0	26.1	9.7	10.8	31.0	0.0				7.8	0.0	14.3
Cycle Q Clear(g_c), s	0.0	26.1	9.7	10.8	31.0	0.0				7.8	0.0	14.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2092	634	285	2215	0				792	0	705
V/C Ratio(X)	0.00	0.91	0.44	0.92	0.85	0.00				0.53	0.00	0.89
Avail Cap(c_a), veh/h	0	2118	642	285	2233	0				889	0	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.6	14.9	29.8	10.1	0.0				24.5	0.0	27.0
Incr Delay (d2), s/veh	0.0	6.1	0.4	31.5	3.2	0.0				0.2	0.0	10.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.5	2.9	6.6	8.5	0.0				2.9	0.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	25.7	15.3	61.3	13.3	0.0				24.7	0.0	37.1
LnGrp LOS	A	C	B	E	B	A				C	A	D
Approach Vol, veh/h		2180			2136						1044	
Approach Delay, s/veh		24.4			19.2						32.1	
Approach LOS		C			B						C	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	16.0	35.3	21.3	51.3
Change Period (Y+Rc), s	4.0	4.6	4.6	4.6
Max Green Setting (Gmax), s	12.0	31.1	18.7	47.1
Max Q Clear Time (g_c+I1), s	12.8	28.1	16.3	33.0
Green Ext Time (p_c), s	0.0	2.6	0.4	10.1

Intersection Summary	
HCM 6th Ctrl Delay	23.8
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)	500	1540	0	0	1350	260	530	0	420	0	0	0
Future Volume (veh/h)	500	1540	0	0	1350	260	530	0	420	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1811	1811	0	0	1811	1811	1811	1811	1811			
Adj Flow Rate, veh/h	568	1750	0	0	1534	238	602	0	414			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	6	6	0	0	6	6	6	6	6			
Cap, veh/h	603	2416	0	0	1641	703	670	0	596			
Arrive On Green	0.18	0.70	0.00	0.00	0.48	0.48	0.19	0.00	0.19			
Sat Flow, veh/h	3346	3532	0	0	3532	1474	3450	0	3070			
Grp Volume(v), veh/h	568	1750	0	0	1534	238	602	0	414			
Grp Sat Flow(s),veh/h/ln	1673	1721	0	0	1721	1474	1725	0	1535			
Q Serve(g_s), s	14.9	27.4	0.0	0.0	37.3	8.9	15.1	0.0	11.1			
Cycle Q Clear(g_c), s	14.9	27.4	0.0	0.0	37.3	8.9	15.1	0.0	11.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	603	2416	0	0	1641	703	670	0	596			
V/C Ratio(X)	0.94	0.72	0.00	0.00	0.93	0.34	0.90	0.00	0.69			
Avail Cap(c_a), veh/h	603	2447	0	0	1671	716	688	0	612			
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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.9	8.0	0.0	0.0	21.9	14.5	34.9	0.0	33.3			
Incr Delay (d2), s/veh	22.9	1.1	0.0	0.0	10.2	0.3	14.0	0.0	2.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.6	7.1	0.0	0.0	15.2	2.7	7.3	0.0	4.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	9.1	0.0	0.0	32.1	14.7	48.9	0.0	36.0			
LnGrp LOS	E	A	A	A	C	B	D	A	D			
Approach Vol, veh/h		2318			1772			1016				
Approach Delay, s/veh		21.3			29.7			43.7				
Approach LOS		C			C			D				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		66.9			20.0	46.9		21.8				
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6				
Max Green Setting (Gmax), s		63.1			16.0	43.1		17.7				
Max Q Clear Time (g_c+I1), s		29.4			16.9	39.3		17.1				
Green Ext Time (p_c), s		16.1			0.0	3.0		0.1				

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

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↑↑				↱			↱
Traffic Vol, veh/h	0	1700	260	0	1540	0	0	0	40	0	0	70
Future Vol, veh/h	0	1700	260	0	1540	0	0	0	40	0	0	70
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	1932	295	0	1750	0	0	0	45	0	0	80

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1116	-	-	875
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.02	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.36	-	-	3.36
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	196	0	0	285
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	196	-	-	285
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	28.8	22.5
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	196	-	-	-	285
HCM Lane V/C Ratio	0.232	-	-	-	0.279
HCM Control Delay (s)	28.8	-	-	-	22.5
HCM Lane LOS	D	-	-	-	C
HCM 95th %tile Q(veh)	0.9	-	-	-	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑		↰	↑↑		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	290	1210	220	110	1020	140	300	230	110	120	130	150
Future Volume (veh/h)	290	1210	220	110	1020	140	300	230	110	120	130	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		0.98	1.00		0.99	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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	330	1375	240	125	1159	151	341	261	34	136	148	3
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	281	1492	257	122	1273	165	295	541	70	161	341	7
Arrive On Green	0.16	0.51	0.51	0.07	0.42	0.42	0.17	0.18	0.18	0.09	0.10	0.10
Sat Flow, veh/h	1725	2934	505	1725	3054	397	1725	3062	394	1725	3448	70
Grp Volume(v), veh/h	330	799	816	125	651	659	341	145	150	136	74	77
Grp Sat Flow(s),veh/h/ln	1725	1721	1719	1725	1721	1731	1725	1721	1736	1725	1721	1797
Q Serve(g_s), s	19.5	51.0	53.2	8.5	42.6	42.9	20.5	9.1	9.3	9.3	4.8	4.9
Cycle Q Clear(g_c), s	19.5	51.0	53.2	8.5	42.6	42.9	20.5	9.1	9.3	9.3	4.8	4.9
Prop In Lane	1.00		0.29	1.00		0.23	1.00		0.23	1.00		0.04
Lane Grp Cap(c), veh/h	281	875	874	122	717	721	295	304	307	161	170	178
V/C Ratio(X)	1.18	0.91	0.93	1.02	0.91	0.91	1.16	0.48	0.49	0.84	0.43	0.43
Avail Cap(c_a), veh/h	281	883	882	122	725	730	295	539	544	281	524	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	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	50.1	27.0	27.5	55.6	32.8	32.9	49.6	44.3	44.4	53.4	50.8	50.8
Incr Delay (d2), s/veh	109.8	14.2	17.0	87.1	16.0	16.5	101.2	2.5	2.6	4.5	3.7	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.7	22.5	24.0	6.6	19.8	20.2	16.9	4.0	4.2	4.1	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	159.9	41.2	44.5	142.8	48.7	49.4	150.8	46.8	47.0	58.0	54.5	54.4
LnGrp LOS	F	D	D	F	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1945			1435			636			287	
Approach Delay, s/veh		62.7			57.2			102.6			56.1	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	65.4	25.0	16.4	24.0	54.4	15.7	25.7
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	8.5	61.5	20.5	36.5	19.5	50.5	19.5	37.5
Max Q Clear Time (g_c+I1), s	10.5	55.2	22.5	6.9	21.5	44.9	11.3	11.3
Green Ext Time (p_c), s	0.0	5.7	0.0	1.4	0.0	4.6	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	66.3
HCM 6th LOS	E

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)	100	980	290	180	930	120	170	450	270	170	420	90
Future Volume (veh/h)	100	980	290	180	930	120	170	450	270	170	420	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	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	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	115	1126	194	207	1069	46	195	517	95	195	483	17
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, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	144	1194	533	230	1366	601	203	729	321	273	802	353
Arrive On Green	0.08	0.35	0.35	0.14	0.40	0.40	0.06	0.22	0.22	0.08	0.24	0.24
Sat Flow, veh/h	1697	3385	1510	1697	3385	1490	3291	3385	1488	3291	3385	1490
Grp Volume(v), veh/h	115	1126	194	207	1069	46	195	517	95	195	483	17
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1490	1646	1692	1488	1646	1692	1490
Q Serve(g_s), s	5.4	26.2	7.7	9.7	22.3	1.5	4.8	11.5	4.3	4.7	10.3	0.7
Cycle Q Clear(g_c), s	5.4	26.2	7.7	9.7	22.3	1.5	4.8	11.5	4.3	4.7	10.3	0.7
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	144	1194	533	230	1366	601	203	729	321	273	802	353
V/C Ratio(X)	0.80	0.94	0.36	0.90	0.78	0.08	0.96	0.71	0.30	0.71	0.60	0.05
Avail Cap(c_a), veh/h	188	1197	534	230	1366	601	203	1055	464	365	1168	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5	25.5	19.5	34.5	21.1	14.9	38.0	29.5	26.7	36.3	27.6	23.9
Incr Delay (d2), s/veh	16.5	14.8	0.9	33.9	3.5	0.1	52.1	2.0	0.8	4.3	1.2	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	2.8	11.8	2.6	5.9	8.4	0.5	3.3	4.5	1.5	1.9	4.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.9	40.2	20.4	68.5	24.6	15.0	90.1	31.5	27.5	40.6	28.7	24.0
LnGrp LOS	D	D	C	E	C	B	F	C	C	D	C	C
Approach Vol, veh/h		1435			1322			807			695	
Approach Delay, s/veh		38.6			31.1			45.2			31.9	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	32.6	10.7	22.8	10.9	36.8	9.0	24.5
Change Period (Y+Rc), s	4.0	4.0	4.0	* 5.3	4.0	4.0	4.0	5.3
Max Green Setting (Gmax), s	11.0	28.7	9.0	* 25	9.0	30.7	5.0	28.0
Max Q Clear Time (g_c+I1), s	11.7	28.2	6.7	13.5	7.4	24.3	6.8	12.3
Green Ext Time (p_c), s	0.0	0.5	0.1	3.9	0.0	4.8	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	41.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	90	1400	1220	50	30	120
Future Vol, veh/h	90	1400	1220	50	30	120
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	7	7	7	7	7	7
Mvmt Flow	105	1628	1419	58	35	140

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1478	0	-	0	2473	740
Stage 1	-	-	-	-	1449	-
Stage 2	-	-	-	-	1024	-
Critical Hdwy	4.24	-	-	-	6.94	7.04
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.27	-	-	-	3.57	3.37
Pot Cap-1 Maneuver	428	-	-	-	~ 23	348
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	296	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	428	-	-	-	~ 17	348
Mov Cap-2 Maneuver	-	-	-	-	~ 17	-
Stage 1	-	-	-	-	131	-
Stage 2	-	-	-	-	296	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	$ 787.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	428	-	-	-	71
HCM Lane V/C Ratio	0.245	-	-	-	2.457
HCM Control Delay (s)	16.1	-	-	-	$ 787.7
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.9	-	-	-	16.8

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1510	110	150	1430	70	70	20	140	90	30	20
Future Volume (veh/h)	5	1510	110	150	1430	70	70	20	140	90	30	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	6	1697	32	169	1607	77	79	22	-26	101	34	4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	14	2359	717	212	1978	94	107	0	368	129	63	7
Arrive On Green	0.01	0.48	0.48	0.12	0.59	0.59	0.06	0.03	0.00	0.07	0.04	0.04
Sat Flow, veh/h	1725	4944	1503	1725	3340	159	1725	1811	0	1725	1587	187
Grp Volume(v), veh/h	6	1697	32	169	824	860	79	-4	-4	101	0	38
Grp Sat Flow(s),veh/h/ln	1725	1648	1503	1725	1721	1778	1725	1811	1535	1725	0	1774
Q Serve(g_s), s	0.2	15.9	0.7	5.6	21.8	22.3	2.6	0.0	0.0	3.4	0.0	1.2
Cycle Q Clear(g_c), s	0.2	15.9	0.7	5.6	21.8	22.3	2.6	0.0	0.0	3.4	0.0	1.2
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.00	1.00		0.11
Lane Grp Cap(c), veh/h	14	2359	717	212	1019	1053	107	0	0	129	0	70
V/C Ratio(X)	0.44	0.72	0.04	0.80	0.81	0.82	0.74	0.00	0.00	0.78	0.00	0.54
Avail Cap(c_a), veh/h	148	4342	1320	447	1812	1873	500	0	0	334	0	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.8	12.1	8.1	24.9	9.3	9.4	26.9	0.0	0.0	26.5	0.0	27.5
Incr Delay (d2), s/veh	8.0	0.2	0.0	2.6	0.6	0.6	3.7	0.0	0.0	3.9	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.2	0.2	2.1	5.0	5.2	1.1	0.0	0.0	1.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.8	12.3	8.2	27.4	9.9	10.0	30.6	0.0	0.0	30.4	0.0	29.9
LnGrp LOS	D	B	A	C	A	A	C	A	A	C	A	C
Approach Vol, veh/h		1735			1853			71			139	
Approach Delay, s/veh		12.3			11.5			34.1			30.3	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	39.1	8.5	6.2	11.3	32.4	7.7	6.9
Change Period (Y+Rc), s	4.1	* 4.6	4.1	4.6	4.1	4.6	4.1	4.6
Max Green Setting (Gmax), s	5.0	* 61	11.3	30.0	15.1	51.2	16.9	24.4
Max Q Clear Time (g_c+I1), s	2.2	24.3	5.4	0.0	7.6	17.9	4.6	3.2
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.1	9.9	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	13.0
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)	0	1620	120	80	780	30	180	0	340	70	340	690
Future Volume (veh/h)	0	1620	120	80	780	30	180	0	340	70	340	690
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	1811	1811	0	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	1820	68	90	876	14	202	0	382	79	382	669
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	6	6	6	6	6	6	0	6	6	6	6
Cap, veh/h	0	1734	590	121	1585	692	191	0	0	99	1047	822
Arrive On Green	0.00	0.39	0.39	0.04	0.46	0.46	0.11	0.00	0.00	0.06	0.30	0.30
Sat Flow, veh/h	0	4781	1516	3346	3441	1502	1725	202		1725	3441	2701
Grp Volume(v), veh/h	0	1820	68	90	876	14	202	142.9		79	382	669
Grp Sat Flow(s),veh/h/ln	0	1485	1516	1673	1721	1502	1725	F		1725	1721	1351
Q Serve(g_s), s	0.0	53.8	4.0	3.7	25.5	0.7	15.3			6.3	12.0	31.7
Cycle Q Clear(g_c), s	0.0	53.8	4.0	3.7	25.5	0.7	15.3			6.3	12.0	31.7
Prop In Lane	0.00		1.00	1.00		1.00	1.00			1.00		1.00
Lane Grp Cap(c), veh/h	0	1734	590	121	1585	692	191			99	1047	822
V/C Ratio(X)	0.00	1.05	0.12	0.74	0.55	0.02	1.06			0.80	0.36	0.81
Avail Cap(c_a), veh/h	0	1734	590	121	1585	692	191			168	1220	957
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	42.2	27.0	66.0	27.0	20.3	61.5			64.3	37.6	44.5
Incr Delay (d2), s/veh	0.0	36.0	0.2	23.7	0.7	0.0	81.4			19.9	0.5	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	24.6	1.4	1.9	10.2	0.2	10.9			3.3	5.0	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	78.3	27.2	89.7	27.7	20.3	142.9			84.3	38.1	50.7
LnGrp LOS	A	F	C	F	C	C	F			F	D	D
Approach Vol, veh/h		1888			980						1130	
Approach Delay, s/veh		76.4			33.3						48.8	
Approach LOS		E			C						D	

Timer - Assigned Phs	1	2	3	4		6	7
Phs Duration (G+Y+Rc), s	9.9	59.8	20.0	48.6		69.7	12.7
Change Period (Y+Rc), s	4.9	* 6	* 4.7	6.5		6.0	* 4.7
Max Green Setting (Gmax), s	5.0	* 54	* 15	49.0		63.5	* 14
Max Q Clear Time (g_c+I1), s	5.7	55.8	17.3	33.7		27.5	8.3
Green Ext Time (p_c), s	0.0	0.0	0.0	8.4		12.7	0.1

Intersection Summary		
HCM 6th Ctrl Delay		62.1
HCM 6th LOS		E

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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	400	810	60	340	550	40
Future Volume (veh/h)	400	810	60	340	550	40
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	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	449	0	67	382	618	9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	952		117	1565	797	365
Arrive On Green	0.28	0.00	0.07	0.45	0.24	0.24
Sat Flow, veh/h	3532	1535	1725	3532	3346	1535
Grp Volume(v), veh/h	449	0	67	382	618	9
Grp Sat Flow(s),veh/h/ln	1721	1535	1725	1721	1673	1535
Q Serve(g_s), s	3.9	0.0	1.4	2.5	6.2	0.2
Cycle Q Clear(g_c), s	3.9	0.0	1.4	2.5	6.2	0.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	952		117	1565	797	365
V/C Ratio(X)	0.47		0.57	0.24	0.78	0.02
Avail Cap(c_a), veh/h	1932		239	2750	1851	849
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	10.9	0.0	16.3	6.0	12.9	10.6
Incr Delay (d2), s/veh	0.1	0.0	1.6	0.0	0.6	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	1.0	0.0	0.5	0.4	1.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.0	0.0	18.0	6.1	13.5	10.6
LnGrp LOS	B		B	A	B	B
Approach Vol, veh/h	449			449	627	
Approach Delay, s/veh	11.0			7.9	13.5	
Approach LOS	B			A	B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.4	16.2				22.6		13.5
Change Period (Y+Rc), s	4.0	* 6.2				6.2		4.9
Max Green Setting (Gmax), s	5.0	* 20				28.9		20.0
Max Q Clear Time (g_c+I1), s	3.4	5.9				4.5		8.2
Green Ext Time (p_c), s	0.0	0.4				0.4		0.4

Intersection Summary		
HCM 6th Ctrl Delay		11.1
HCM 6th LOS		B

Notes

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

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)	5	0	5	30	5	60	5	600	40	50	530	5
Future Volume (veh/h)	5	0	5	30	5	60	5	600	40	50	530	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		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	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693
Adj Flow Rate, veh/h	6	0	0	34	6	0	6	682	27	57	602	6
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, %	14	14	14	14	14	14	14	14	14	14	14	14
Cap, veh/h	13	0	12	74	77	66	16	1264	564	188	1446	14
Arrive On Green	0.01	0.00	0.00	0.05	0.05	0.00	0.01	0.39	0.39	0.06	0.44	0.44
Sat Flow, veh/h	1612	0	1434	1612	1693	1434	1612	3216	1434	3127	3261	32
Grp Volume(v), veh/h	6	0	0	34	6	0	6	682	27	57	297	311
Grp Sat Flow(s),veh/h/ln	1612	0	1434	1612	1693	1434	1612	1608	1434	1564	1608	1686
Q Serve(g_s), s	0.1	0.0	0.0	0.8	0.1	0.0	0.1	6.0	0.4	0.6	4.6	4.6
Cycle Q Clear(g_c), s	0.1	0.0	0.0	0.8	0.1	0.0	0.1	6.0	0.4	0.6	4.6	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	13	0	12	74	77	66	16	1264	564	188	713	748
V/C Ratio(X)	0.46	0.00	0.00	0.46	0.08	0.00	0.38	0.54	0.05	0.30	0.42	0.42
Avail Cap(c_a), veh/h	230	0	204	1334	1400	1187	274	3180	1419	471	1559	1635
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	0.0	0.0	17.0	16.7	0.0	18.0	8.5	6.9	16.4	6.9	6.9
Incr Delay (d2), s/veh	9.1	0.0	0.0	1.7	0.2	0.0	5.6	0.5	0.0	0.3	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.2	0.0	0.0	0.1	1.0	0.1	0.2	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	0.0	18.7	16.8	0.0	23.6	9.0	6.9	16.8	7.5	7.5
LnGrp LOS	C	A	A	B	B	A	C	A	A	B	A	A
Approach Vol, veh/h		6			40			715			665	
Approach Delay, s/veh		27.1			18.4			9.1			8.3	
Approach LOS		C			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.7	18.8		4.8	4.9	20.7		6.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	36.1		5.2	6.2	35.4		30.2
Max Q Clear Time (g_c+I1), s	2.6	8.0		2.1	2.1	6.6		2.8
Green Ext Time (p_c), s	0.0	6.4		0.0	0.0	4.9		0.0

Intersection Summary		
HCM 6th Ctrl Delay		9.0
HCM 6th LOS		A

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	10	570	90	20	580
Future Volume (veh/h)	30	10	570	90	20	580
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	1722	1722	1722	1722	1722	1722
Adj Flow Rate, veh/h	37	0	695	77	24	707
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	12	12	12	12	12	12
Cap, veh/h	73	0	1348	149	60	2113
Arrive On Green	0.05	0.00	0.45	0.45	0.04	0.65
Sat Flow, veh/h	1599	0	3049	328	1640	3358
Grp Volume(v), veh/h	38	0	383	389	24	707
Grp Sat Flow(s),veh/h/ln	1642	0	1636	1655	1640	1636
Q Serve(g_s), s	0.7	0.0	4.9	4.9	0.4	2.8
Cycle Q Clear(g_c), s	0.7	0.0	4.9	4.9	0.4	2.8
Prop In Lane	0.97	0.00		0.20	1.00	
Lane Grp Cap(c), veh/h	75	0	744	753	60	2113
V/C Ratio(X)	0.51	0.00	0.52	0.52	0.40	0.33
Avail Cap(c_a), veh/h	282	0	1151	1164	338	3481
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	13.6	0.0	5.7	5.7	13.7	2.3
Incr Delay (d2), s/veh	5.3	0.0	1.2	1.2	4.3	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	0.3	0.0	0.7	0.7	0.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.9	0.0	6.8	6.8	18.1	2.5
LnGrp LOS	B	A	A	A	B	A
Approach Vol, veh/h	38		772			731
Approach Delay, s/veh	18.9		6.8			3.0
Approach LOS	B		A			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	5.6	17.8				23.3		5.8
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	6.0	20.5				31.0		5.0
Max Q Clear Time (g_c+I1), s	2.4	6.9				4.8		2.7
Green Ext Time (p_c), s	0.0	6.4				8.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	90	130	5
Future Vol, veh/h	5	5	5	90	130	5
Conflicting Peds, #/hr	0	0	1	0	0	1
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	89	89	89	89	89	89
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	6	6	6	101	146	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	263	150	153	0	-	0
Stage 1	150	-	-	-	-	-
Stage 2	113	-	-	-	-	-
Critical Hdwy	6.49	6.29	4.19	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.381	2.281	-	-	-
Pot Cap-1 Maneuver	711	878	1386	-	-	-
Stage 1	861	-	-	-	-	-
Stage 2	895	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	706	877	1385	-	-	-
Mov Cap-2 Maneuver	706	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	894	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1385	-	782	-	-
HCM Lane V/C Ratio	0.004	-	0.014	-	-
HCM Control Delay (s)	7.6	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	400	40	10	210	40	30	5	40	220	20	110
Future Volume (veh/h)	150	400	40	10	210	40	30	5	40	220	20	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	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	167	444	44	11	233	22	33	6	0	244	22	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	211	550	54	40	764	72	68	12	0	304	27	293
Arrive On Green	0.13	0.37	0.37	0.03	0.26	0.26	0.05	0.05	0.00	0.21	0.21	0.21
Sat Flow, veh/h	1584	1489	148	1584	2920	273	1350	245	0	1458	132	1409
Grp Volume(v), veh/h	167	0	488	11	125	130	39	0	0	266	0	19
Grp Sat Flow(s),veh/h/ln	1584	0	1636	1584	1580	1614	1595	0	0	1590	0	1409
Q Serve(g_s), s	5.2	0.0	13.5	0.3	3.2	3.3	1.2	0.0	0.0	8.0	0.0	0.5
Cycle Q Clear(g_c), s	5.2	0.0	13.5	0.3	3.2	3.3	1.2	0.0	0.0	8.0	0.0	0.5
Prop In Lane	1.00		0.09	1.00		0.17	0.85		0.00	0.92		1.00
Lane Grp Cap(c), veh/h	211	0	604	40	413	422	80	0	0	331	0	293
V/C Ratio(X)	0.79	0.00	0.81	0.27	0.30	0.31	0.49	0.00	0.00	0.80	0.00	0.06
Avail Cap(c_a), veh/h	534	0	896	393	724	739	218	0	0	489	0	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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	0.0	14.3	24.1	14.9	14.9	23.3	0.0	0.0	19.0	0.0	16.0
Incr Delay (d2), s/veh	6.6	0.0	4.6	3.6	0.6	0.6	4.6	0.0	0.0	6.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	4.1	0.1	0.9	1.0	0.5	0.0	0.0	2.9	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	0.0	18.9	27.7	15.6	15.6	27.9	0.0	0.0	25.0	0.0	16.1
LnGrp LOS	C	A	B	C	B	B	C	A	A	C	A	B
Approach Vol, veh/h		655			266			39			285	
Approach Delay, s/veh		21.2			16.1			27.9			24.4	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	23.1		15.0	10.7	17.7		7.0
Change Period (Y+Rc), s	4.0	4.5		4.5	4.0	4.5		4.5
Max Green Setting (Gmax), s	12.5	27.6		15.5	17.0	23.1		6.9
Max Q Clear Time (g_c+I1), s	2.3	15.5		10.0	7.2	5.3		3.2
Green Ext Time (p_c), s	0.0	3.1		0.7	0.3	1.7		0.0

Intersection Summary		
HCM 6th Ctrl Delay		21.0
HCM 6th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	440	50	0	100	60	20	20	5	20	0	140
Future Volume (veh/h)	170	440	50	0	100	60	20	20	5	20	0	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	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	189	489	52	0	111	37	22	22	0	22	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	232	828	88	4	360	120	55	55	0	52	0	46
Arrive On Green	0.15	0.56	0.56	0.00	0.30	0.30	0.07	0.07	0.00	0.03	0.00	0.00
Sat Flow, veh/h	1584	1477	157	1584	1193	398	811	811	0	1584	0	1409
Grp Volume(v), veh/h	189	0	541	0	0	148	44	0	0	22	0	0
Grp Sat Flow(s),veh/h/ln	1584	0	1635	1584	0	1591	1622	0	0	1584	0	1409
Q Serve(g_s), s	4.6	0.0	8.7	0.0	0.0	2.9	1.0	0.0	0.0	0.5	0.0	0.0
Cycle Q Clear(g_c), s	4.6	0.0	8.7	0.0	0.0	2.9	1.0	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.25	0.50		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	0	916	4	0	480	110	0	0	52	0	46
V/C Ratio(X)	0.82	0.00	0.59	0.00	0.00	0.31	0.40	0.00	0.00	0.43	0.00	0.00
Avail Cap(c_a), veh/h	672	0	1043	350	0	691	338	0	0	378	0	336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.5	0.0	5.7	0.0	0.0	10.7	17.8	0.0	0.0	18.9	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.0	0.3	0.0	0.0	0.1	0.9	0.0	0.0	2.1	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	1.3	0.0	0.8	0.0	0.0	0.8	0.3	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	0.0	6.1	0.0	0.0	10.8	18.7	0.0	0.0	21.0	0.0	0.0
LnGrp LOS	B	A	A	A	A	B	B	A	A	C	A	A
Approach Vol, veh/h		730			148			44			22	
Approach Delay, s/veh		9.5			10.8			18.7			21.0	
Approach LOS		A			B			B			C	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	0.0	26.8	5.8	10.3	16.5	7.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.8	25.4	9.5	16.9	17.3	8.3
Max Q Clear Time (g_c+I1), s	0.0	10.7	2.5	6.6	4.9	3.0
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Intersection						
Int Delay, s/veh	0.1					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	335	50	0	520
Future Vol, veh/h	0	5	335	50	0	520
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	5	364	54	0	565

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	209	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.02	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.36	-	-	-	-
Pot Cap-1 Maneuver	0	785	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	785	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	785	-
HCM Lane V/C Ratio	-	-	0.007	-
HCM Control Delay (s)	-	-	9.6	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection						
Int Delay, s/veh	0					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	325	0	0	520
Future Vol, veh/h	0	0	325	0	0	520
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	-	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	353	0	0	565

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	636	177	0	0	353	0
Stage 1	353	-	-	-	-	-
Stage 2	283	-	-	-	-	-
Critical Hdwy	6.92	7.02	-	-	4.22	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	-	-	2.26	-
Pot Cap-1 Maneuver	401	823	-	-	1174	-
Stage 1	670	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	401	823	-	-	1174	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	670	-	-	-	-	-
Stage 2	728	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1174	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	325	0	0	520
Future Vol, veh/h	0	0	325	0	0	520
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	-	-	-	300	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	353	0	0	565

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	636	177	0	0	353	0
Stage 1	353	-	-	-	-	-
Stage 2	283	-	-	-	-	-
Critical Hdwy	6.92	7.02	-	-	4.22	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	-	-	2.26	-
Pot Cap-1 Maneuver	401	823	-	-	1174	-
Stage 1	670	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	401	823	-	-	1174	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	670	-	-	-	-	-
Stage 2	728	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1174	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	0					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	95	185	0
Future Vol, veh/h	0	0	0	95	185	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	120	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	0	103	201	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	304	201	201	0	-	0
Stage 1	201	-	-	-	-	-
Stage 2	103	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.254	-	-	-
Pot Cap-1 Maneuver	680	830	1347	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	680	830	1347	-	-	-
Mov Cap-2 Maneuver	680	-	-	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	911	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1347	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Intersection Delay, s/veh	126.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	740	0	0	690	0	0	0	0	0	0	0
Future Vol, veh/h	0	740	0	0	690	0	0	0	0	0	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
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	804	0	0	750	0	0	0	0	0	0	0
Number of Lanes	1	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	3
HCM Control Delay	99.6	155	0	0
HCM LOS	F	F	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	740	0	690	0
LT Vol	0	0	0	0	0	0	0
Through Vol	0	0	0	740	0	690	0
RT Vol	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	804	0	750	0
Geometry Grp	8	8	7	7	7	8	8
Degree of Util (X)	0	0	0	1.138	0	1.269	0
Departure Headway (Hd)	8.968	8.968	5.286	5.286	5.286	6.351	8.968
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	692	0	578	0
Service Time	6.668	6.668	2.986	2.986	2.986	4.051	6.668
HCM Lane V/C Ratio	0	0	0	1.162	0	1.298	0
HCM Control Delay	11.7	11.7	8	99.6	8	155	11.7
HCM Lane LOS	N	N	N	F	N	F	N
HCM 95th-tile Q	0	0	0	23.9	0	28.5	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1093	0	0	714	0	0	0	5	0	0	47
Future Vol, veh/h	0	1093	0	0	714	0	0	0	5	0	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	1188	0	0	776	0	0	0	5	0	0	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	-	-	-	0	-	-	594	-	-	388
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.22	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.96	-	-	3.36
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	376	0	0	599
Stage 1	0	-	0	0	-	0	0	0	-	0	0	-
Stage 2	0	-	0	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-			-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	376	-	-	599
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14.7	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT	SBLn1
Capacity (veh/h)	376	-	-	599
HCM Lane V/C Ratio	0.014	-	-	0.085
HCM Control Delay (s)	14.7	-	-	11.6
HCM Lane LOS	B	-	-	B
HCM 95th %tile Q(veh)	0	-	-	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	220	90	60	430	170	70
Future Volume (veh/h)	220	90	60	430	170	70
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	1737	1737	1737	1737	1737	1737
Adj Flow Rate, veh/h	234	36	64	457	181	12
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	11	11	11	11	11	11
Cap, veh/h	508	431	110	853	407	362
Arrive On Green	0.29	0.29	0.07	0.49	0.25	0.25
Sat Flow, veh/h	1737	1472	1654	1737	1654	1472
Grp Volume(v), veh/h	234	36	64	457	181	12
Grp Sat Flow(s),veh/h/ln	1737	1472	1654	1737	1654	1472
Q Serve(g_s), s	3.8	0.6	1.3	6.2	3.2	0.2
Cycle Q Clear(g_c), s	3.8	0.6	1.3	6.2	3.2	0.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	508	431	110	853	407	362
V/C Ratio(X)	0.46	0.08	0.58	0.54	0.45	0.03
Avail Cap(c_a), veh/h	610	517	315	1169	629	560
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	9.9	8.8	15.5	6.0	10.9	9.8
Incr Delay (d2), s/veh	2.4	0.3	4.8	1.9	2.8	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	1.1	0.1	0.5	0.9	1.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.2	9.1	20.3	7.9	13.7	9.9
LnGrp LOS	B	A	C	A	B	A
Approach Vol, veh/h	270			521	193	
Approach Delay, s/veh	11.8			9.4	13.4	
Approach LOS	B			A	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.8	14.5		12.9		21.3
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	6.5	12.0		13.0		23.0
Max Q Clear Time (g_c+I1), s	3.3	5.8		5.2		8.2
Green Ext Time (p_c), s	0.0	1.4		0.9		4.9
Intersection Summary						
HCM 6th Ctrl Delay			10.9			
HCM 6th LOS			B			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	5	150	10	5	10	130	190	10	10	150	30
Future Volume (veh/h)	20	5	150	10	5	10	130	190	10	10	150	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	1781	1811	1781	1811	1811	1811	1781	1781	1811	1811	1781	1781
Adj Flow Rate, veh/h	22	5	11	11	5	1	146	213	4	11	169	7
Peak Hour Factor	0.89	0.92	0.89	0.92	0.92	0.92	0.89	0.89	0.92	0.92	0.89	0.89
Percent Heavy Veh, %	8	6	8	6	6	6	8	8	6	6	8	8
Cap, veh/h	92	640	281	25	502	224	186	462	398	25	293	248
Arrive On Green	0.05	0.19	0.19	0.01	0.15	0.15	0.11	0.26	0.26	0.01	0.16	0.16
Sat Flow, veh/h	1697	3441	1510	1725	3441	1535	1697	1781	1535	1725	1781	1510
Grp Volume(v), veh/h	22	5	11	11	5	1	146	213	4	11	169	7
Grp Sat Flow(s),veh/h/ln	1697	1721	1510	1725	1721	1535	1697	1781	1535	1725	1781	1510
Q Serve(g_s), s	0.4	0.0	0.2	0.2	0.0	0.0	2.9	3.4	0.1	0.2	3.0	0.1
Cycle Q Clear(g_c), s	0.4	0.0	0.2	0.2	0.0	0.0	2.9	3.4	0.1	0.2	3.0	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	92	640	281	25	502	224	186	462	398	25	293	248
V/C Ratio(X)	0.24	0.01	0.04	0.44	0.01	0.00	0.79	0.46	0.01	0.44	0.58	0.03
Avail Cap(c_a), veh/h	892	3114	1366	252	2110	941	396	1092	941	252	1092	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	15.5	11.4	11.4	16.7	12.5	12.5	14.9	10.7	9.4	16.7	13.2	12.0
Incr Delay (d2), s/veh	1.3	0.0	0.1	11.7	0.0	0.0	7.1	0.7	0.0	11.7	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	0.2	0.0	0.0	0.2	0.0	0.0	1.1	0.8	0.0	0.1	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.8	11.4	11.5	28.4	12.5	12.5	22.0	11.4	9.4	28.4	15.0	12.1
LnGrp LOS	B	B	B	C	B	B	C	B	A	C	B	B
Approach Vol, veh/h		38			17			363			187	
Approach Delay, s/veh		14.6			22.8			15.6			15.7	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	10.9	8.3	10.1	6.4	9.5	5.0	13.4
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	5.0	31.0	8.0	21.0	18.0	21.0	5.0	21.0
Max Q Clear Time (g_c+I1), s	2.2	2.2	4.9	5.0	2.4	2.0	2.2	5.4
Green Ext Time (p_c), s	0.0	0.0	0.1	0.6	0.0	0.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	0	90	210	0	15	50	515	75	5	420	20
Future Volume (veh/h)	30	0	90	210	0	15	50	515	75	5	420	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		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	1796	1811	1796	1811	1811	1811	1796	1796	1811	1811	1796	1796
Adj Flow Rate, veh/h	34	0	3	228	0	5	57	592	70	5	483	20
Peak Hour Factor	0.87	0.92	0.87	0.92	0.92	0.92	0.87	0.87	0.92	0.92	0.87	0.87
Percent Heavy Veh, %	7	6	7	6	6	6	7	7	6	6	7	7
Cap, veh/h	204	0	99	295	0	179	101	934	110	12	840	35
Arrive On Green	0.12	0.00	0.06	0.17	0.00	0.12	0.06	0.30	0.30	0.01	0.25	0.25
Sat Flow, veh/h	1711	0	1535	1725	0	1535	1711	3074	363	1725	3336	138
Grp Volume(v), veh/h	34	0	3	228	0	5	57	328	334	5	247	256
Grp Sat Flow(s),veh/h/ln	1711	0	1535	1725	0	1535	1711	1706	1730	1725	1706	1768
Q Serve(g_s), s	0.7	0.0	0.1	5.0	0.0	0.1	1.3	6.6	6.6	0.1	5.0	5.0
Cycle Q Clear(g_c), s	0.7	0.0	0.1	5.0	0.0	0.1	1.3	6.6	6.6	0.1	5.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.08
Lane Grp Cap(c), veh/h	204	0	99	295	0	179	101	518	526	12	430	445
V/C Ratio(X)	0.17	0.00	0.03	0.77	0.00	0.03	0.57	0.63	0.64	0.43	0.57	0.58
Avail Cap(c_a), veh/h	267	0	1083	630	0	1404	216	1054	1068	217	1054	1091
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	0.0	17.4	15.7	0.0	15.5	18.2	11.9	11.9	19.6	13.0	13.0
Incr Delay (d2), s/veh	0.4	0.0	0.1	4.3	0.0	0.1	4.9	1.3	1.3	23.0	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	2.0	0.0	0.0	0.5	1.9	1.9	0.1	1.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	0.0	17.5	20.0	0.0	15.6	23.1	13.2	13.2	42.6	14.2	14.2
LnGrp LOS	B	A	B	B	A	B	C	B	B	D	B	B
Approach Vol, veh/h		37			233			719			508	
Approach Delay, s/veh		16.2			19.9			14.0			14.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	16.6	11.3	7.1	6.8	14.5	9.2	9.1
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	5.0	24.5	14.5	28.0	5.0	24.5	6.2	36.3
Max Q Clear Time (g_c+I1), s	2.1	8.6	7.0	2.1	3.3	7.0	2.7	2.1
Green Ext Time (p_c), s	0.0	3.3	0.4	0.0	0.0	2.3	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		15.1
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	10	110	80	5	20	90	580	50	5	680	20
Future Volume (veh/h)	40	10	110	80	5	20	90	580	50	5	680	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		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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	49	12	0	98	6	1	110	707	54	6	829	22
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	105	45	0	162	88	15	172	1535	117	17	1314	35
Arrive On Green	0.06	0.02	0.00	0.09	0.06	0.06	0.10	0.47	0.47	0.01	0.38	0.38
Sat Flow, veh/h	1725	1811	0	1725	1513	252	1725	3240	247	1725	3422	91
Grp Volume(v), veh/h	49	12	0	98	0	7	110	375	386	6	417	434
Grp Sat Flow(s),veh/h/ln	1725	1811	0	1725	0	1765	1725	1721	1767	1725	1721	1792
Q Serve(g_s), s	1.2	0.3	0.0	2.5	0.0	0.2	2.8	6.6	6.6	0.2	8.9	8.9
Cycle Q Clear(g_c), s	1.2	0.3	0.0	2.5	0.0	0.2	2.8	6.6	6.6	0.2	8.9	8.9
Prop In Lane	1.00		0.00	1.00		0.14	1.00		0.14	1.00		0.05
Lane Grp Cap(c), veh/h	105	45	0	162	0	102	172	815	837	17	661	688
V/C Ratio(X)	0.47	0.27	0.00	0.60	0.00	0.07	0.64	0.46	0.46	0.36	0.63	0.63
Avail Cap(c_a), veh/h	230	1086	0	230	0	1058	230	1074	1102	230	1074	1118
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	21.6	0.0	19.6	0.0	20.1	19.5	8.0	8.0	22.2	11.3	11.3
Incr Delay (d2), s/veh	3.2	3.1	0.0	3.6	0.0	0.3	3.9	0.6	0.6	12.7	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.2	0.0	1.0	0.0	0.1	1.1	1.6	1.6	0.1	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	24.7	0.0	23.2	0.0	20.3	23.4	8.5	8.5	34.8	12.7	12.6
LnGrp LOS	C	C	A	C	A	C	C	A	A	C	B	B
Approach Vol, veh/h		61			105			871			857	
Approach Delay, s/veh		23.8			23.0			10.4			12.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	26.6	8.2	5.7	8.5	22.6	6.7	7.2
Change Period (Y+Rc), s	4.0	5.3	4.0	4.6	4.0	5.3	4.0	4.6
Max Green Setting (Gmax), s	6.0	28.1	6.0	27.0	6.0	28.1	6.0	27.0
Max Q Clear Time (g_c+I1), s	2.2	8.6	4.5	2.3	4.8	10.9	3.2	2.2
Green Ext Time (p_c), s	0.0	6.0	0.0	0.0	0.0	6.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

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)	220	870	140	320	810	350	140	280	330	340	470	210
Future Volume (veh/h)	220	870	140	320	810	350	140	280	330	340	470	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	250	989	60	364	920	362	159	318	180	386	534	200
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	233	1044	466	361	913	357	181	362	200	361	670	250
Arrive On Green	0.13	0.30	0.30	0.21	0.38	0.38	0.10	0.17	0.17	0.21	0.27	0.27
Sat Flow, veh/h	1725	3441	1535	1725	2417	945	1725	2126	1174	1725	2441	910
Grp Volume(v), veh/h	250	989	60	364	653	629	159	256	242	386	376	358
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1725	1721	1641	1725	1721	1579	1725	1721	1631
Q Serve(g_s), s	20.0	41.6	4.2	31.0	56.0	56.0	13.5	21.5	22.3	31.0	30.0	30.3
Cycle Q Clear(g_c), s	20.0	41.6	4.2	31.0	56.0	56.0	13.5	21.5	22.3	31.0	30.0	30.3
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.74	1.00		0.56
Lane Grp Cap(c), veh/h	233	1044	466	361	650	620	181	293	269	361	472	448
V/C Ratio(X)	1.07	0.95	0.13	1.01	1.00	1.01	0.88	0.87	0.90	1.07	0.80	0.80
Avail Cap(c_a), veh/h	233	1044	466	361	650	620	209	313	288	361	472	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	64.1	50.5	37.4	58.6	46.1	46.1	65.4	59.9	60.3	58.6	49.9	50.0
Incr Delay (d2), s/veh	80.2	16.7	0.2	49.7	36.5	39.8	29.3	22.5	28.7	67.3	9.6	10.4
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	18.8	19.9	1.6	18.2	29.6	28.8	7.3	11.1	11.0	20.0	13.9	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	144.3	67.2	37.6	108.4	82.7	86.0	94.7	82.5	89.0	126.0	59.5	60.4
LnGrp LOS	F	E	D	F	F	F	F	F	F	F	E	E
Approach Vol, veh/h		1299			1646			657			1120	
Approach Delay, s/veh		80.7			89.6			87.8			82.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	49.0	19.5	44.7	24.0	60.0	35.0	29.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	31.0	45.0	18.0	40.0	20.0	56.0	31.0	27.0
Max Q Clear Time (g_c+I1), s	33.0	43.6	15.5	32.3	22.0	58.0	33.0	24.3
Green Ext Time (p_c), s	0.0	1.0	0.1	3.3	0.0	0.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	85.3
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	100	50	320	130	0	0	0	0	340	0	60
Future Volume (veh/h)	0	100	50	320	130	0	0	0	0	340	0	60
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1352	1352	1352	1352	0				1352	1352	1352
Adj Flow Rate, veh/h	0	115	1	368	149	0				391	0	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	37	37	37	37	0				37	37	37
Cap, veh/h	0	458	4	410	1512	0				501	263	0
Arrive On Green	0.00	0.18	0.18	0.32	0.59	0.00				0.19	0.00	0.00
Sat Flow, veh/h	0	2677	23	1287	2636	0				2575	1352	0
Grp Volume(v), veh/h	0	57	59	368	149	0				391	0	0
Grp Sat Flow(s),veh/h/ln	0	1284	1348	1287	1284	0				1287	1352	0
Q Serve(g_s), s	0.0	1.6	1.6	11.6	1.1	0.0				6.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.6	1.6	11.6	1.1	0.0				6.1	0.0	0.0
Prop In Lane	0.00		0.02	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	226	237	410	1512	0				501	263	0
V/C Ratio(X)	0.00	0.25	0.25	0.90	0.10	0.00				0.78	0.00	0.00
Avail Cap(c_a), veh/h	0	306	321	637	2124	0				953	500	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)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	15.1	15.1	13.8	3.8	0.0				16.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.6	7.3	0.0	0.0				1.0	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	0.0	0.4	0.4	3.3	0.1	0.0				1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.7	15.6	21.1	3.8	0.0				17.2	0.0	0.0
LnGrp LOS	A	B	B	C	A	A				B	A	A
Approach Vol, veh/h		116			517						391	
Approach Delay, s/veh		15.6			16.1						17.2	
Approach LOS		B			B						B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	17.5	12.1		12.9		29.6						
Change Period (Y+Rc), s	4.0	4.6		4.6		4.6						
Max Green Setting (Gmax), s	21.0	10.1		15.7		35.1						
Max Q Clear Time (g_c+I1), s	13.6	3.6		8.1		3.1						
Green Ext Time (p_c), s	0.1	0.2		0.2		0.9						
Intersection Summary												
HCM 6th Ctrl Delay			16.5									
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)	30	410	0	0	370	270	70	0	250	0	0	0
Future Volume (veh/h)	30	410	0	0	370	270	70	0	250	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1352	1352	0	0	1352	1352	1352	1352	1352			
Adj Flow Rate, veh/h	34	471	0	0	425	0	80	0	2			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87			
Percent Heavy Veh, %	37	37	0	0	37	37	37	37	37			
Cap, veh/h	53	1552	0	0	577		107	0	95			
Arrive On Green	0.04	0.60	0.00	0.00	0.43	0.00	0.08	0.00	0.08			
Sat Flow, veh/h	1287	2636	0	0	1352	0	1287	0	1145			
Grp Volume(v), veh/h	34	471	0	0	425	0	80	0	2			
Grp Sat Flow(s),veh/h/ln	1287	1284	0	0	1352	0	1287	0	1145			
Q Serve(g_s), s	0.8	2.6	0.0	0.0	7.7	0.0	1.8	0.0	0.0			
Cycle Q Clear(g_c), s	0.8	2.6	0.0	0.0	7.7	0.0	1.8	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	53	1552	0	0	577		107	0	95			
V/C Ratio(X)	0.64	0.30	0.00	0.00	0.74		0.75	0.00	0.02			
Avail Cap(c_a), veh/h	219	5449	0	0	2454		805	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	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	13.9	2.8	0.0	0.0	7.0	0.0	13.2	0.0	12.4			
Incr Delay (d2), s/veh	4.7	0.1	0.0	0.0	1.9	0.0	3.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.0	1.1	0.0	0.4	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	2.9	0.0	0.0	8.9	0.0	17.1	0.0	12.4			
LnGrp LOS	B	A	A	A	A		B	A	B			
Approach Vol, veh/h		505			425			82				
Approach Delay, s/veh		4.0			8.9			17.0				
Approach LOS		A			A			B				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		22.4			5.2	17.2		7.0				
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6				
Max Green Setting (Gmax), s		62.4			5.0	53.4		18.4				
Max Q Clear Time (g_c+I1), s		4.6			2.8	9.7		3.8				
Green Ext Time (p_c), s		3.4			0.0	2.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		7.1
HCM 6th LOS		A

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)	100	180	70	10	230	20	80	350	10	10	300	190
Future Volume (veh/h)	100	180	70	10	230	20	80	350	10	10	300	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1811	1604	1811	1811	1811	1604	1604	1811	1811	1604	1604
Adj Flow Rate, veh/h	106	196	27	11	250	20	85	372	11	11	319	54
Peak Hour Factor	0.94	0.92	0.94	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.94	0.94
Percent Heavy Veh, %	20	6	20	6	6	6	20	20	6	6	20	20
Cap, veh/h	134	1032	408	24	328	26	101	837	25	24	685	305
Arrive On Green	0.09	0.30	0.30	0.01	0.20	0.20	0.07	0.28	0.28	0.01	0.22	0.22
Sat Flow, veh/h	1527	3441	1359	1725	1655	132	1527	3022	89	1725	3047	1359
Grp Volume(v), veh/h	106	196	27	11	0	270	85	187	196	11	319	54
Grp Sat Flow(s),veh/h/ln	1527	1721	1359	1725	0	1787	1527	1523	1588	1725	1523	1359
Q Serve(g_s), s	3.6	2.2	0.8	0.3	0.0	7.6	2.9	5.4	5.4	0.3	4.8	1.7
Cycle Q Clear(g_c), s	3.6	2.2	0.8	0.3	0.0	7.6	2.9	5.4	5.4	0.3	4.8	1.7
Prop In Lane	1.00		1.00	1.00		0.07	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	134	1032	408	24	0	354	101	422	440	24	685	305
V/C Ratio(X)	0.79	0.19	0.07	0.45	0.00	0.76	0.84	0.44	0.45	0.45	0.47	0.18
Avail Cap(c_a), veh/h	919	2913	1150	162	0	605	115	974	1015	162	2006	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	23.8	13.8	13.3	26.0	0.0	20.1	24.5	15.8	15.9	26.0	17.8	16.6
Incr Delay (d2), s/veh	10.0	0.1	0.1	12.6	0.0	3.4	38.8	2.6	2.6	12.6	1.8	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	1.6	0.8	0.2	0.2	0.0	3.2	2.0	1.7	1.8	0.2	1.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	13.9	13.4	38.6	0.0	23.6	63.4	18.5	18.4	38.6	19.6	17.6
LnGrp LOS	C	B	B	D	A	C	E	B	B	D	B	B
Approach Vol, veh/h		329			281			468			384	
Approach Delay, s/veh		20.3			24.1			26.6			19.9	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	17.9	5.2	21.9	5.2	20.7	10.7	16.5
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	6.0	* 6
Max Green Setting (Gmax), s	4.0	35.0	5.0	45.0	5.0	34.0	32.0	* 18
Max Q Clear Time (g_c+I1), s	4.9	6.8	2.3	4.2	2.3	7.4	5.6	9.6
Green Ext Time (p_c), s	0.0	5.1	0.0	1.4	0.0	5.1	0.3	1.0

Intersection Summary	
HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

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)	0	1680	370	290	1750	0	0	0	0	230	0	370
Future Volume (veh/h)	0	1680	370	290	1750	0	0	0	0	230	0	370
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	0				1811	1811	1811
Adj Flow Rate, veh/h	0	1909	231	330	1989	0				261	0	328
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	6	6	6	6	0				6	6	6
Cap, veh/h	0	2225	675	354	2472	0				470	0	418
Arrive On Green	0.00	0.45	0.45	0.21	0.72	0.00				0.14	0.00	0.14
Sat Flow, veh/h	0	5107	1500	1725	3532	0				3450	0	3070
Grp Volume(v), veh/h	0	1909	231	330	1989	0				261	0	328
Grp Sat Flow(s),veh/h/ln	0	1648	1500	1725	1721	0				1725	0	1535
Q Serve(g_s), s	0.0	21.9	6.3	11.9	24.4	0.0				4.5	0.0	6.5
Cycle Q Clear(g_c), s	0.0	21.9	6.3	11.9	24.4	0.0				4.5	0.0	6.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2225	675	354	2472	0				470	0	418
V/C Ratio(X)	0.00	0.86	0.34	0.93	0.80	0.00				0.56	0.00	0.78
Avail Cap(c_a), veh/h	0	2295	696	354	2521	0				512	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.6	11.3	24.7	5.9	0.0				25.6	0.0	26.5
Incr Delay (d2), s/veh	0.0	3.4	0.3	30.5	1.9	0.0				0.5	0.0	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.0	1.7	7.2	4.0	0.0				1.7	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.0	11.6	55.2	7.9	0.0				26.0	0.0	33.5
LnGrp LOS	A	B	B	E	A	A				C	A	C
Approach Vol, veh/h		2140			2319						589	
Approach Delay, s/veh		18.2			14.6						30.2	
Approach LOS		B			B						C	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	17.0	33.1	13.2	50.1
Change Period (Y+Rc), s	4.0	4.6	4.6	4.6
Max Green Setting (Gmax), s	13.0	29.4	9.4	46.4
Max Q Clear Time (g_c+I1), s	13.9	23.9	8.5	26.4
Green Ext Time (p_c), s	0.0	4.6	0.1	13.9

Intersection Summary	
HCM 6th Ctrl Delay	17.9
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)	660	1250	0	0	1510	250	530	0	230	0	0	0
Future Volume (veh/h)	660	1250	0	0	1510	250	530	0	230	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1811	1811	0	0	1811	1811	1811	1811	1811			
Adj Flow Rate, veh/h	750	1420	0	0	1716	244	602	0	120			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	6	6	0	0	6	6	6	6	6			
Cap, veh/h	700	2546	0	0	1702	730	608	0	541			
Arrive On Green	0.21	0.74	0.00	0.00	0.49	0.49	0.18	0.00	0.18			
Sat Flow, veh/h	3346	3532	0	0	3532	1476	3450	0	3070			
Grp Volume(v), veh/h	750	1420	0	0	1716	244	602	0	120			
Grp Sat Flow(s),veh/h/ln	1673	1721	0	0	1721	1476	1725	0	1535			
Q Serve(g_s), s	23.0	20.1	0.0	0.0	54.4	11.0	19.2	0.0	3.7			
Cycle Q Clear(g_c), s	23.0	20.1	0.0	0.0	54.4	11.0	19.2	0.0	3.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	700	2546	0	0	1702	730	608	0	541			
V/C Ratio(X)	1.07	0.56	0.00	0.00	1.01	0.33	0.99	0.00	0.22			
Avail Cap(c_a), veh/h	700	2546	0	0	1702	730	608	0	541			
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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	43.5	6.3	0.0	0.0	27.8	16.8	45.2	0.0	38.8			
Incr Delay (d2), s/veh	55.0	0.3	0.0	0.0	23.9	0.2	33.7	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	14.4	5.4	0.0	0.0	25.6	3.5	10.7	0.0	1.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.5	6.6	0.0	0.0	51.7	17.1	78.9	0.0	38.9			
LnGrp LOS	F	A	A	A	F	B	E	A	D			
Approach Vol, veh/h		2170			1960			722				
Approach Delay, s/veh		38.3			47.4			72.2				
Approach LOS		D			D			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.0			27.0	59.0		24.0				
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6				
Max Green Setting (Gmax), s		81.4			23.0	54.4		19.4				
Max Q Clear Time (g_c+I1), s		22.1			25.0	56.4		21.2				
Green Ext Time (p_c), s		13.1			0.0	0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			47.0									
HCM 6th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1330	150	0	1640	0	0	0	20	0	0	120
Future Vol, veh/h	0	1330	150	0	1640	0	0	0	20	0	0	120
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	1511	170	0	1864	0	0	0	23	0	0	136

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	843	-	-	932
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.02	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.36	-	-	3.36
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	299	0	0	261
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	298	-	-	261
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	18.1	33
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	298	-	-	-	261
HCM Lane V/C Ratio	0.076	-	-	-	0.522
HCM Control Delay (s)	18.1	-	-	-	33
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑		↰	↑↑		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	280	930	160	80	1130	70	240	120	100	80	100	200
Future Volume (veh/h)	280	930	160	80	1130	70	240	120	100	80	100	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	318	1057	173	91	1284	77	273	136	8	91	114	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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	299	1590	260	113	1414	85	271	618	36	113	329	0
Arrive On Green	0.17	0.54	0.54	0.07	0.43	0.43	0.16	0.19	0.19	0.07	0.10	0.00
Sat Flow, veh/h	1725	2960	483	1725	3295	197	1725	3302	193	1725	3532	0
Grp Volume(v), veh/h	318	614	616	91	669	692	273	70	74	91	114	0
Grp Sat Flow(s),veh/h/ln	1725	1721	1723	1725	1721	1771	1725	1721	1775	1725	1721	0
Q Serve(g_s), s	21.5	31.9	32.0	6.5	45.1	45.4	19.5	4.3	4.4	6.5	3.8	0.0
Cycle Q Clear(g_c), s	21.5	31.9	32.0	6.5	45.1	45.4	19.5	4.3	4.4	6.5	3.8	0.0
Prop In Lane	1.00		0.28	1.00		0.11	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	299	924	925	113	739	760	271	322	332	113	329	0
V/C Ratio(X)	1.06	0.66	0.67	0.81	0.91	0.91	1.01	0.22	0.22	0.81	0.35	0.00
Avail Cap(c_a), veh/h	299	924	925	132	755	778	271	561	579	215	1012	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.3	20.7	20.7	57.2	33.1	33.2	52.3	42.8	42.8	57.3	52.5	0.0
Incr Delay (d2), s/veh	70.2	2.4	2.4	27.4	15.2	15.3	56.7	0.7	0.7	5.1	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	14.8	12.4	12.5	3.6	20.8	21.5	12.5	1.9	2.0	2.9	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	121.5	23.1	23.2	84.7	48.3	48.4	109.0	43.5	43.5	62.3	53.9	0.0
LnGrp LOS	F	C	C	F	D	D	F	D	D	E	D	A
Approach Vol, veh/h		1548			1452			417			205	
Approach Delay, s/veh		43.3			50.6			86.4			57.6	
Approach LOS		D			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	71.2	24.0	16.4	26.0	57.8	12.6	27.7
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	9.5	66.5	19.5	36.5	21.5	54.5	15.5	40.5
Max Q Clear Time (g_c+I1), s	8.5	34.0	21.5	5.8	23.5	47.4	8.5	6.4
Green Ext Time (p_c), s	0.0	18.0	0.0	1.1	0.0	5.9	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

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)	70	790	150	200	1010	130	280	300	230	80	270	60
Future Volume (veh/h)	70	790	150	200	1010	130	280	300	230	80	270	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	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	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	80	908	77	230	1161	62	322	345	103	92	310	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, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	101	1220	544	215	1448	637	324	713	313	194	579	255
Arrive On Green	0.06	0.36	0.36	0.13	0.43	0.43	0.10	0.21	0.21	0.06	0.17	0.17
Sat Flow, veh/h	1697	3385	1510	1697	3385	1490	3291	3385	1488	3291	3385	1490
Grp Volume(v), veh/h	80	908	77	230	1161	62	322	345	103	92	310	7
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1490	1646	1692	1488	1646	1692	1490
Q Serve(g_s), s	3.3	16.7	2.4	9.0	21.2	1.8	6.9	6.4	4.2	1.9	5.9	0.3
Cycle Q Clear(g_c), s	3.3	16.7	2.4	9.0	21.2	1.8	6.9	6.4	4.2	1.9	5.9	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	101	1220	544	215	1448	637	324	713	313	194	579	255
V/C Ratio(X)	0.80	0.74	0.14	1.07	0.80	0.10	0.99	0.48	0.33	0.47	0.54	0.03
Avail Cap(c_a), veh/h	119	1366	609	215	1557	685	324	1443	634	278	1333	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	19.9	15.3	31.0	17.7	12.1	32.0	24.7	23.8	32.4	26.9	24.5
Incr Delay (d2), s/veh	26.1	2.7	0.3	81.4	3.5	0.1	48.1	0.8	1.0	1.8	1.2	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	2.0	6.1	0.8	8.2	7.5	0.5	4.7	2.4	1.4	0.8	2.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	22.5	15.6	112.5	21.2	12.3	80.2	25.5	24.8	34.2	28.1	24.6
LnGrp LOS	E	C	B	F	C	B	F	C	C	C	C	C
Approach Vol, veh/h		1065			1453			770			409	
Approach Delay, s/veh		24.8			35.3			48.2			29.4	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	29.6	8.2	20.3	8.2	34.4	11.0	17.5
Change Period (Y+Rc), s	4.0	4.0	4.0	* 5.3	4.0	4.0	4.0	5.3
Max Green Setting (Gmax), s	9.0	28.7	6.0	* 30	5.0	32.7	7.0	28.0
Max Q Clear Time (g_c+I1), s	11.0	18.7	3.9	8.4	5.3	23.2	8.9	7.9
Green Ext Time (p_c), s	0.0	6.4	0.0	3.7	0.0	7.2	0.0	2.6

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.

Intersection	
Int Delay, s/veh	42.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	90	1200	1200	20	40	110
Future Vol, veh/h	90	1200	1200	20	40	110
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	7	7	7	7	7	7
Mvmt Flow	105	1395	1395	23	47	128

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1419	0	-	0	2316	710
Stage 1	-	-	-	-	1408	-
Stage 2	-	-	-	-	908	-
Critical Hdwy	4.24	-	-	-	6.94	7.04
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.27	-	-	-	3.57	3.37
Pot Cap-1 Maneuver	451	-	-	-	~ 30	365
Stage 1	-	-	-	-	183	-
Stage 2	-	-	-	-	342	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	451	-	-	-	~ 23	365
Mov Cap-2 Maneuver	-	-	-	-	~ 23	-
Stage 1	-	-	-	-	140	-
Stage 2	-	-	-	-	342	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	$ 739.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	451	-	-	-	74
HCM Lane V/C Ratio	0.232	-	-	-	2.357
HCM Control Delay (s)	15.4	-	-	-	$ 739.5
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.9	-	-	-	16.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1370	100	140	1370	40	80	10	160	20	20	5
Future Volume (veh/h)	20	1370	100	140	1370	40	80	10	160	20	20	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	22	1539	42	157	1539	43	90	11	7	22	22	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	45	2166	658	199	1803	50	120	72	46	45	47	0
Arrive On Green	0.03	0.44	0.44	0.12	0.53	0.53	0.07	0.07	0.07	0.03	0.03	0.00
Sat Flow, veh/h	1725	4944	1503	1725	3417	95	1725	1034	658	1725	1811	0
Grp Volume(v), veh/h	22	1539	42	157	773	809	90	0	18	22	22	0
Grp Sat Flow(s),veh/h/ln	1725	1648	1503	1725	1721	1791	1725	0	1693	1725	1811	0
Q Serve(g_s), s	0.7	13.4	0.9	4.7	20.3	20.5	2.7	0.0	0.5	0.7	0.6	0.0
Cycle Q Clear(g_c), s	0.7	13.4	0.9	4.7	20.3	20.5	2.7	0.0	0.5	0.7	0.6	0.0
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.39	1.00		0.00
Lane Grp Cap(c), veh/h	45	2166	658	199	908	945	120	0	118	45	47	0
V/C Ratio(X)	0.49	0.71	0.06	0.79	0.85	0.86	0.75	0.00	0.15	0.49	0.47	0.00
Avail Cap(c_a), veh/h	167	3562	1083	441	1553	1617	402	0	963	164	779	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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.3	12.1	8.6	22.7	10.7	10.7	24.1	0.0	23.1	25.3	25.3	0.0
Incr Delay (d2), s/veh	3.0	0.2	0.0	2.6	0.9	0.9	3.5	0.0	0.2	3.0	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	0.3	3.5	0.2	1.8	5.0	5.2	1.1	0.0	0.2	0.3	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	12.3	8.6	25.3	11.6	11.6	27.6	0.0	23.3	28.4	27.9	0.0
LnGrp LOS	C	B	A	C	B	B	C	A	C	C	C	A
Approach Vol, veh/h		1603			1739			108			44	
Approach Delay, s/veh		12.4			12.8			26.9			28.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	33.5	5.5	8.3	10.2	28.8	7.8	6.0
Change Period (Y+Rc), s	4.1	* 5.7	4.1	4.6	4.1	5.7	4.1	4.6
Max Green Setting (Gmax), s	5.1	* 48	5.0	30.0	13.5	38.0	12.3	22.7
Max Q Clear Time (g_c+I1), s	2.7	22.5	2.7	2.5	6.7	15.4	4.7	2.6
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.1	7.7	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.3
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	1420	130	100	800	60	290	0	370	50	300	460
Future Volume (veh/h)	0	1420	130	100	800	60	290	0	370	50	300	460
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	1811	1811	0	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	1596	53	112	899	27	326	0	416	56	337	406
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	6	6	6	6	6	6	0	6	6	6	6
Cap, veh/h	0	1714	583	138	1603	700	298	0	0	72	763	599
Arrive On Green	0.00	0.38	0.38	0.04	0.47	0.47	0.17	0.00	0.00	0.04	0.22	0.22
Sat Flow, veh/h	0	4781	1516	3346	3441	1502	1725	326		1725	3441	2701
Grp Volume(v), veh/h	0	1596	53	112	899	27	326	130.4		56	337	406
Grp Sat Flow(s),veh/h/ln	0	1485	1516	1673	1721	1502	1725	F		1725	1721	1351
Q Serve(g_s), s	0.0	42.3	2.7	4.1	23.3	1.2	21.3			4.0	10.4	17.0
Cycle Q Clear(g_c), s	0.0	42.3	2.7	4.1	23.3	1.2	21.3			4.0	10.4	17.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00			1.00		1.00
Lane Grp Cap(c), veh/h	0	1714	583	138	1603	700	298			72	763	599
V/C Ratio(X)	0.00	0.93	0.09	0.81	0.56	0.04	1.09			0.78	0.44	0.68
Avail Cap(c_a), veh/h	0	1724	587	138	1606	701	298			147	1368	1074
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	36.3	24.2	58.6	23.8	17.9	51.0			58.5	41.4	43.9
Incr Delay (d2), s/veh	0.0	9.9	0.1	30.4	0.7	0.0	79.5			24.4	0.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.1	1.0	2.3	9.1	0.4	15.5			2.2	4.4	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	46.2	24.3	89.0	24.5	17.9	130.4			82.9	42.3	46.9
LnGrp LOS	A	D	C	F	C	B	F			F	D	D
Approach Vol, veh/h		1649			1038						799	
Approach Delay, s/veh		45.5			31.3						47.5	
Approach LOS		D			C						D	

Timer - Assigned Phs	1	2	3	4		6	7
Phs Duration (G+Y+Rc), s	10.0	53.4	26.0	33.8		63.4	9.8
Change Period (Y+Rc), s	4.9	* 6	* 4.7	6.5		6.0	* 4.7
Max Green Setting (Gmax), s	5.1	* 48	* 21	49.0		57.5	* 11
Max Q Clear Time (g_c+I1), s	6.1	44.3	23.3	19.0		25.3	6.0
Green Ext Time (p_c), s	0.0	3.1	0.0	8.4		12.7	0.1

Intersection Summary		
HCM 6th Ctrl Delay		49.3
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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	310	790	80	360	600	20
Future Volume (veh/h)	310	790	80	360	600	20
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	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	348	0	90	404	674	5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	914		140	1558	845	388
Arrive On Green	0.27	0.00	0.08	0.45	0.25	0.25
Sat Flow, veh/h	3532	1535	1725	3532	3346	1535
Grp Volume(v), veh/h	348	0	90	404	674	5
Grp Sat Flow(s),veh/h/ln	1721	1535	1725	1721	1673	1535
Q Serve(g_s), s	3.1	0.0	1.9	2.7	7.1	0.1
Cycle Q Clear(g_c), s	3.1	0.0	1.9	2.7	7.1	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	914		140	1558	845	388
V/C Ratio(X)	0.38		0.64	0.26	0.80	0.01
Avail Cap(c_a), veh/h	1398		229	2184	1777	815
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	11.3	0.0	16.8	6.4	13.2	10.6
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.0	0.7	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	0.8	0.0	0.6	0.5	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.4	0.0	18.6	6.4	13.8	10.6
LnGrp LOS	B		B	A	B	B
Approach Vol, veh/h	348			494	679	
Approach Delay, s/veh	11.4			8.6	13.8	
Approach LOS	B			A	B	

Timer - Assigned Phs	1	2	6	8
Phs Duration (G+Y+Rc), s	7.0	16.2	23.2	14.4
Change Period (Y+Rc), s	4.0	* 6.2	6.2	4.9
Max Green Setting (Gmax), s	5.0	* 15	23.9	20.0
Max Q Clear Time (g_c+I1), s	3.9	5.1	4.7	9.1
Green Ext Time (p_c), s	0.0	0.3	0.4	0.4

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

Notes

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

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)	5	5	5	30	20	60	5	400	30	40	360	5
Future Volume (veh/h)	5	5	5	30	20	60	5	400	30	40	360	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		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	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693
Adj Flow Rate, veh/h	6	6	0	34	23	0	6	455	14	45	409	5
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, %	14	14	14	14	14	14	14	14	14	14	14	14
Cap, veh/h	13	13	23	100	105	89	16	979	437	161	1126	14
Arrive On Green	0.02	0.02	0.00	0.06	0.06	0.00	0.01	0.30	0.30	0.05	0.35	0.35
Sat Flow, veh/h	826	826	1434	1612	1693	1434	1612	3216	1434	3127	3253	40
Grp Volume(v), veh/h	12	0	0	34	23	0	6	455	14	45	202	212
Grp Sat Flow(s),veh/h/ln	1651	0	1434	1612	1693	1434	1612	1608	1434	1564	1608	1684
Q Serve(g_s), s	0.2	0.0	0.0	0.6	0.4	0.0	0.1	3.6	0.2	0.4	3.0	3.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.6	0.4	0.0	0.1	3.6	0.2	0.4	3.0	3.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	26	0	23	100	105	89	16	979	437	161	557	583
V/C Ratio(X)	0.46	0.00	0.00	0.34	0.22	0.00	0.38	0.46	0.03	0.28	0.36	0.36
Avail Cap(c_a), veh/h	1558	0	1353	1531	1607	1362	314	3671	1637	541	1800	1886
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	0.0	0.0	14.3	14.2	0.0	15.6	9.0	7.8	14.5	7.8	7.8
Incr Delay (d2), s/veh	4.6	0.0	0.0	0.7	0.4	0.0	5.6	0.5	0.0	0.3	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.2	0.1	0.0	0.1	0.6	0.0	0.1	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.1	0.0	0.0	15.0	14.6	0.0	21.2	9.5	7.8	14.9	8.3	8.3
LnGrp LOS	C	A	A	B	B	A	C	A	A	B	A	A
Approach Vol, veh/h		12			57			475			459	
Approach Delay, s/veh		20.1			14.8			9.6			9.0	
Approach LOS		C			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	14.2		5.0	4.8	15.5		6.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	36.3		30.0	6.2	35.6		30.2
Max Q Clear Time (g_c+I1), s	2.4	5.6		2.2	2.1	5.0		2.6
Green Ext Time (p_c), s	0.0	4.0		0.0	0.0	3.2		0.1

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

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	50	20	430	20	5	310
Future Volume (veh/h)	50	20	430	20	5	310
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	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	1722	1722	1722	1722	1722	1722
Adj Flow Rate, veh/h	61	0	524	18	6	378
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	12	12	12	12	12	12
Cap, veh/h	112	0	1278	44	16	1901
Arrive On Green	0.07	0.00	0.40	0.40	0.01	0.58
Sat Flow, veh/h	1615	0	3312	111	1640	3358
Grp Volume(v), veh/h	62	0	265	277	6	378
Grp Sat Flow(s),veh/h/ln	1641	0	1636	1701	1640	1636
Q Serve(g_s), s	0.9	0.0	3.0	3.0	0.1	1.4
Cycle Q Clear(g_c), s	0.9	0.0	3.0	3.0	0.1	1.4
Prop In Lane	0.98	0.00		0.07	1.00	
Lane Grp Cap(c), veh/h	114	0	648	674	16	1901
V/C Ratio(X)	0.54	0.00	0.41	0.41	0.37	0.20
Avail Cap(c_a), veh/h	1371	0	1493	1552	414	4385
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	11.6	0.0	5.6	5.6	12.7	2.6
Incr Delay (d2), s/veh	4.0	0.0	0.9	0.9	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	0.4	0.0	0.4	0.4	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.6	0.0	6.5	6.5	26.4	2.7
LnGrp LOS	B	A	A	A	C	A
Approach Vol, veh/h	62		542			384
Approach Delay, s/veh	15.6		6.5			3.0
Approach LOS	B		A			A

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	4.8	14.7		6.3		19.5
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	6.5	23.5		21.5		34.5
Max Q Clear Time (g_c+I1), s	2.1	5.0		2.9		3.4
Green Ext Time (p_c), s	0.0	5.2		0.1		4.4

Intersection Summary		
HCM 6th Ctrl Delay		5.7
HCM 6th LOS		A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	1.3					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	5	5	70	40	10
Future Vol, veh/h	10	5	5	70	40	10
Conflicting Peds, #/hr	0	0	1	0	0	1
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	89	89	89	89	89	89
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	11	6	6	79	45	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	143	52	57	0	-	0
Stage 1	52	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.49	6.29	4.19	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.381	2.281	-	-	-
Pot Cap-1 Maneuver	833	996	1504	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	915	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	828	995	1503	-	-	-
Mov Cap-2 Maneuver	828	-	-	-	-	-
Stage 1	948	-	-	-	-	-
Stage 2	914	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1503	-	877	-	-
HCM Lane V/C Ratio	0.004	-	0.019	-	-
HCM Control Delay (s)	7.4	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	140	20	20	350	30	20	5	20	70	40	140
Future Volume (veh/h)	120	140	20	20	350	30	20	5	20	70	40	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	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	133	156	22	22	389	23	22	6	0	78	44	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	181	529	75	77	889	52	50	14	0	116	65	158
Arrive On Green	0.11	0.37	0.37	0.05	0.29	0.29	0.04	0.04	0.00	0.11	0.11	0.11
Sat Flow, veh/h	1584	1426	201	1584	3032	179	1257	343	0	1030	581	1409
Grp Volume(v), veh/h	133	0	178	22	202	210	28	0	0	122	0	6
Grp Sat Flow(s),veh/h/ln	1584	0	1627	1584	1580	1631	1600	0	0	1611	0	1409
Q Serve(g_s), s	3.3	0.0	3.2	0.5	4.2	4.3	0.7	0.0	0.0	3.0	0.0	0.2
Cycle Q Clear(g_c), s	3.3	0.0	3.2	0.5	4.2	4.3	0.7	0.0	0.0	3.0	0.0	0.2
Prop In Lane	1.00		0.12	1.00		0.11	0.79		0.00	0.64		1.00
Lane Grp Cap(c), veh/h	181	0	604	77	463	478	64	0	0	181	0	158
V/C Ratio(X)	0.73	0.00	0.29	0.29	0.44	0.44	0.44	0.00	0.00	0.67	0.00	0.04
Avail Cap(c_a), veh/h	271	0	604	484	568	586	270	0	0	528	0	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	9.1	18.8	11.7	11.7	19.2	0.0	0.0	17.4	0.0	16.2
Incr Delay (d2), s/veh	5.7	0.0	0.4	2.0	1.0	1.0	4.7	0.0	0.0	4.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.7	0.2	1.1	1.1	0.3	0.0	0.0	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.2	0.0	9.5	20.8	12.7	12.7	23.8	0.0	0.0	21.7	0.0	16.3
LnGrp LOS	C	A	A	C	B	B	C	A	A	C	A	B
Approach Vol, veh/h		311			434			28			128	
Approach Delay, s/veh		15.4			13.1			23.8			21.5	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	19.7		9.1	9.2	16.5		6.1				
Change Period (Y+Rc), s	4.0	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	9.7		13.4	7.0	14.7		6.9				
Max Q Clear Time (g_c+I1), s	2.5	5.2		5.0	5.3	6.3		2.7				
Green Ext Time (p_c), s	0.0	0.4		0.3	0.0	1.9		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			15.4									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	120	20	5	210	160	20	30	5	30	0	170
Future Volume (veh/h)	90	120	20	5	210	160	20	30	5	30	0	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	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	100	133	14	6	233	137	22	33	0	33	0	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	161	590	62	18	302	178	53	79	0	75	0	67
Arrive On Green	0.10	0.40	0.40	0.01	0.31	0.31	0.08	0.08	0.00	0.05	0.00	0.05
Sat Flow, veh/h	1584	1479	156	1584	982	577	652	978	0	1584	0	1409
Grp Volume(v), veh/h	100	0	147	6	0	370	55	0	0	33	0	1
Grp Sat Flow(s),veh/h/ln	1584	0	1635	1584	0	1559	1630	0	0	1584	0	1409
Q Serve(g_s), s	2.4	0.0	2.3	0.1	0.0	8.4	1.3	0.0	0.0	0.8	0.0	0.0
Cycle Q Clear(g_c), s	2.4	0.0	2.3	0.1	0.0	8.4	1.3	0.0	0.0	0.8	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.37	0.40		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	0	652	18	0	480	131	0	0	75	0	67
V/C Ratio(X)	0.62	0.00	0.23	0.34	0.00	0.77	0.42	0.00	0.00	0.44	0.00	0.01
Avail Cap(c_a), veh/h	321	0	652	358	0	652	347	0	0	386	0	344
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	7.7	19.1	0.0	12.2	17.0	0.0	0.0	18.0	0.0	17.7
Incr Delay (d2), s/veh	1.4	0.0	0.1	4.0	0.0	2.5	0.8	0.0	0.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.4	0.1	0.0	2.6	0.4	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	0.0	7.8	23.1	0.0	14.7	17.8	0.0	0.0	19.5	0.0	17.7
LnGrp LOS	B	A	A	C	A	B	B	A	A	B	A	B
Approach Vol, veh/h		247			376			55			34	
Approach Delay, s/veh		12.0			14.9			17.8			19.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	20.0		6.3	8.5	16.5		7.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	8.8	15.4		9.5	7.9	16.3		8.3
Max Q Clear Time (g_c+I1), s	2.1	4.3		2.8	4.4	10.4		3.3
Green Ext Time (p_c), s	0.0	0.1		0.0	0.0	0.5		0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Intersection						
Int Delay, s/veh	0.1					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	535	25	0	445
Future Vol, veh/h	0	5	535	25	0	445
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	5	582	27	0	484

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	305	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.02	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.36	-	-	-	-
Pot Cap-1 Maneuver	0	679	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	679	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	679	-
HCM Lane V/C Ratio	-	-	0.008	-
HCM Control Delay (s)	-	-	10.3	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection						
Int Delay, s/veh	0					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	540	0	0	445
Future Vol, veh/h	0	0	540	0	0	445
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	-	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	587	0	0	484

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	829	294	0	0	587	0
Stage 1	587	-	-	-	-	-
Stage 2	242	-	-	-	-	-
Critical Hdwy	6.92	7.02	-	-	4.22	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	-	-	2.26	-
Pot Cap-1 Maneuver	301	691	-	-	957	-
Stage 1	508	-	-	-	-	-
Stage 2	764	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	301	691	-	-	957	-
Mov Cap-2 Maneuver	301	-	-	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	764	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	957	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	540	0	0	310
Future Vol, veh/h	0	0	540	0	0	310
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	-	-	-	300	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	587	0	0	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	756	294	0	0	587	0
Stage 1	587	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.92	7.02	-	-	4.22	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	-	-	2.26	-
Pot Cap-1 Maneuver	336	691	-	-	957	-
Stage 1	508	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	336	691	-	-	957	-
Mov Cap-2 Maneuver	336	-	-	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	832	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	957	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	80	50	0
Future Vol, veh/h	0	0	0	80	50	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	120	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	0	87	54	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	141	54	54	0	-	0
Stage 1	54	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.254	-	-	-
Pot Cap-1 Maneuver	843	1002	1526	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	843	1002	1526	-	-	-
Mov Cap-2 Maneuver	843	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	926	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1526	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	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
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	1	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	3
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0	0
Geometry Grp	8	8	7	7	7	8	8
Degree of Util (X)	0	0	0	0	0	0	0
Departure Headway (Hd)	4.602	4.602	4.602	4.602	4.602	4.602	4.602
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0	0
Service Time	2.302	2.302	2.302	2.302	2.302	2.302	2.302
HCM Lane V/C Ratio	0	0	0	0	0	0	0
HCM Control Delay	7.3	7.3	7.3	7.3	7.3	7.3	7.3
HCM Lane LOS	N	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1350	0	0	1570	0	0	0	0	0	0	70
Future Vol, veh/h	0	1350	0	0	1570	0	0	0	0	0	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	1467	0	0	1707	0	0	0	0	0	0	76

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	-	-	-	0	-	-	734	-	-	854
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.22	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.96	-	-	3.36
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	304	0	0	294
Stage 1	0	-	0	0	-	0	0	0	-	0	0	-
Stage 2	0	-	0	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-			-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	304	-	-	294
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	21.5
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-	294
HCM Lane V/C Ratio	-	-	-	0.259
HCM Control Delay (s)	0	-	-	21.5
HCM Lane LOS	A	-	-	C
HCM 95th %tile Q(veh)	-	-	-	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	480	210	80	290	160	120
Future Volume (veh/h)	480	210	80	290	160	120
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	1737	1737	1737	1737	1737	1737
Adj Flow Rate, veh/h	511	112	85	309	170	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	11	11	11	11	11	11
Cap, veh/h	760	644	123	1051	344	306
Arrive On Green	0.44	0.44	0.07	0.61	0.21	0.21
Sat Flow, veh/h	1737	1472	1654	1737	1654	1472
Grp Volume(v), veh/h	511	112	85	309	170	16
Grp Sat Flow(s),veh/h/ln	1737	1472	1654	1737	1654	1472
Q Serve(g_s), s	10.0	2.0	2.1	3.7	3.9	0.4
Cycle Q Clear(g_c), s	10.0	2.0	2.1	3.7	3.9	0.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	760	644	123	1051	344	306
V/C Ratio(X)	0.67	0.17	0.69	0.29	0.49	0.05
Avail Cap(c_a), veh/h	1136	962	270	1582	502	447
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	9.6	7.3	19.3	4.1	15.0	13.6
Incr Delay (d2), s/veh	3.7	0.5	6.8	0.6	4.0	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	2.7	0.4	0.9	0.4	1.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.3	7.8	26.1	4.6	18.9	13.8
LnGrp LOS	B	A	C	A	B	B
Approach Vol, veh/h	623			394	186	
Approach Delay, s/veh	12.3			9.3	18.5	
Approach LOS	B			A	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.2	22.7		12.9		29.9
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	7.0	28.0		13.0		39.0
Max Q Clear Time (g_c+I1), s	4.1	12.0		5.9		5.7
Green Ext Time (p_c), s	0.0	6.7		0.8		4.5
Intersection Summary						
HCM 6th Ctrl Delay			12.3			
HCM 6th LOS			B			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	110	140	10	40	10	60	230	10	10	290	5
Future Volume (veh/h)	60	110	140	10	40	10	60	230	10	10	290	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	1781	1811	1781	1811	1811	1811	1781	1781	1811	1811	1781	1781
Adj Flow Rate, veh/h	67	120	29	11	43	1	67	258	3	11	326	2
Peak Hour Factor	0.89	0.92	0.89	0.92	0.92	0.92	0.89	0.89	0.92	0.92	0.89	0.89
Percent Heavy Veh, %	8	6	8	6	6	6	8	8	6	6	8	8
Cap, veh/h	194	771	338	25	427	191	111	534	460	25	443	376
Arrive On Green	0.11	0.22	0.22	0.01	0.12	0.12	0.07	0.30	0.30	0.01	0.25	0.25
Sat Flow, veh/h	1697	3441	1510	1725	3441	1535	1697	1781	1535	1725	1781	1510
Grp Volume(v), veh/h	67	120	29	11	43	1	67	258	3	11	326	2
Grp Sat Flow(s),veh/h/ln	1697	1721	1510	1725	1721	1535	1697	1781	1535	1725	1781	1510
Q Serve(g_s), s	1.5	1.1	0.6	0.3	0.4	0.0	1.5	4.8	0.1	0.3	6.8	0.0
Cycle Q Clear(g_c), s	1.5	1.1	0.6	0.3	0.4	0.0	1.5	4.8	0.1	0.3	6.8	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	194	771	338	25	427	191	111	534	460	25	443	376
V/C Ratio(X)	0.35	0.16	0.09	0.44	0.10	0.01	0.60	0.48	0.01	0.44	0.74	0.01
Avail Cap(c_a), veh/h	759	2966	1301	214	1855	827	265	987	850	214	929	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	12.6	12.4	19.7	15.6	15.5	18.3	11.5	9.9	19.7	13.9	11.4
Incr Delay (d2), s/veh	1.1	0.1	0.1	11.9	0.1	0.0	5.2	0.7	0.0	11.9	2.4	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	0.5	0.3	0.1	0.2	0.2	0.0	0.6	1.2	0.0	0.2	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	12.6	12.5	31.6	15.7	15.5	23.5	12.2	9.9	31.6	16.3	11.4
LnGrp LOS	B	B	B	C	B	B	C	B	A	C	B	B
Approach Vol, veh/h		216			55			328			339	
Approach Delay, s/veh		14.1			18.9			14.5			16.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	13.5	7.1	14.5	9.1	9.5	5.1	16.6
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	5.0	34.7	6.3	21.0	18.0	21.7	5.0	22.3
Max Q Clear Time (g_c+I1), s	2.3	3.1	3.5	8.8	3.5	2.4	2.3	6.8
Green Ext Time (p_c), s	0.0	0.7	0.0	1.2	0.1	0.1	0.0	1.0

Intersection Summary		
HCM 6th Ctrl Delay		15.5
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	60	130	0	5	80	360	160	20	460	40
Future Volume (veh/h)	20	0	60	130	0	5	80	360	160	20	460	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		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	1796	1811	1796	1811	1811	1811	1796	1796	1811	1811	1796	1796
Adj Flow Rate, veh/h	23	0	0	141	0	1	92	414	124	22	529	37
Peak Hour Factor	0.87	0.92	0.87	0.92	0.92	0.92	0.87	0.87	0.92	0.92	0.87	0.87
Percent Heavy Veh, %	7	6	7	6	6	6	7	7	6	6	7	7
Cap, veh/h	180	184	0	177	0	153	137	821	243	47	851	59
Arrive On Green	0.11	0.00	0.00	0.10	0.00	0.10	0.08	0.32	0.32	0.03	0.26	0.26
Sat Flow, veh/h	1711	1811	0	1725	0	1535	1711	2594	769	1725	3230	225
Grp Volume(v), veh/h	23	0	0	141	0	1	92	271	267	22	279	287
Grp Sat Flow(s),veh/h/ln	1711	1811	0	1725	0	1535	1711	1706	1656	1725	1706	1749
Q Serve(g_s), s	0.5	0.0	0.0	3.2	0.0	0.0	2.1	5.1	5.2	0.5	5.7	5.8
Cycle Q Clear(g_c), s	0.5	0.0	0.0	3.2	0.0	0.0	2.1	5.1	5.2	0.5	5.7	5.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.46	1.00		0.13
Lane Grp Cap(c), veh/h	180	184	0	177	0	153	137	540	524	47	450	461
V/C Ratio(X)	0.13	0.00	0.00	0.80	0.00	0.01	0.67	0.50	0.51	0.47	0.62	0.62
Avail Cap(c_a), veh/h	215	1273	0	216	0	1079	215	1028	998	216	1028	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	0.0	17.5	0.0	16.2	17.8	11.1	11.1	19.1	12.9	12.9
Incr Delay (d2), s/veh	0.3	0.0	0.0	15.4	0.0	0.0	5.6	0.7	0.8	7.2	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.8	0.0	0.0	0.9	1.4	1.4	0.2	1.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	0.0	0.0	32.8	0.0	16.2	23.4	11.8	11.9	26.3	14.3	14.3
LnGrp LOS	B	A	A	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		23			142			630			588	
Approach Delay, s/veh		16.5			32.7			13.5			14.8	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	17.1	8.6	8.6	7.7	15.0	8.7	8.5
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	5.0	24.0	5.0	28.0	5.0	24.0	5.0	28.0
Max Q Clear Time (g_c+I1), s	2.5	7.2	5.2	0.0	4.1	7.8	2.5	2.0
Green Ext Time (p_c), s	0.0	2.7	0.0	0.0	0.0	2.6	0.0	0.0

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	5	140	50	5	20	150	550	60	20	540	80
Future Volume (veh/h)	30	5	140	50	5	20	150	550	60	20	540	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	37	6	0	61	6	1	183	671	63	24	659	82
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	87	23	0	127	54	9	230	1472	138	60	1119	139
Arrive On Green	0.05	0.01	0.00	0.07	0.04	0.04	0.13	0.46	0.46	0.04	0.36	0.36
Sat Flow, veh/h	1725	1811	0	1725	1513	252	1725	3180	298	1725	3071	382
Grp Volume(v), veh/h	37	6	0	61	0	7	183	363	371	24	369	372
Grp Sat Flow(s),veh/h/ln	1725	1811	0	1725	0	1765	1725	1721	1757	1725	1721	1732
Q Serve(g_s), s	0.9	0.1	0.0	1.4	0.0	0.2	4.2	5.9	5.9	0.6	7.1	7.1
Cycle Q Clear(g_c), s	0.9	0.1	0.0	1.4	0.0	0.2	4.2	5.9	5.9	0.6	7.1	7.1
Prop In Lane	1.00		0.00	1.00		0.14	1.00		0.17	1.00		0.22
Lane Grp Cap(c), veh/h	87	23	0	127	0	63	230	796	814	60	627	631
V/C Ratio(X)	0.43	0.26	0.00	0.48	0.00	0.11	0.79	0.46	0.46	0.40	0.59	0.59
Avail Cap(c_a), veh/h	253	1201	0	253	0	1170	295	1216	1242	253	1174	1182
HCM Platoon Ratio	1.00	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	20.0	0.0	18.2	0.0	19.1	17.2	7.5	7.5	19.3	10.5	10.5
Incr Delay (d2), s/veh	3.3	5.7	0.0	2.8	0.0	0.8	10.9	0.6	0.6	4.2	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	0.6	0.0	0.1	2.0	1.3	1.3	0.3	1.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	25.7	0.0	21.0	0.0	19.8	28.1	8.1	8.0	23.5	11.8	11.8
LnGrp LOS	C	C	A	C	A	B	C	A	A	C	B	B
Approach Vol, veh/h		43			68			917			765	
Approach Delay, s/veh		22.6			20.9			12.0			12.1	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	23.4	7.0	5.0	9.5	19.4	6.1	6.0				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	6.0	28.9	6.0	27.1	7.0	27.9	6.0	27.1				
Max Q Clear Time (g_c+I1), s	2.6	7.9	3.4	2.1	6.2	9.1	2.9	2.2				
Green Ext Time (p_c), s	0.0	5.9	0.0	0.0	0.0	5.7	0.0	0.0				

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

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)	250	1120	130	340	960	280	140	400	310	270	440	120
Future Volume (veh/h)	250	1120	130	340	960	280	140	400	310	270	440	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		0.99	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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	284	1273	67	386	1091	296	159	455	240	307	500	117
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	246	1204	537	320	1053	283	182	403	211	259	636	148
Arrive On Green	0.14	0.35	0.35	0.19	0.39	0.39	0.11	0.19	0.19	0.15	0.23	0.23
Sat Flow, veh/h	1725	3441	1535	1725	2681	721	1725	2171	1136	1725	2761	642
Grp Volume(v), veh/h	284	1273	67	386	697	690	159	360	335	307	310	307
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1725	1721	1681	1725	1721	1587	1725	1721	1683
Q Serve(g_s), s	20.0	49.0	4.2	26.0	55.0	55.0	12.7	26.0	26.0	21.0	23.7	24.0
Cycle Q Clear(g_c), s	20.0	49.0	4.2	26.0	55.0	55.0	12.7	26.0	26.0	21.0	23.7	24.0
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.72	1.00		0.38
Lane Grp Cap(c), veh/h	246	1204	537	320	676	660	182	320	295	259	396	388
V/C Ratio(X)	1.15	1.06	0.12	1.21	1.03	1.04	0.87	1.13	1.14	1.19	0.78	0.79
Avail Cap(c_a), veh/h	246	1204	537	320	676	660	209	320	295	259	396	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	60.0	45.5	30.9	57.0	42.5	42.5	61.7	57.0	57.0	59.5	50.6	50.7
Incr Delay (d2), s/veh	104.8	42.4	0.1	118.1	42.9	47.2	28.4	88.8	94.8	116.0	10.4	11.2
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	15.7	27.2	1.6	21.5	30.4	30.5	6.9	19.0	18.0	17.3	11.1	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	164.8	87.9	31.1	175.1	85.4	89.7	90.1	145.8	151.8	175.5	61.0	61.9
LnGrp LOS	F	F	C	F	F	F	F	F	F	F	E	E
Approach Vol, veh/h		1624			1773			854			924	
Approach Delay, s/veh		99.0			106.6			137.8			99.3	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	54.0	18.8	37.2	24.0	60.0	25.0	31.0
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	26.0	49.0	17.0	30.0	20.0	55.0	21.0	26.0
Max Q Clear Time (g_c+I1), s	28.0	51.0	14.7	26.0	22.0	57.0	23.0	28.0
Green Ext Time (p_c), s	0.0	0.0	0.1	1.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	108.1
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	190	110	390	140	0	0	0	0	410	0	40
Future Volume (veh/h)	0	190	110	390	140	0	0	0	0	410	0	40
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1352	1352	1352	1352	0				1352	1352	1352
Adj Flow Rate, veh/h	0	218	6	448	161	0				471	0	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	37	37	37	37	0				37	37	37
Cap, veh/h	0	444	12	480	1589	0				556	292	0
Arrive On Green	0.00	0.17	0.17	0.37	0.62	0.00				0.22	0.00	0.00
Sat Flow, veh/h	0	2621	70	1287	2636	0				2575	1352	0
Grp Volume(v), veh/h	0	109	115	448	161	0				471	0	0
Grp Sat Flow(s),veh/h/ln	0	1284	1339	1287	1284	0				1287	1352	0
Q Serve(g_s), s	0.0	4.3	4.3	18.6	1.4	0.0				9.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	4.3	4.3	18.6	1.4	0.0				9.8	0.0	0.0
Prop In Lane	0.00		0.05	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	223	233	480	1589	0				556	292	0
V/C Ratio(X)	0.00	0.49	0.49	0.93	0.10	0.00				0.85	0.00	0.00
Avail Cap(c_a), veh/h	0	263	274	624	1955	0				851	447	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)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	20.8	20.8	16.8	4.3	0.0				21.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	1.6	16.3	0.0	0.0				3.1	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
%ile BackOfQ(50%),veh/ln	0.0	1.2	1.3	6.6	0.2	0.0				2.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.4	22.4	33.1	4.3	0.0				24.0	0.0	0.0
LnGrp LOS	A	C	C	C	A	A				C	A	A
Approach Vol, veh/h		224			609						471	
Approach Delay, s/veh		22.4			25.5						24.0	
Approach LOS		C			C						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	24.8	14.3		16.6		39.1						
Change Period (Y+Rc), s	4.0	4.6		4.6		4.6						
Max Green Setting (Gmax), s	27.0	11.4		18.4		42.4						
Max Q Clear Time (g_c+I1), s	20.6	6.3		11.8		3.4						
Green Ext Time (p_c), s	0.2	0.5		0.3		1.0						
Intersection Summary												
HCM 6th Ctrl Delay			24.4									
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)	50	550	0	0	440	290	90	0	230	0	0	0
Future Volume (veh/h)	50	550	0	0	440	290	90	0	230	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1352	1352	0	0	1352	1352	1352	1352	1352			
Adj Flow Rate, veh/h	57	632	0	0	506	0	103	0	0			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87			
Percent Heavy Veh, %	37	37	0	0	37	37	37	37	37			
Cap, veh/h	78	1663	0	0	639		116	0	103			
Arrive On Green	0.06	0.65	0.00	0.00	0.47	0.00	0.09	0.00	0.00			
Sat Flow, veh/h	1287	2636	0	0	1352	0	1287	0	1145			
Grp Volume(v), veh/h	57	632	0	0	506	0	103	0	0			
Grp Sat Flow(s),veh/h/ln	1287	1284	0	0	1352	0	1287	0	1145			
Q Serve(g_s), s	1.5	4.0	0.0	0.0	11.1	0.0	2.8	0.0	0.0			
Cycle Q Clear(g_c), s	1.5	4.0	0.0	0.0	11.1	0.0	2.8	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	78	1663	0	0	639		116	0	103			
V/C Ratio(X)	0.73	0.38	0.00	0.00	0.79		0.89	0.00	0.00			
Avail Cap(c_a), veh/h	184	4584	0	0	2066		668	0	594			
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	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	16.2	2.9	0.0	0.0	7.8	0.0	15.8	0.0	0.0			
Incr Delay (d2), s/veh	4.8	0.1	0.0	0.0	2.3	0.0	8.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	0.0	1.8	0.0	0.9	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	3.0	0.0	0.0	10.1	0.0	24.1	0.0	0.0			
LnGrp LOS	C	A	A	A	B		C	A	A			
Approach Vol, veh/h		689			506			103				
Approach Delay, s/veh		4.5			10.1			24.1				
Approach LOS		A			B			C				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		27.3			6.1	21.2		7.8				
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6				
Max Green Setting (Gmax), s		62.6			5.0	53.6		18.2				
Max Q Clear Time (g_c+I1), s		6.0			3.5	13.1		4.8				
Green Ext Time (p_c), s		4.9			0.0	3.5		0.1				

Intersection Summary			
HCM 6th Ctrl Delay			8.2
HCM 6th LOS			A

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)	120	470	140	10	150	10	80	600	10	5	440	200
Future Volume (veh/h)	120	470	140	10	150	10	80	600	10	5	440	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1811	1604	1811	1811	1811	1604	1604	1811	1811	1604	1604
Adj Flow Rate, veh/h	128	511	43	11	163	9	85	638	11	5	468	69
Peak Hour Factor	0.94	0.92	0.94	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.94	0.94
Percent Heavy Veh, %	20	6	20	6	6	6	20	20	6	6	20	20
Cap, veh/h	163	857	338	24	266	15	101	1158	20	12	970	433
Arrive On Green	0.11	0.25	0.25	0.01	0.16	0.16	0.07	0.38	0.38	0.01	0.32	0.32
Sat Flow, veh/h	1527	3441	1359	1725	1700	94	1527	3065	53	1725	3047	1359
Grp Volume(v), veh/h	128	511	43	11	0	172	85	317	332	5	468	69
Grp Sat Flow(s),veh/h/ln	1527	1721	1359	1725	0	1794	1527	1523	1594	1725	1523	1359
Q Serve(g_s), s	4.2	6.7	1.3	0.3	0.0	4.6	2.8	8.4	8.4	0.1	6.3	1.9
Cycle Q Clear(g_c), s	4.2	6.7	1.3	0.3	0.0	4.6	2.8	8.4	8.4	0.1	6.3	1.9
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	163	857	338	24	0	280	101	576	602	12	970	433
V/C Ratio(X)	0.78	0.60	0.13	0.45	0.00	0.61	0.84	0.55	0.55	0.43	0.48	0.16
Avail Cap(c_a), veh/h	1002	3133	1237	169	0	632	120	1059	1108	169	2177	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	16.9	14.9	25.0	0.0	20.1	23.6	12.5	12.5	25.3	14.0	12.5
Incr Delay (d2), s/veh	8.0	0.7	0.2	12.5	0.0	2.2	37.6	3.0	2.8	23.5	1.4	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	1.7	2.4	0.4	0.2	0.0	1.9	1.9	2.4	2.5	0.1	1.7	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	17.6	15.0	37.4	0.0	22.3	61.2	15.5	15.3	48.7	15.4	13.1
LnGrp LOS	C	B	B	D	A	C	E	B	B	D	B	B
Approach Vol, veh/h		682			183			734			542	
Approach Delay, s/veh		19.8			23.2			20.7			15.4	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	20.8	5.2	17.2	4.8	23.8	10.0	12.5
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	4.0	36.5	5.0	46.5	5.0	35.5	33.5	18.0
Max Q Clear Time (g_c+I1), s	4.8	8.3	2.3	8.7	2.1	10.4	6.2	6.6
Green Ext Time (p_c), s	0.0	7.7	0.0	4.0	0.0	8.9	0.3	0.6

Intersection Summary	
HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B

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)	0	1690	340	230	1650	0	0	0	0	360	0	650
Future Volume (veh/h)	0	1690	340	230	1650	0	0	0	0	360	0	650
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	0				1811	1811	1811
Adj Flow Rate, veh/h	0	1920	236	261	1875	0				409	0	670
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	6	6	6	6	0				6	6	6
Cap, veh/h	0	2066	626	280	2182	0				834	0	742
Arrive On Green	0.00	0.42	0.42	0.16	0.63	0.00				0.24	0.00	0.24
Sat Flow, veh/h	0	5107	1499	1725	3532	0				3450	0	3070
Grp Volume(v), veh/h	0	1920	236	261	1875	0				409	0	670
Grp Sat Flow(s),veh/h/ln	0	1648	1499	1725	1721	0				1725	0	1535
Q Serve(g_s), s	0.0	27.4	8.0	11.1	32.4	0.0				7.5	0.0	15.7
Cycle Q Clear(g_c), s	0.0	27.4	8.0	11.1	32.4	0.0				7.5	0.0	15.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2066	626	280	2182	0				834	0	742
V/C Ratio(X)	0.00	0.93	0.38	0.93	0.86	0.00				0.49	0.00	0.90
Avail Cap(c_a), veh/h	0	2078	630	280	2190	0				872	0	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.5	14.9	30.6	10.9	0.0				24.1	0.0	27.2
Incr Delay (d2), s/veh	0.0	8.0	0.3	35.9	3.7	0.0				0.2	0.0	13.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.3	2.4	7.0	9.3	0.0				2.8	0.0	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	28.6	15.2	66.5	14.6	0.0				24.3	0.0	40.3
LnGrp LOS	A	C	B	E	B	A				C	A	D
Approach Vol, veh/h		2156			2136						1079	
Approach Delay, s/veh		27.1			20.9						34.2	
Approach LOS		C			C						C	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	16.0	35.5	22.5	51.5
Change Period (Y+Rc), s	4.0	4.6	4.6	4.6
Max Green Setting (Gmax), s	12.0	31.1	18.7	47.1
Max Q Clear Time (g_c+I1), s	13.1	29.4	17.7	34.4
Green Ext Time (p_c), s	0.0	1.6	0.2	9.3

Intersection Summary	
HCM 6th Ctrl Delay	26.1
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)	500	1550	0	0	1350	270	530	0	420	0	0	0
Future Volume (veh/h)	500	1550	0	0	1350	270	530	0	420	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1811	1811	0	0	1811	1811	1811	1811	1811			
Adj Flow Rate, veh/h	568	1761	0	0	1534	248	602	0	414			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	6	6	0	0	6	6	6	6	6			
Cap, veh/h	603	2416	0	0	1641	703	670	0	596			
Arrive On Green	0.18	0.70	0.00	0.00	0.48	0.48	0.19	0.00	0.19			
Sat Flow, veh/h	3346	3532	0	0	3532	1474	3450	0	3070			
Grp Volume(v), veh/h	568	1761	0	0	1534	248	602	0	414			
Grp Sat Flow(s),veh/h/ln	1673	1721	0	0	1721	1474	1725	0	1535			
Q Serve(g_s), s	14.9	27.7	0.0	0.0	37.4	9.4	15.1	0.0	11.2			
Cycle Q Clear(g_c), s	14.9	27.7	0.0	0.0	37.4	9.4	15.1	0.0	11.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	603	2416	0	0	1641	703	670	0	596			
V/C Ratio(X)	0.94	0.73	0.00	0.00	0.93	0.35	0.90	0.00	0.69			
Avail Cap(c_a), veh/h	603	2446	0	0	1671	716	688	0	612			
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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.9	8.1	0.0	0.0	21.9	14.6	34.9	0.0	33.3			
Incr Delay (d2), s/veh	22.9	1.1	0.0	0.0	10.2	0.3	14.0	0.0	2.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.6	7.2	0.0	0.0	15.2	2.8	7.3	0.0	4.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	9.2	0.0	0.0	32.1	14.9	49.0	0.0	36.0			
LnGrp LOS	E	A	A	A	C	B	D	A	D			
Approach Vol, veh/h		2329			1782			1016				
Approach Delay, s/veh		21.3			29.7			43.7				
Approach LOS		C			C			D				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		66.9			20.0	46.9		21.8				
Change Period (Y+Rc), s		4.6			4.0	4.6		4.6				
Max Green Setting (Gmax), s		63.1			16.0	43.1		17.7				
Max Q Clear Time (g_c+I1), s		29.7			16.9	39.4		17.1				
Green Ext Time (p_c), s		16.2			0.0	3.0		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		28.6
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1700	260	0	1500	0	0	0	40	0	0	70
Future Vol, veh/h	0	1700	260	0	1500	0	0	0	40	0	0	70
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	1932	295	0	1705	0	0	0	45	0	0	80

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1116	-	-	853
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.02	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.36	-	-	3.36
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	196	0	0	294
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	196	-	-	294
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	28.8	21.7
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	196	-	-	-	294
HCM Lane V/C Ratio	0.232	-	-	-	0.271
HCM Control Delay (s)	28.8	-	-	-	21.7
HCM Lane LOS	D	-	-	-	C
HCM 95th %tile Q(veh)	0.9	-	-	-	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	1250	220	110	1010	140	300	230	150	120	130	150
Future Volume (veh/h)	290	1250	220	110	1010	140	300	230	150	120	130	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		0.98	1.00		0.99	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	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	330	1420	240	125	1148	151	341	261	79	136	148	3
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, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	280	1505	251	122	1277	167	294	460	136	161	341	7
Arrive On Green	0.16	0.51	0.51	0.07	0.42	0.42	0.17	0.18	0.18	0.09	0.10	0.10
Sat Flow, veh/h	1725	2950	491	1725	3051	400	1725	2612	773	1725	3448	70
Grp Volume(v), veh/h	330	819	841	125	646	653	341	170	170	136	74	77
Grp Sat Flow(s),veh/h/ln	1725	1721	1721	1725	1721	1730	1725	1721	1664	1725	1721	1797
Q Serve(g_s), s	19.5	53.5	56.2	8.5	42.0	42.4	20.5	10.8	11.3	9.3	4.8	4.9
Cycle Q Clear(g_c), s	19.5	53.5	56.2	8.5	42.0	42.4	20.5	10.8	11.3	9.3	4.8	4.9
Prop In Lane	1.00		0.29	1.00		0.23	1.00		0.46	1.00		0.04
Lane Grp Cap(c), veh/h	280	878	878	122	720	724	294	303	293	161	170	177
V/C Ratio(X)	1.18	0.93	0.96	1.02	0.90	0.90	1.16	0.56	0.58	0.84	0.43	0.44
Avail Cap(c_a), veh/h	280	881	881	122	723	727	294	537	519	280	523	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	50.3	27.5	28.2	55.8	32.5	32.6	49.8	45.3	45.4	53.6	51.0	51.0
Incr Delay (d2), s/veh	111.2	17.0	20.9	88.2	14.7	15.1	102.6	3.5	3.9	4.5	3.7	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.8	24.2	26.1	6.6	19.3	19.7	17.0	4.8	4.9	4.1	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.5	44.6	49.1	144.0	47.2	47.8	152.4	48.7	49.3	58.2	54.7	54.6
LnGrp LOS	F	D	D	F	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1990			1424			681			287	
Approach Delay, s/veh		65.9			56.0			100.8			56.3	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	65.8	25.0	16.4	24.0	54.8	15.7	25.6
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	8.5	61.5	20.5	36.5	19.5	50.5	19.5	37.5
Max Q Clear Time (g_c+I1), s	10.5	58.2	22.5	6.9	21.5	44.4	11.3	13.3
Green Ext Time (p_c), s	0.0	3.1	0.0	1.4	0.0	5.1	0.0	3.6

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

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)	160	990	280	180	950	120	170	470	290	150	390	90
Future Volume (veh/h)	160	990	280	180	950	120	170	470	290	150	390	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	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	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	184	1138	183	207	1092	46	195	540	118	172	448	17
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, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	188	1195	533	230	1278	562	202	755	332	249	803	354
Arrive On Green	0.11	0.35	0.35	0.14	0.38	0.38	0.06	0.22	0.22	0.08	0.24	0.24
Sat Flow, veh/h	1697	3385	1510	1697	3385	1490	3291	3385	1488	3291	3385	1490
Grp Volume(v), veh/h	184	1138	183	207	1092	46	195	540	118	172	448	17
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1490	1646	1692	1488	1646	1692	1490
Q Serve(g_s), s	8.8	26.6	7.3	9.8	24.1	1.6	4.8	12.0	5.4	4.1	9.5	0.7
Cycle Q Clear(g_c), s	8.8	26.6	7.3	9.8	24.1	1.6	4.8	12.0	5.4	4.1	9.5	0.7
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	188	1195	533	230	1278	562	202	755	332	249	803	354
V/C Ratio(X)	0.98	0.95	0.34	0.90	0.85	0.08	0.96	0.71	0.36	0.69	0.56	0.05
Avail Cap(c_a), veh/h	188	1195	533	230	1278	563	202	1054	463	364	1166	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	25.6	19.4	34.6	23.2	16.2	38.0	29.2	26.6	36.6	27.2	23.9
Incr Delay (d2), s/veh	59.5	16.3	0.8	34.2	6.4	0.1	52.5	2.1	1.0	3.4	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	12.2	2.4	5.9	9.6	0.5	3.3	4.7	1.9	1.7	3.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.5	41.9	20.2	68.8	29.6	16.4	90.6	31.3	27.7	40.1	28.2	24.0
LnGrp LOS	F	D	C	E	C	B	F	C	C	D	C	C
Approach Vol, veh/h		1505			1345			853			637	
Approach Delay, s/veh		45.8			35.2			44.3			31.3	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	32.7	10.1	23.4	13.0	34.7	9.0	24.6
Change Period (Y+Rc), s	4.0	4.0	4.0	* 5.3	4.0	4.0	4.0	5.3
Max Green Setting (Gmax), s	11.0	28.7	9.0	* 25	9.0	30.7	5.0	28.0
Max Q Clear Time (g_c+I1), s	11.8	28.6	6.1	14.0	10.8	26.1	6.8	11.5
Green Ext Time (p_c), s	0.0	0.1	0.1	4.1	0.0	3.6	0.0	3.7

Intersection Summary	
HCM 6th Ctrl Delay	40.1
HCM 6th LOS	D

Notes

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

Intersection						
Int Delay, s/veh	40.3					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	90	1450	1230	50	30	120
Future Vol, veh/h	90	1450	1230	50	30	120
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	110	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	7	7	7	7	7	7
Mvmt Flow	105	1686	1430	58	35	140

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1489	0	-	0	2513	745
Stage 1	-	-	-	-	1460	-
Stage 2	-	-	-	-	1053	-
Critical Hdwy	4.24	-	-	-	6.94	7.04
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.27	-	-	-	3.57	3.37
Pot Cap-1 Maneuver	423	-	-	-	~ 22	346
Stage 1	-	-	-	-	172	-
Stage 2	-	-	-	-	286	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	423	-	-	-	~ 17	346
Mov Cap-2 Maneuver	-	-	-	-	~ 17	-
Stage 1	-	-	-	-	129	-
Stage 2	-	-	-	-	286	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	$ 787.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	423	-	-	-	71
HCM Lane V/C Ratio	0.247	-	-	-	2.457
HCM Control Delay (s)	16.3	-	-	-	$ 787.7
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	1	-	-	-	16.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1510	130	170	1440	60	110	20	170	130	40	20
Future Volume (veh/h)	5	1510	130	170	1440	60	110	20	170	130	40	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	6	1697	54	191	1618	65	124	22	8	146	45	4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	14	2278	692	234	1983	79	158	41	15	183	76	7
Arrive On Green	0.01	0.46	0.46	0.14	0.59	0.59	0.09	0.03	0.03	0.11	0.05	0.05
Sat Flow, veh/h	1725	4944	1503	1725	3369	135	1725	1267	461	1725	1637	145
Grp Volume(v), veh/h	6	1697	54	191	823	860	124	0	30	146	0	49
Grp Sat Flow(s),veh/h/ln	1725	1648	1503	1725	1721	1783	1725	0	1728	1725	0	1782
Q Serve(g_s), s	0.2	18.5	1.3	7.1	24.7	25.1	4.6	0.0	1.1	5.4	0.0	1.8
Cycle Q Clear(g_c), s	0.2	18.5	1.3	7.1	24.7	25.1	4.6	0.0	1.1	5.4	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.27	1.00		0.08
Lane Grp Cap(c), veh/h	14	2278	692	234	1013	1050	158	0	55	183	0	83
V/C Ratio(X)	0.44	0.74	0.08	0.82	0.81	0.82	0.78	0.00	0.54	0.80	0.00	0.59
Avail Cap(c_a), veh/h	131	3844	1169	402	1611	1669	444	0	790	297	0	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	32.4	14.5	9.9	27.5	10.6	10.7	29.1	0.0	31.3	28.6	0.0	30.7
Incr Delay (d2), s/veh	8.1	0.2	0.0	2.6	0.8	0.8	3.2	0.0	3.0	3.0	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.4	0.4	2.8	6.4	6.8	2.0	0.0	0.5	2.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	14.7	9.9	30.2	11.4	11.6	32.3	0.0	34.3	31.6	0.0	33.2
LnGrp LOS	D	B	A	C	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1757			1874			154			195	
Approach Delay, s/veh		14.6			13.4			32.7			32.0	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	43.2	11.1	6.7	13.0	34.8	10.1	7.6
Change Period (Y+Rc), s	4.1	* 4.6	4.1	4.6	4.1	4.6	4.1	4.6
Max Green Setting (Gmax), s	5.0	* 61	11.3	30.0	15.3	51.0	16.9	24.4
Max Q Clear Time (g_c+I1), s	2.2	27.1	7.4	3.1	9.1	20.5	6.6	3.8
Green Ext Time (p_c), s	0.0	1.4	0.1	0.1	0.1	9.7	0.1	0.1

Intersection Summary

HCM 6th Ctrl Delay 15.6

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)	0	1680	130	80	800	30	180	0	340	70	340	690
Future Volume (veh/h)	0	1680	130	80	800	30	180	0	340	70	340	690
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1811	1811	1811	1811	0	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	1888	79	90	899	14	202	0	382	79	382	677
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	6	6	6	6	6	6	0	6	6	6	6
Cap, veh/h	0	1761	599	121	1606	701	178	0	0	99	1053	827
Arrive On Green	0.00	0.40	0.40	0.04	0.47	0.47	0.10	0.00	0.00	0.06	0.31	0.31
Sat Flow, veh/h	0	4781	1516	3346	3441	1502	1725	202		1725	3441	2701
Grp Volume(v), veh/h	0	1888	79	90	899	14	202	170.7		79	382	677
Grp Sat Flow(s),veh/h/ln	0	1485	1516	1673	1721	1502	1725	F		1725	1721	1351
Q Serve(g_s), s	0.0	54.8	4.6	3.7	26.1	0.7	14.3			6.3	12.0	32.2
Cycle Q Clear(g_c), s	0.0	54.8	4.6	3.7	26.1	0.7	14.3			6.3	12.0	32.2
Prop In Lane	0.00		1.00	1.00		1.00	1.00			1.00		1.00
Lane Grp Cap(c), veh/h	0	1761	599	121	1606	701	178			99	1053	827
V/C Ratio(X)	0.00	1.07	0.13	0.75	0.56	0.02	1.14			0.80	0.36	0.82
Avail Cap(c_a), veh/h	0	1761	599	121	1606	701	178			168	1216	955
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	41.9	26.7	66.2	26.7	19.9	62.2			64.5	37.5	44.5
Incr Delay (d2), s/veh	0.0	43.7	0.2	24.1	0.7	0.0	108.5			19.9	0.5	6.4
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
%ile BackOfQ(50%),veh/ln	0.0	26.3	1.7	2.0	10.5	0.2	11.5			3.3	5.0	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	85.6	26.9	90.2	27.4	19.9	170.7			84.5	38.0	50.9
LnGrp LOS	A	F	C	F	C	B	F			F	D	D
Approach Vol, veh/h		1967			1003						1138	
Approach Delay, s/veh		83.3			32.9						48.9	
Approach LOS		F			C						D	

Timer - Assigned Phs	1	2	3	4		6	7
Phs Duration (G+Y+Rc), s	9.9	60.8	19.0	48.9		70.7	12.7
Change Period (Y+Rc), s	4.9	* 6	* 4.7	6.5		6.0	* 4.7
Max Green Setting (Gmax), s	5.0	* 55	* 14	49.0		64.5	* 14
Max Q Clear Time (g_c+I1), s	5.7	56.8	16.3	34.2		28.1	8.3
Green Ext Time (p_c), s	0.0	0.0	0.0	8.3		13.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	66.6
HCM 6th LOS	E

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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	400	840	60	350	560	40
Future Volume (veh/h)	400	840	60	350	560	40
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	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	449	0	67	393	629	9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	948		117	1559	807	370
Arrive On Green	0.28	0.00	0.07	0.45	0.24	0.24
Sat Flow, veh/h	3532	1535	1725	3532	3346	1535
Grp Volume(v), veh/h	449	0	67	393	629	9
Grp Sat Flow(s),veh/h/ln	1721	1535	1725	1721	1673	1535
Q Serve(g_s), s	3.9	0.0	1.4	2.6	6.4	0.2
Cycle Q Clear(g_c), s	3.9	0.0	1.4	2.6	6.4	0.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	948		117	1559	807	370
V/C Ratio(X)	0.47		0.57	0.25	0.78	0.02
Avail Cap(c_a), veh/h	1924		237	2739	1843	845
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	11.0	0.0	16.4	6.1	12.9	10.5
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.0	0.6	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	1.0	0.0	0.5	0.4	1.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.1	0.0	18.1	6.2	13.5	10.5
LnGrp LOS	B		B	A	B	B
Approach Vol, veh/h	449			460	638	
Approach Delay, s/veh	11.1			7.9	13.5	
Approach LOS	B			A	B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.5	16.2				22.7		13.7
Change Period (Y+Rc), s	4.0	* 6.2				6.2		4.9
Max Green Setting (Gmax), s	5.0	* 20				28.9		20.0
Max Q Clear Time (g_c+I1), s	3.4	5.9				4.6		8.4
Green Ext Time (p_c), s	0.0	0.4				0.4		0.4

Intersection Summary			
HCM 6th Ctrl Delay			11.1
HCM 6th LOS			B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
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)	5	0	5	30	5	60	5	660	40	50	530	5
Future Volume (veh/h)	5	0	5	30	5	60	5	660	40	50	530	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		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	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693	1693
Adj Flow Rate, veh/h	6	0	0	34	6	0	6	750	27	57	602	6
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, %	14	14	14	14	14	14	14	14	14	14	14	14
Cap, veh/h	13	0	12	73	77	65	16	1336	596	186	1517	15
Arrive On Green	0.01	0.00	0.00	0.05	0.05	0.00	0.01	0.42	0.42	0.06	0.47	0.47
Sat Flow, veh/h	1612	0	1434	1612	1693	1434	1612	3216	1434	3127	3261	32
Grp Volume(v), veh/h	6	0	0	34	6	0	6	750	27	57	297	311
Grp Sat Flow(s),veh/h/ln	1612	0	1434	1612	1693	1434	1612	1608	1434	1564	1608	1686
Q Serve(g_s), s	0.1	0.0	0.0	0.8	0.1	0.0	0.1	6.8	0.4	0.7	4.6	4.6
Cycle Q Clear(g_c), s	0.1	0.0	0.0	0.8	0.1	0.0	0.1	6.8	0.4	0.7	4.6	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	13	0	12	73	77	65	16	1336	596	186	748	784
V/C Ratio(X)	0.46	0.00	0.00	0.47	0.08	0.00	0.38	0.56	0.05	0.31	0.40	0.40
Avail Cap(c_a), veh/h	220	0	195	1276	1339	1135	262	3042	1357	451	1492	1564
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	0.0	0.0	17.8	17.5	0.0	18.8	8.5	6.6	17.2	6.7	6.7
Incr Delay (d2), s/veh	9.1	0.0	0.0	1.7	0.2	0.0	5.7	0.5	0.0	0.3	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.3	0.0	0.0	0.1	1.2	0.1	0.2	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	0.0	0.0	19.5	17.6	0.0	24.4	9.0	6.7	17.5	7.2	7.2
LnGrp LOS	C	A	A	B	B	A	C	A	A	B	A	A
Approach Vol, veh/h		6			40			783			665	
Approach Delay, s/veh		28.0			19.2			9.1			8.1	
Approach LOS		C			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	20.4		4.8	4.9	22.3		6.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	36.1		5.2	6.2	35.4		30.2				
Max Q Clear Time (g_c+I1), s	2.7	8.8		2.1	2.1	6.6		2.8				
Green Ext Time (p_c), s	0.0	7.1		0.0	0.0	4.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			9.0
HCM 6th LOS			A

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	10	610	110	20	560
Future Volume (veh/h)	30	10	610	110	20	560
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	1722	1722	1722	1722	1722	1722
Adj Flow Rate, veh/h	37	0	744	101	24	683
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	12	12	12	12	12	12
Cap, veh/h	72	0	1364	185	59	2151
Arrive On Green	0.05	0.00	0.47	0.47	0.04	0.66
Sat Flow, veh/h	1599	0	2972	392	1640	3358
Grp Volume(v), veh/h	38	0	422	423	24	683
Grp Sat Flow(s),veh/h/ln	1642	0	1636	1642	1640	1636
Q Serve(g_s), s	0.7	0.0	5.5	5.5	0.4	2.7
Cycle Q Clear(g_c), s	0.7	0.0	5.5	5.5	0.4	2.7
Prop In Lane	0.97	0.00		0.24	1.00	
Lane Grp Cap(c), veh/h	74	0	773	776	59	2151
V/C Ratio(X)	0.51	0.00	0.55	0.55	0.40	0.32
Avail Cap(c_a), veh/h	271	0	1108	1112	325	3352
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	14.1	0.0	5.7	5.7	14.3	2.2
Incr Delay (d2), s/veh	5.4	0.0	1.3	1.3	4.4	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	0.3	0.0	0.8	0.8	0.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.5	0.0	7.0	7.0	18.6	2.4
LnGrp LOS	B	A	A	A	B	A
Approach Vol, veh/h	38		845			707
Approach Delay, s/veh	19.5		7.0			3.0
Approach LOS	B		A			A

Timer - Assigned Phs	1	2	6	8
Phs Duration (G+Y+Rc), s	5.6	18.8	24.4	5.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.0	20.5	31.0	5.0
Max Q Clear Time (g_c+I1), s	2.4	7.5	4.7	2.7
Green Ext Time (p_c), s	0.0	6.7	8.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	90	180	5
Future Vol, veh/h	5	5	5	90	180	5
Conflicting Peds, #/hr	0	0	1	0	0	1
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	89	89	89	89	89	89
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	6	6	6	101	202	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	319	206	209	0	-	0
Stage 1	206	-	-	-	-	-
Stage 2	113	-	-	-	-	-
Critical Hdwy	6.49	6.29	4.19	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.381	2.281	-	-	-
Pot Cap-1 Maneuver	660	817	1321	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	895	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	655	816	1320	-	-	-
Mov Cap-2 Maneuver	655	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	894	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1320	-	727	-	-
HCM Lane V/C Ratio	0.004	-	0.015	-	-
HCM Control Delay (s)	7.7	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	400	40	10	210	40	30	5	40	220	20	150
Future Volume (veh/h)	160	400	40	10	210	40	30	5	40	220	20	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	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	178	444	44	11	233	22	33	6	0	244	22	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	224	550	54	40	739	69	68	12	0	304	27	294
Arrive On Green	0.14	0.37	0.37	0.03	0.25	0.25	0.05	0.05	0.00	0.21	0.21	0.21
Sat Flow, veh/h	1584	1489	148	1584	2920	273	1350	245	0	1458	132	1409
Grp Volume(v), veh/h	178	0	488	11	125	130	39	0	0	266	0	25
Grp Sat Flow(s),veh/h/ln	1584	0	1636	1584	1580	1614	1595	0	0	1590	0	1409
Q Serve(g_s), s	5.5	0.0	13.5	0.3	3.2	3.3	1.2	0.0	0.0	8.0	0.0	0.7
Cycle Q Clear(g_c), s	5.5	0.0	13.5	0.3	3.2	3.3	1.2	0.0	0.0	8.0	0.0	0.7
Prop In Lane	1.00		0.09	1.00		0.17	0.85		0.00	0.92		1.00
Lane Grp Cap(c), veh/h	224	0	604	40	400	408	80	0	0	332	0	294
V/C Ratio(X)	0.79	0.00	0.81	0.27	0.31	0.32	0.49	0.00	0.00	0.80	0.00	0.09
Avail Cap(c_a), veh/h	552	0	895	392	704	719	218	0	0	488	0	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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	14.3	24.1	15.3	15.3	23.3	0.0	0.0	19.0	0.0	16.1
Incr Delay (d2), s/veh	6.2	0.0	4.6	3.6	0.7	0.7	4.6	0.0	0.0	5.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	4.1	0.1	1.0	1.0	0.5	0.0	0.0	3.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	0.0	19.0	27.7	16.0	16.0	27.9	0.0	0.0	24.9	0.0	16.2
LnGrp LOS	C	A	B	C	B	B	C	A	A	C	A	B
Approach Vol, veh/h		666			266			39			291	
Approach Delay, s/veh		21.2			16.5			27.9			24.2	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	23.1		15.0	11.1	17.3		7.0				
Change Period (Y+Rc), s	4.0	4.5		4.5	4.0	4.5		4.5				
Max Green Setting (Gmax), s	12.5	27.6		15.5	17.6	22.5		6.9				
Max Q Clear Time (g_c+I1), s	2.3	15.5		10.0	7.5	5.3		3.2				
Green Ext Time (p_c), s	0.0	3.1		0.7	0.3	1.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			21.1									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	440	50	0	100	60	20	20	5	20	0	140
Future Volume (veh/h)	170	440	50	0	100	60	20	20	5	20	0	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	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663	1663
Adj Flow Rate, veh/h	189	489	52	0	111	37	22	22	0	22	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	16	16	16	16	16	16	16	16	16	16	16	16
Cap, veh/h	232	828	88	4	360	120	55	55	0	52	0	46
Arrive On Green	0.15	0.56	0.56	0.00	0.30	0.30	0.07	0.07	0.00	0.03	0.00	0.00
Sat Flow, veh/h	1584	1477	157	1584	1193	398	811	811	0	1584	0	1409
Grp Volume(v), veh/h	189	0	541	0	0	148	44	0	0	22	0	0
Grp Sat Flow(s),veh/h/ln	1584	0	1635	1584	0	1591	1622	0	0	1584	0	1409
Q Serve(g_s), s	4.6	0.0	8.7	0.0	0.0	2.9	1.0	0.0	0.0	0.5	0.0	0.0
Cycle Q Clear(g_c), s	4.6	0.0	8.7	0.0	0.0	2.9	1.0	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.25	0.50		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	0	916	4	0	480	110	0	0	52	0	46
V/C Ratio(X)	0.82	0.00	0.59	0.00	0.00	0.31	0.40	0.00	0.00	0.43	0.00	0.00
Avail Cap(c_a), veh/h	672	0	1043	350	0	691	338	0	0	378	0	336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.5	0.0	5.7	0.0	0.0	10.7	17.8	0.0	0.0	18.9	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.0	0.3	0.0	0.0	0.1	0.9	0.0	0.0	2.1	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	1.3	0.0	0.8	0.0	0.0	0.8	0.3	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	0.0	6.1	0.0	0.0	10.8	18.7	0.0	0.0	21.0	0.0	0.0
LnGrp LOS	B	A	A	A	A	B	B	A	A	C	A	A
Approach Vol, veh/h		730			148			44			22	
Approach Delay, s/veh		9.5			10.8			18.7			21.0	
Approach LOS		A			B			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	26.8		5.8	10.3	16.5		7.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.8	25.4		9.5	16.9	17.3		8.3				
Max Q Clear Time (g_c+I1), s	0.0	10.7		2.5	6.6	4.9		3.0				
Green Ext Time (p_c), s	0.0	0.3		0.0	0.0	0.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			10.4									
HCM 6th LOS			B									

Intersection						
Int Delay, s/veh	0.1					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	335	50	0	520
Future Vol, veh/h	0	5	335	50	0	520
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	5	364	54	0	565

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	209	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.02	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.36	-	-	-	-
Pot Cap-1 Maneuver	0	785	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	785	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	785	-
HCM Lane V/C Ratio	-	-	0.007	-
HCM Control Delay (s)	-	-	9.6	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection						
Int Delay, s/veh	0					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	325	0	0	520
Future Vol, veh/h	0	0	325	0	0	520
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	-	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	353	0	0	565

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	636	177	0	0	353	0
Stage 1	353	-	-	-	-	-
Stage 2	283	-	-	-	-	-
Critical Hdwy	6.92	7.02	-	-	4.22	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	-	-	2.26	-
Pot Cap-1 Maneuver	401	823	-	-	1174	-
Stage 1	670	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	401	823	-	-	1174	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	670	-	-	-	-	-
Stage 2	728	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1174	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	0					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	325	0	0	520
Future Vol, veh/h	0	0	325	0	0	520
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	-	-	-	300	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	353	0	0	565

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	636	177	0	0	353	0
Stage 1	353	-	-	-	-	-
Stage 2	283	-	-	-	-	-
Critical Hdwy	6.92	7.02	-	-	4.22	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	-	-	2.26	-
Pot Cap-1 Maneuver	401	823	-	-	1174	-
Stage 1	670	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	401	823	-	-	1174	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	670	-	-	-	-	-
Stage 2	728	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1174	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	0					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	95	185	0
Future Vol, veh/h	0	0	0	95	185	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	120	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	0	103	201	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	304	201	201	0	-	0
Stage 1	201	-	-	-	-	-
Stage 2	103	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.254	-	-	-
Pot Cap-1 Maneuver	680	830	1347	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	680	830	1347	-	-	-
Mov Cap-2 Maneuver	680	-	-	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	911	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1347	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	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
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	1	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	3
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0	0
Geometry Grp	8	8	7	7	7	8	8
Degree of Util (X)	0	0	0	0	0	0	0
Departure Headway (Hd)	4.602	4.602	4.602	4.602	4.602	4.602	4.602
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0	0
Service Time	2.302	2.302	2.302	2.302	2.302	2.302	2.302
HCM Lane V/C Ratio	0	0	0	0	0	0	0
HCM Control Delay	7.3	7.3	7.3	7.3	7.3	7.3	7.3
HCM Lane LOS	N	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1740	0	0	1460	0	0	0	0	0	0	0
Future Vol, veh/h	0	1740	0	0	1460	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	0	1891	0	0	1587	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	-	-	-	0	-	-	946	-	-	794
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.22	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.96	-	-	3.36
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	219	0	0	323
Stage 1	0	-	0	0	-	0	0	0	-	0	0	-
Stage 2	0	-	0	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-			-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	219	-	-	323
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	0
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	172	368	149	235	225
v/c Ratio	0.29	0.78	0.10	0.76	0.60
Control Delay	16.7	31.4	5.5	38.6	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.7	31.4	5.5	38.6	18.6
Queue Length 50th (ft)	18	115	10	81	37
Queue Length 95th (ft)	42	#235	20	#172	97
Internal Link Dist (ft)	157		364		1109
Turn Bay Length (ft)					
Base Capacity (vph)	602	608	1826	432	485
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.61	0.08	0.54	0.46

Intersection Summary

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

Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	57	632	839	103	264
v/c Ratio	0.70	0.31	0.93	0.64	0.70
Control Delay	27.4	2.8	19.7	30.6	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	2.8	19.7	30.6	16.0
Queue Length 50th (ft)	29	39	323	51	0
Queue Length 95th (ft)	#95	77	#669	97	61
Internal Link Dist (ft)		364	153	914	
Turn Bay Length (ft)	200				
Base Capacity (vph)	82	2068	902	300	472
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.70	0.31	0.93	0.34	0.56

Intersection Summary

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

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1920	386	261	1875	204	205	739
v/c Ratio	0.95	0.52	0.96	0.88	0.51	0.51	1.01
Control Delay	21.1	6.5	89.6	10.6	23.3	23.7	27.8
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Total Delay	21.1	6.5	89.6	11.0	23.3	23.7	27.8
Queue Length 50th (ft)	305	48	122	334	86	86	~181
Queue Length 95th (ft)	#402	114	#252	430	148	148	#298
Internal Link Dist (ft)	1067			499		1231	
Turn Bay Length (ft)		100	250		240		240
Base Capacity (vph)	2028	748	272	2138	403	403	729
Starvation Cap Reductn	0	0	0	129	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.52	0.96	0.93	0.51	0.51	1.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	568	1761	1534	307	301	301	477
v/c Ratio	0.96	0.74	0.94	0.42	0.96	0.96	0.83
Control Delay	134.4	6.0	61.7	13.5	113.2	113.2	10.7
Queue Delay	0.0	0.6	35.2	0.0	0.0	0.0	0.0
Total Delay	134.4	6.6	96.8	13.5	113.2	113.2	10.7
Queue Length 50th (ft)	167	278	417	70	178	178	128
Queue Length 95th (ft)	#261	343	#561	128	#333	#333	#204
Internal Link Dist (ft)		499	110			1373	
Turn Bay Length (ft)	200			60	300		300
Base Capacity (vph)	592	2406	1644	745	320	320	586
Starvation Cap Reductn	0	389	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.87	0.93	0.41	0.94	0.94	0.81

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	1888	146	90	899	34	202	382	79	382	775
v/c Ratio	1.08	0.22	0.76	0.57	0.05	1.15	0.43	0.55	0.37	0.85
Control Delay	43.7	7.1	130.3	28.4	4.1	224.4	35.7	49.4	36.9	25.2
Queue Delay	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	7.1	130.3	28.4	4.1	224.4	35.7	49.4	36.9	25.2
Queue Length 50th (ft)	~796	27	42	314	0	~220	153	70	141	318
Queue Length 95th (ft)	#926	77	#93	396	6	#390	204	128	184	401
Internal Link Dist (ft)	477			173					1565	
Turn Bay Length (ft)		380	500		150	700	575	550		800
Base Capacity (vph)	1745	654	119	1587	727	175	986	166	1205	1032
Starvation Cap Reductn	141	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.18	0.22	0.76	0.57	0.05	1.15	0.39	0.48	0.32	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	449	944	67	393	629	45
v/c Ratio	0.40	0.84	0.31	0.27	0.67	0.10
Control Delay	10.7	9.8	38.5	9.1	18.2	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.7	9.8	38.5	9.1	18.2	3.2
Queue Length 50th (ft)	46	0	14	26	65	0
Queue Length 95th (ft)	94	#224	#61	60	138	18
Internal Link Dist (ft)	511			633	1003	
Turn Bay Length (ft)		165	325		550	675
Base Capacity (vph)	1783	1237	219	2538	1704	807
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.76	0.31	0.15	0.37	0.06

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	178	488	11	277	83	266	167
v/c Ratio	0.56	0.71	0.04	0.35	0.40	0.69	0.34
Control Delay	27.8	5.1	44.1	25.7	11.3	11.0	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.8	5.1	44.1	25.7	11.3	11.0	2.0
Queue Length 50th (ft)	64	145	4	46	14	96	0
Queue Length 95th (ft)	134	#375	19	84	59	#248	37
Internal Link Dist (ft)		1678		931	134	1504	
Turn Bay Length (ft)	200		155				550
Base Capacity (vph)	482	812	342	1220	220	427	519
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.60	0.03	0.23	0.38	0.62	0.32

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	189	545	178	50	22	156
v/c Ratio	0.58	0.51	0.27	0.18	0.10	0.39
Control Delay	14.5	3.1	45.1	27.1	34.9	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	3.1	45.1	27.1	34.9	11.7
Queue Length 50th (ft)	38	50	23	9	4	0
Queue Length 95th (ft)	115	208	95	43	26	17
Internal Link Dist (ft)		931	1550	630	1917	
Turn Bay Length (ft)	236					400
Base Capacity (vph)	640	1058	791	323	360	502
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.52	0.23	0.15	0.06	0.31

Intersection Summary

Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	344	448	161	259	258
v/c Ratio	0.65	0.91	0.10	0.85	0.71
Control Delay	23.1	46.4	5.8	50.7	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.1	46.4	5.8	50.7	27.1
Queue Length 50th (ft)	45	174	13	108	67
Queue Length 95th (ft)	83	#324	23	#218	#142
Internal Link Dist (ft)	157		364		1109
Turn Bay Length (ft)					
Base Capacity (vph)	558	571	1793	369	424
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	0.78	0.09	0.70	0.61

Intersection Summary

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

Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	57	632	839	103	264
v/c Ratio	0.70	0.31	0.93	0.64	0.70
Control Delay	81.6	3.9	32.1	51.9	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	81.6	3.9	32.1	51.9	15.4
Queue Length 50th (ft)	29	39	323	51	0
Queue Length 95th (ft)	#95	77	#669	97	61
Internal Link Dist (ft)		364	153	914	
Turn Bay Length (ft)	200				
Base Capacity (vph)	82	2068	902	300	472
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.70	0.31	0.93	0.34	0.56

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1920	386	261	1875	204	205	739
v/c Ratio	0.95	0.52	0.96	0.88	0.51	0.51	1.01
Control Delay	33.1	9.3	80.0	17.9	29.4	29.4	64.1
Queue Delay	0.0	0.0	0.0	1.6	0.0	0.0	0.0
Total Delay	33.1	9.3	80.0	19.5	29.4	29.4	64.1
Queue Length 50th (ft)	305	48	122	334	86	86	~181
Queue Length 95th (ft)	#402	114	#252	430	148	148	#298
Internal Link Dist (ft)	1067			499		1231	
Turn Bay Length (ft)		100	250		240		240
Base Capacity (vph)	2028	748	272	2138	403	403	729
Starvation Cap Reductn	0	0	0	129	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.52	0.96	0.93	0.51	0.51	1.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	568	1761	1534	307	301	301	477
v/c Ratio	0.96	0.74	0.94	0.42	0.96	0.96	0.83
Control Delay	66.4	10.6	35.3	12.0	78.9	78.9	43.3
Queue Delay	0.0	1.2	0.0	0.0	0.0	0.0	0.0
Total Delay	66.4	11.8	35.3	12.0	78.9	78.9	43.3
Queue Length 50th (ft)	167	278	417	70	178	178	128
Queue Length 95th (ft)	#261	343	#561	128	#333	#333	#204
Internal Link Dist (ft)		499	110			1373	
Turn Bay Length (ft)	200			60	300		300
Base Capacity (vph)	592	2406	1644	745	320	320	586
Starvation Cap Reductn	0	389	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.87	0.93	0.41	0.94	0.94	0.81

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	1888	146	90	899	34	202	382	79	382	775
v/c Ratio	1.08	0.22	0.76	0.57	0.05	1.15	0.43	0.55	0.37	0.85
Control Delay	87.3	11.5	102.8	29.4	1.3	168.6	37.7	76.5	38.3	47.1
Queue Delay	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.2	11.5	102.8	29.4	1.3	168.6	37.7	76.5	38.3	47.1
Queue Length 50th (ft)	~796	27	42	314	0	~220	153	70	141	318
Queue Length 95th (ft)	#926	77	#93	396	6	#390	204	128	184	401
Internal Link Dist (ft)	477			173					1565	
Turn Bay Length (ft)		380	500		150	700	575	550		800
Base Capacity (vph)	1745	654	119	1587	727	175	986	166	1205	1032
Starvation Cap Reductn	141	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.18	0.22	0.76	0.57	0.05	1.15	0.39	0.48	0.32	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	449	944	67	393	629	45
v/c Ratio	0.40	0.84	0.31	0.27	0.67	0.10
Control Delay	13.5	10.1	26.6	8.2	18.3	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	10.1	26.6	8.2	18.3	6.0
Queue Length 50th (ft)	46	0	14	26	65	0
Queue Length 95th (ft)	94	#224	#61	60	138	18
Internal Link Dist (ft)	511			633	1003	
Turn Bay Length (ft)		165	325		550	675
Base Capacity (vph)	1783	1237	219	2538	1704	807
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.76	0.31	0.15	0.37	0.06

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	178	488	11	277	83	266	167
v/c Ratio	0.56	0.71	0.04	0.35	0.40	0.69	0.34
Control Delay	32.1	24.0	28.5	22.0	23.5	36.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	24.0	28.5	22.0	23.5	36.4	5.6
Queue Length 50th (ft)	64	145	4	46	14	96	0
Queue Length 95th (ft)	134	#375	19	84	59	#248	37
Internal Link Dist (ft)		1678		931	134	1504	
Turn Bay Length (ft)	200		155				550
Base Capacity (vph)	482	812	342	1220	220	427	519
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.60	0.03	0.23	0.38	0.62	0.32

Intersection Summary

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

Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	189	545	178	50	22	156
v/c Ratio	0.58	0.51	0.27	0.18	0.10	0.39
Control Delay	25.9	9.2	14.8	21.0	23.7	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	9.2	14.8	21.0	23.7	4.4
Queue Length 50th (ft)	38	50	23	9	4	0
Queue Length 95th (ft)	115	208	95	43	26	17
Internal Link Dist (ft)		931	1550	630	1917	
Turn Bay Length (ft)	236					400
Base Capacity (vph)	640	1058	791	323	360	502
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.52	0.23	0.15	0.06	0.31

Intersection Summary

Appendix B – Signal Warrant Calculations

FEHR PEERS

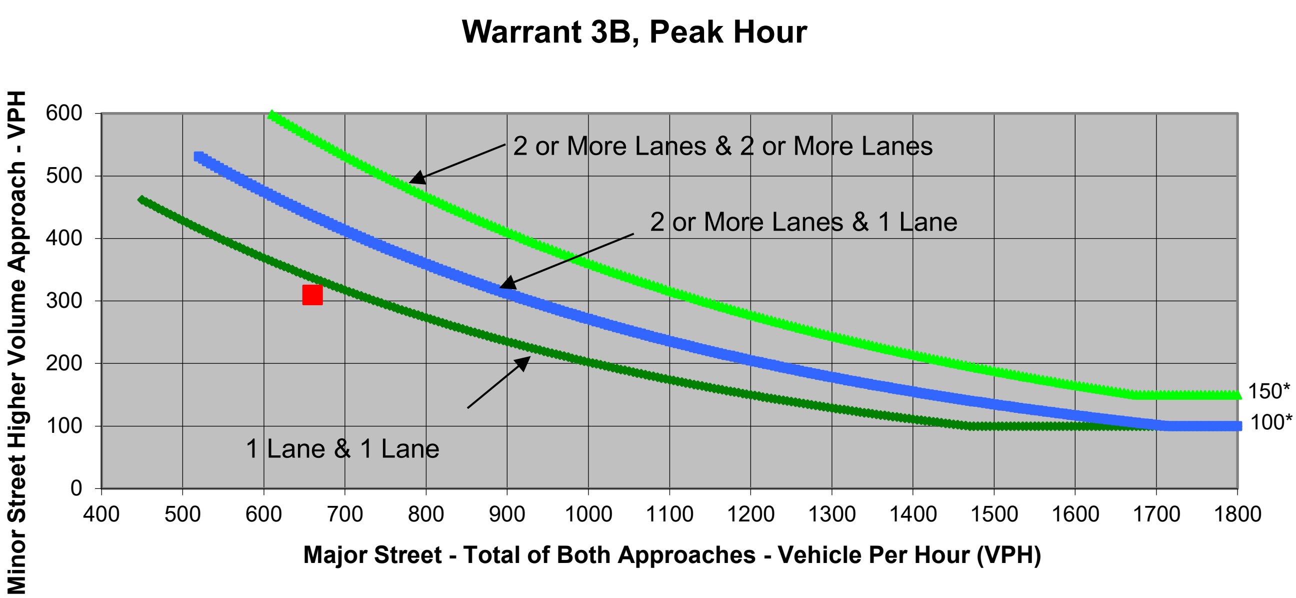
			Project	Manteca Annexation
Major Street	Union Rd		Scenario	Existing Plus Project
Minor Street	Shady Pines St		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	30	10	250
Through	290	220	0	0
Right	90	10	30	60
Total	400	260	40	310

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 Union Rd	Minor Street Shady Pines St	Warrant Met
Number of Approach Lanes	**2**	**2**	**NO**
Traffic Volume (VPH) *	**660**	**310**	

* 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

Project	Manteca Annexation
Scenario	Existing Plus Project
Peak Hour	AM

Major Street	Union Rd
Minor Street	Shady Pines St

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	30	10	250
Through	290	220	0	0
Right	90	10	30	60
Total	400	260	40	310

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	2
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	55
Approach with Worst Case Delay	WB
Total Vehicles on Approach	310

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)**
Existing Plus Project	**4.7**	**310**	**1,010**
Limiting Value	**5**	**150**	**800**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

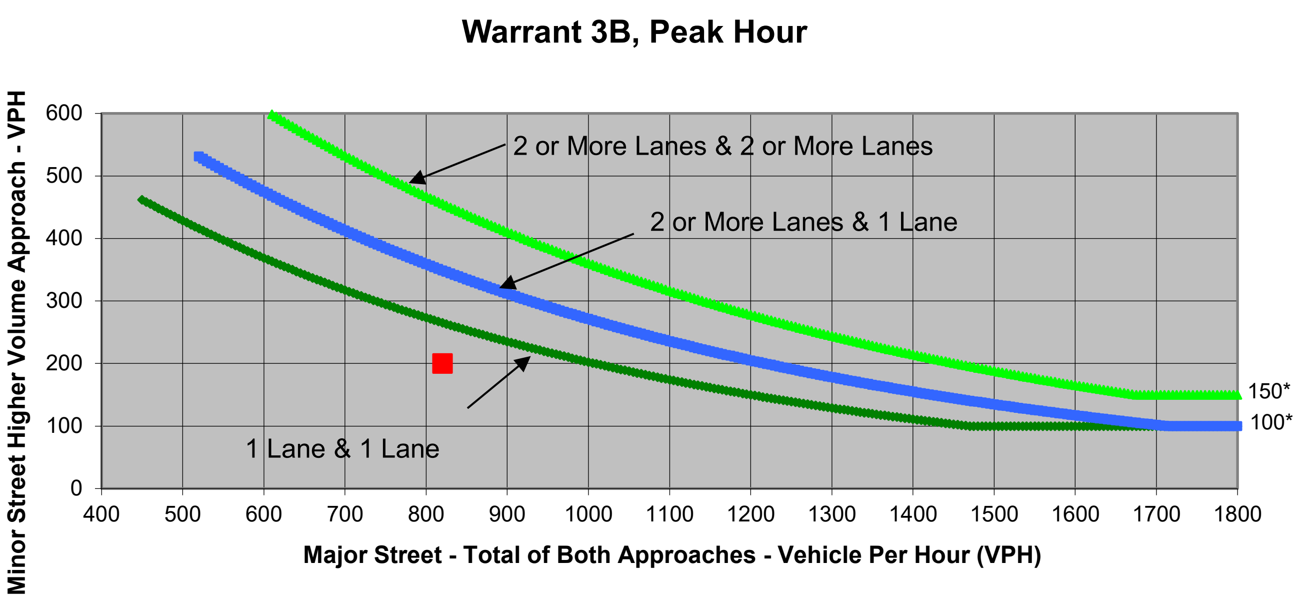
			Project	Manteca Annexation
Major Street	Union Rd		Scenario	Existing Plus Project
Minor Street	Shady Pines St		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	110	10	150
Through	260	260	0	0
Right	140	20	20	50
Total	430	390	30	200

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 Union Rd	Minor Street Shady Pines St	Warrant Met
Number of Approach Lanes	**2**	**2**	**NO**
Traffic Volume (VPH) *	**820**	**200**	

* 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	Union Rd		Project	Manteca Annexation
Minor Street	Shady Pines St		Scenario	Existing Plus Project
			Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	110	10	150
Through	260	260	0	0
Right	140	20	20	50
Total	430	390	30	200

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	2
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	46.7
Approach with Worst Case Delay	WB
Total Vehicles on Approach	200

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)
Existing Plus Project	**2.6**	**200**	**1,050**
Limiting Value	**5**	**150**	**800**
Condition Satisfied?	**Not Met**	**Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

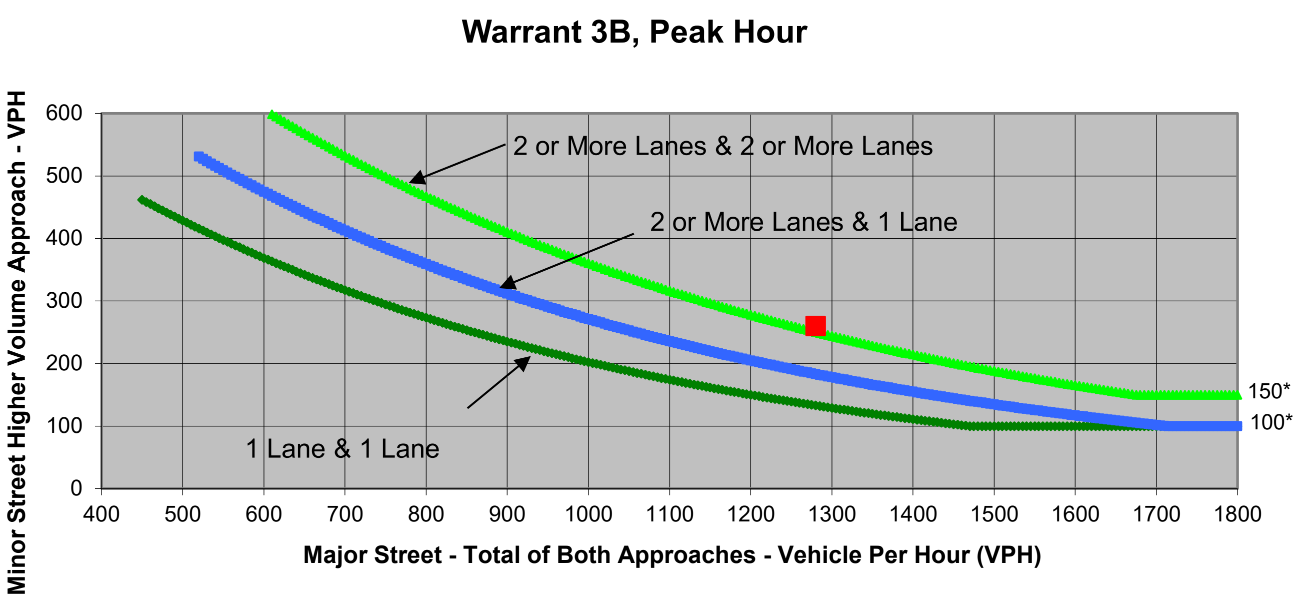
			Project	Manteca Annexation
Major Street	Union Rd		Scenario	Cumulative Plus Project
Minor Street	Shady Pines St		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	40	20	30	200
Through	550	560	0	0
Right	90	20	90	60
Total	680	600	120	260

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 Union Rd	**Minor Street** Shady Pines St	**Warrant Met**
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**1,280**	**260**	

* 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

			Project	Manteca Annexation
Major Street	Union Rd		Scenario	Cumulative Plus Project
Minor Street	Shady Pines St		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	40	20	30	200
Through	550	560	0	0
Right	90	20	90	60
Total	680	600	120	260

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	2
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	411.4
Approach with Worst Case Delay	WB
Total Vehicles on Approach	260

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 Plus Project	**29.7**	**260**	**1,660**
Limiting Value	**5**	**150**	**800**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met		**YES**	

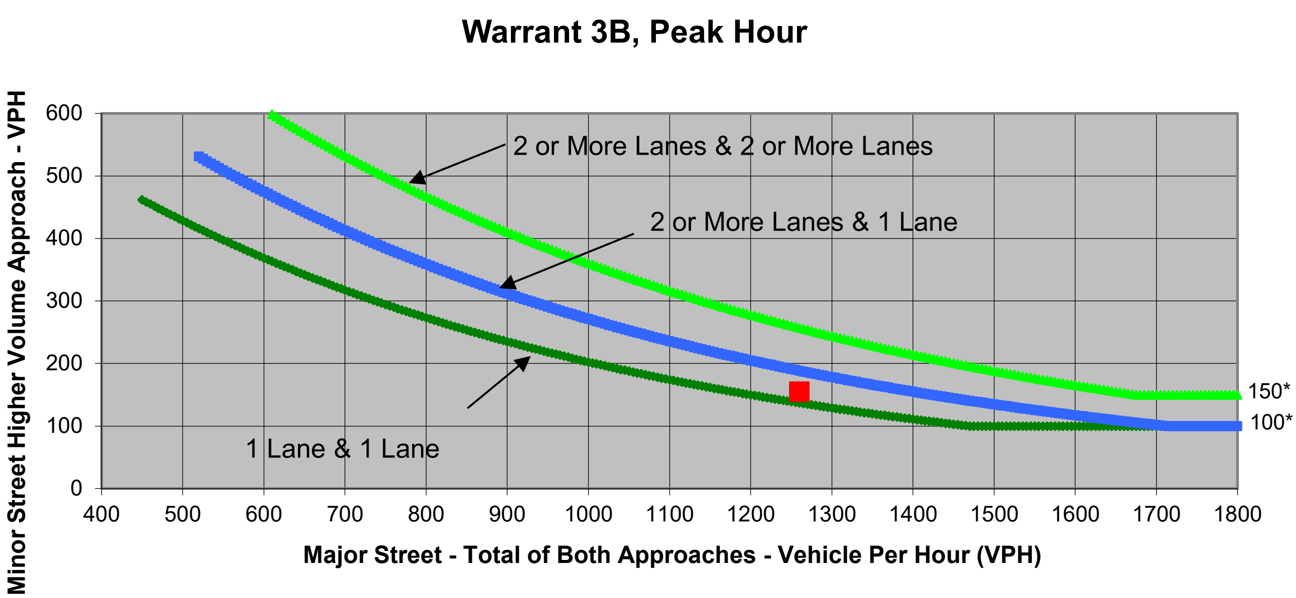
Major Street	Union Rd	Project	Manteca Annexation
Minor Street	Shady Pines St	Scenario	Cumulative Plus Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	80	70	20	110
Through	360	520	0	0
Right	190	40	60	45
Total	630	630	80	155

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
	Union Rd	Shady Pines St	
Number of Approach Lanes	**2**	**2**	**NO**
Traffic Volume (VPH) *	**1,260**	**155**	

* 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	Union Rd		Project	Manteca Annexation
Minor Street	Shady Pines St		Scenario	Cumulative Plus Project
			Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	80	70	20	110
Through	360	520	0	0
Right	190	40	60	45
Total	630	630	80	155

Major Street Direction

x	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	2
Total Approaches	4

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	135.8
Approach with Worst Case Delay	WB
Total Vehicles on Approach	155

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 Plus Project	**5.8**	**155**	**1,495**
Limiting Value	**5**	**150**	**800**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		